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A Retrospective View of Life.

JOS. B. COTTON, '86.

Our thoughts do wander back on passing life;
Perchance our early years we would recall.
We would not have that hour of mortal strife,
When Death does knock, and knock, and seek to call;
The haunting past, that Time doth call his own,
We would reclaim—each deed, each act, each thought;
And feel the Omnipresence round us thrown,
Where'er we pause to list what He has taught.

Oft do we think of childhood's early years,
When all was joy, and innocence, and ease.
No sky so blue or so serene appears
As then; no leaves so green do clothe the trees
Where we were wont to shelter from the sun.
Those were the only days of pure delight,
When we were taught to love and honor one
Who bids the bird to seek its nest at night,
And calls man heavenward when life is done.

Those happy hours of childhood gone;
The games and songs that oft went 'round,
The childish glee, the rambles at the early dawn,
The gathering nuts that lay upon the ground,
Cut down by autumn's early frosts,
The noisy group that gambled o'er the green,
Who chased the hoop, or caught the ball up-tost—
All these are gone, all traces of each scene.

The days of youth do pass to sterner years;
'Tis then the child assumes the garb of man.
No more the innocence of youth appears;
But all is toil, and work, and scheme, and plan;
No more he sleeps the hours of early morn:
When streaks of red o'ercast the eastern skies,
He turns the furrow, reaps the golden corn,
And thinks to fill his coffers ere he dies.

Perchance he wanders into nature's fields:
Walks and talks with her for science's sake;
Digs deep the bowels of the earth, reveals
The hidden things of which we all partake.
He sees a star plunge downward from its throne,
And gild its path with sweeping trails of light;
All men do soundly sleep save he alone,
Who dares to tread the solemn walks of night.

Or if fair nature has for him no charms,
Creates no thoughts of God, and all who live;
Perhaps the world doth open wide her arms,
Allures him on with honors she can give,
When she doth trap him with her wily snares,
And bind, and fetter, with those slavish bonds
Of crime, and vice, and sin, and worldly cares,
Till he doth follow where'er she commands.

Ere long the years do weight him down;
The trembling limbs, the tottering gait,—
His summer now is autumn brown.
His toil is o'er, he can but wait,
Reflect, repent, till comes the winter's frost.
Those hands once strong lie feebly by his side;
That voice once stern has all its sternness lost;
The sunken cheek, the ghastly look beside,
Mark plain the sure and sad decline of life.

He knows that life will soon be o'er;
He sees the children at their play;
It brings him thoughts of youth once more,
And gives him joy and peace each day.
He totters on to church each Sabbath morn,
And sees in every form the one thing, change.

He praises God that he was ever born,
And Death has lost his sting—no longer's strange.

Oh, how he longs to be dismissed from earth.
He is—his spirit's left the earthly crust,
And sought the home where all is joy and mirth,
While loving friends laid 'way the dust to dust.
The world moves on—no stay, no sudden start.
Time tells the tale—the cords of life are snapped;
Each friend who on that day from him did part,
Now lies at rest, his mantle round him wrapped.

The Marking System in Colleges.

JAMES A. DART, DELTA TAU DELTA FRATERNITY.

It has ever been thought necessary to have with studies some incentive for a student to learn his lessons. Prizes and honors have been given, and found as it would seem, to produce a good effect. From this idea originated the system of marking in class recitations; a system, which since its adoption, has been practiced with fair success. But is it truly a success; has it obtained the best work from students?

There may be some reason for marking school children, or some reason why the system should have been used many years ago,—then the age of attendance was much lower than it is now,—but at the present time and in our present colleges its use is fallacious.

What is the object of a college education? Is it not to give reasoning ability; and to give confidence in this ability. From its very nature the marking system is a direct hindrance to this object. It gives as a reward to perform one's duty a mark, and that is all. A student soon studies, not with an aim for duty, but with the sole idea of obtaining a high mark; he thinks of a recitation as ideal only when rewarded by a "ten."

For the development of self-respect, and the capability of self-education, this coercive system of marking has a retarding influence; differing in no wise from the plan practiced in compelling school children to study, its tendency is to lower the feeling of self-responsibility, it is a restraint that students will combat as offending their self-respect. It looks as if the faculty considered them too young for a correct judgment on the reasons for studying; in consequence they settle down to the belief that responsibility is a subject too great for their feeble and immature minds. Is not such a system derogatory in its character? Does it not teach that students are yet mere boys, incapable of any self-judgment?

If a college education is to uncover the inert powers which lie hidden in youth, this mode is not the one most likely to be successful. If education is a preparation for the life work, then some method is needed that will teach responsibility, rather than a plan that will hinder this development.

One has but to watch the recitations in a classroom where marking is practiced, in order to discover its unfitness; to see the labored attempts at making a good show, or hear the parrot-like reciting of one

who has studied for a ten. How well can the accomplished reciter, tell by the varied expression of an enthusiastic professor's face, whether his answer be right or wrong, and thus quickly change a negative to an affirmative answer. How well does he frame replies to the repeated questions, and the unguarded statements of a too zealous instructor. It is often seen too, that a well prepared lesson receives a low mark, simply because that fine art, reciting, has been neglected, or perhaps embarrassment may have clouded the mind just at the time when clear thinking is most needed. It is thus the power of reciting, rather than a knowledge of facts, that receives best reward. A recitation is a struggle in which students, as it would seem, care little for the benefit derived; they study that they may recite, they "pony" and receive help, in fact do most anything to recite well.

That the system is unfair, no one can doubt, but what is to be done? Can the practice of daily marking be dropped? Yes, and with but few other changes. There would then be more severe, though not essentially harder, examinations. These should be fair; but with length sufficient to give a fair test of knowledge.

By this plan greater thoroughness is acquired, no dependence can be placed on the simple every-day recitations; a thorough knowledge is necessary to pass the studies. But, it is asked, will there not be neglect of studies until the near approach of examinations? There would be no such disregard for studies; students have yet left some self-respect, they are not such children as to forget all sense of duty toward themselves. A study for knowledge would replace this strife for high marks. It may be, however, that a few would neglect the daily studying, and resort to the "periodical cramming," but such would neglect this in any case, and to them it will make little difference what plan is practiced.

Thus to drop the marking system would hurt no one; to keep it hurts all. Are so many colleges in the wrong? Or are there good reasons for marking? If there are reasons, let the system be kept; if not, which is most probable, then drop it, have in college no system likely to exert an evil influence on its students.

The Tendency to Extremes.

C. H. HOYT, PHI DELTA THETA FRATERNITY.

One of the innate qualities of the human mind is the tendency to admire the beautiful in art or nature.

When a person allows his thoughts to wander from the real to the ideal, the image his mind's eye sees is one of perfect symmetry, and in which all the parts coördinate and harmonize to make a perfect whole.

The mind or the physique of the ideal man must be symmetrical. We may admire the man of genius, with some of his powers developed at the expense of others; our curiosity may be excited by an eccentric person or a natural monstrosity, but our ideal, if it be a normal one, tends toward symmetrical perfection.

Yet, is this ideal ever attained? The land of Utopia exists only in the realm of ideality.

Every person has some marked peculiarities, either physical or mental that distinguish him from all other persons. In one's make-up then there is a tendency to extremes.

In the course of development from the child to the man, at different periods, different ideas predominate in the child's mind, and these ideas, of course, will be formed and modified by circumstances. The youth

may be seized with a mania for boating, hunting, playing ball, reading novels, or divers other pastimes; in each case the one idea will be the dominant one, sometimes, unfortunately, to the exclusion of all others. The youth becomes a man and his mind changes, but the chances are he will be an ideal man only in some particular essential. A nation is made up of men, and if circumstances have influenced men alike, then that nation will be excessive in some one direction. But as the circumstances change the tendency will be to some other extreme, so we see there can no more be a perfect age or a perfect nation than an ideal man.

Is it not the testimony of history that ages and nations have been unsymmetrical? Greece and Rome were once great powers, yet how plainly do we see this inevitable law in their history. Sparta developed a model soldier. Her predominant spirit was war, and war was her extreme. She produced a Leonidas, but her people were not an ideal people. Greece gave the world models of sculpture, architecture, and oratory, but she came far from being a model nation. Rome showed her dominant spirit in her political perfection, but she lacked the elements a nation needs to perpetuate itself.

If one could soar way above the world, like Volney of France in his imaginary flight with Genius, and while looking down on the ever changing panorama of human affairs, could he be endowed with a colossal mind that could comprehend the causes and effects of human institutions, would he not see the tendency to extremes as plainly marked as a strong man watching a child at play sees the whims and fancies of the child's mind that cause it to go to extremes in its little world of action?

History is replete with examples of this tendency, as we commonly express it, of "overdoing the matter." In the realm of literature we do not find an age or a nation producing models in all its various departments. For many years the old scholastic philosophy occupied the minds of the educated until the mighty intellect of Bacon turned the current of educated thought to more prolific channels. In the Elizabethan period the drama rose preëminently above all other forms of literature, and a group of dramatic writers clustered around the mighty Shakespeare. The tendency of the times was intensely dramatic. Then, with changing circumstances, the novel became the popular literature of the day. This period gave birth to a group of writers, among which were Richardson, Defoe, and Fielding. Then historical writings became the leading feature of another period, and the names of Hume, Robertson, and Gibbon signalized the literary genius of the time. This was a period of deep thought and plain prose, from such pens as were wielded by Johnson, Burke, and Adam Smith. Then arose the emotional spirit of a poetical age, and a Byron, a Gray, and a Wordsworth were produced among a group of lesser poets, and the poetical extreme was the tendency of the time.

Literature furnishes only its share of examples proving this law of extremes. It is seen in every branch of human affairs. At present, especially among the Germans, the scientific spirit predominates. The mercantile spirit of America has been noticed by many visitors from foreign lands. Herbert Spencer justly says, that as a people the Americans have diverged too far from a savage state, and that while making a living they forget to live, or, as he terms it, living a "high pressure life." He advises for Americans a revised ideal of life.

Other nations have other extremes, and it is this principle that distinguishes one person, one nation, or one period from another.

In the liberal present we see less of this tendency than in the narrow past. As man increases his store of knowledge and becomes more and more familiar with the world as it was in the past, and as it is at present, he becomes more symmetrical. And man, nations, and periods are striving toward that acme of human perfection, the ideal, or as the poet puts it:

"Yet I doubt not through the ages one increasing purpose runs,
And the thoughts of men are widened with the process of the suns."

Life at a Public School in England.

W. M. BADCOCK, TAUNTON, ENGLAND, UNION LITERARY SOCIETY.

The King's School at Sherborne is so called on account of its having been founded by Edward VI. The two hundred and eighty boys attending it are almost without exception the sons of church of England clergymen, lawyers, and doctors.

The class-rooms are all furnished with long desks, and benches, consisting of a single board. In reciting the boys are arranged in order, and should one fail to answer a question his place is taken by any one below him who may succeed. At the end of each of the three terms about eight of the best scholars are promoted to the next "form."

The school is divided into twelve of these forms; the lowest is the "lower first," the next the "upper first," and so on to the "upper sixth," whose members are regarded with some awe by the small boys, for, besides various other distinctions, they have the power to punish them for breaking rules. The masters are men who have obtained honors at Oxford or Cambridge.

Latin and Greek are the principal studies; writing, history, geography, French, mathematics, music, free hand drawing, botany, chemistry, and swimming are also compulsory. The lessons are mostly prepared in the evening, such of the lower part of the school as live under the head master, doing so in the "day room," order being kept by an upper fifth boy, who may punish by giving lines to write, or by boxing the ears. The "upper school" have "studies," about eight feet by five, each occupied by two boys.

In summer the day begins with chapel exercises at seven o'clock, all late comers having to learn twenty lines of Shakespeare; then recitations until eight o'clock; then breakfast of thick slices of buttered bread, called "bread and scrape," a small piece of cold meat, and coffee; then lessons until one o'clock, excepting "break" for a quarter of an hour at eleven, when those fortunate enough to have a penny, visit the confectioner's basket. For dinner, two "helpings" of meat and one of pudding are allowed, and unlimited beer or water. After dinner comes the pleasant time when, if no Latin lines or anything else have to be written as a punishment, the boys go to play in the cricket field. This lasts until the study hour, four o'clock, unless the day be one of the three weekly half-holidays, when play lasts until tea time at six o'clock. Tea consists of "bread and scrape" and tea. From seven until half past eight o'clock are study hours, then chapel exercises, then supper of bread and cheese, and beer for those who wish it, after which the younger boys go to their bed rooms, each containing four beds for as many boys.

To draw a book from the library, a list of several has to be handed in at a certain hour once a week, one of which is ready when called for at a certain time a day or two after.

Boys high in the school will not associate intimately with those low down, and the same classing by strength, such as exists amongst cattle, is practiced, no boy who can "lick" another will stand any "cheek" from him.

In the winter there are no studies before breakfast, and only two half-holidays weekly. These are spent at football, which is replaced, in spring, by jumping, hurdle racing, and so forth, in preparation for the annual field day. Another favorite game is paper chasing, in which three of the best runners start off across the country with large bags filled with scraps of paper, which they scatter on the way to guide the "hounds," who start five minutes after the "foxes," whom they hope to catch before the run, of perhaps fifteen miles, is completed.

After leaving the school, where they have perhaps been from the age of nine to eighteen, many go to Oxford or Cambridge, and nearly all expect to be church of England clergymen, lawyers, or doctors, or to go to "the colonies."

The Use of Influence.

ALICE A. JOHNSON, '84.

Of all the powers with which God has endowed man, there is, perhaps, none which so largely affects the welfare of others as influence. This almost imperceptible force, often unconsciously exerted, yet capable of changing the life of an immortal being, certainly should be exercised with conscientious thought and care.

How often a man is heard eloquently exhorting his fellows to noble deeds with little effect; because his life is not in accordance with his teaching. "I don't think much of them, they don't practice what they preach," is the just criticism passed on such persons, sneeringly, but too frequently, truthfully uttered of those, who by false words bring ill repute on good and noble causes. Those who so earnestly strive to live so nobly that their influence shall be only good, are often injured by these hypocrites, who, by their insincerity, prevent many from boldly declaring themselves in favor of the good.

"I don't preach anything, so I need practice nothing!" This thought, too, is often expressed, but how untruthful it is. Our deeds are the exposition of our belief even if no word is spoken. We may never say this is right, that is wrong; duties must be faithfully performed even if distasteful or shirked if the work is not agreeable. Let us not flatter ourselves that we have no influence. We cannot avoid making some impression, by our life and character, on others. No man occupies an indifferent position; his power is negative or positive, for good or for evil. If he is strong and independent, he will exert a wonderful influence over his poor, weak brothers. He may raise them to a higher plane of thought and action; he may help the good to better things or force the fallen down.

Our influence may be limited to a small circle but may be so great over some one that it shall change a life. The force of some man's life example may exert so powerful an influence over some child that he shall be fired with the impulse to be good, noble, great. Because of this thought he may grasp opportunities that, but for this inspiration, would be neglected. The improvement of these opportunities may make him one that shall shake the world to its very center. Who shall say the man, though humble, lived in vain, whose influence produced such grand results? He did far more for humanity than the man

of greater power, in a higher position, but who lived carelessly and did naught for the advancement of others, and whose influence only served to drag companions down.

The influence of one lazy grumbler often counteracts that of many noble ones, who are always faithful to every duty. Know that the habits formed now are the ones that last. If we are inclined to neglect known duties, to grumble and find fault with proper restraints, to suspect that we are not receiving all the attention we merit, our influence for good will be immeasurably lessened. We may do nothing criminal, but will lead many into ways that shall cause sorrow, even wrong to them and others. If, on the other hand we are willing to do all that is demanded, nay more, if faithful to all duties, if we give each his due and have charity for all, we shall be able to exert a good influence through our noble, useful lives. If we see not the good results we will falter not, regret not;

"Knowing this, that never yet
Share of truth was vainly set
In the world's wide fallow;
After hands shall sow the seed,
After hands from hill and mead
Reap the harvests yellow."

SCIENTIFIC.

The Botanic Garden.

PROF. W. J. BEAL.

As is well known by those who have recently been at the Agricultural College, the botanic garden is situated on the east side of the brook which runs between the greenhouse and the botanical laboratory. A rustic foot bridge enables people to pass from one high bank to the other. Boulders large and small have been used along the banks for borders of paths, for steps or seats on the shady bank or near the water. Among the trees and plants, the little rivulets and ponds, the banks and bogs, paths wind irregularly about. At one time this small garden contained not far from 700 species of flowering plants, a large portion of which were our native perennial herbs. The garden is divided into 41 wards, each of which contains plants of one or more natural orders. There is a printed guide and map to the garden, and this any one can get by calling on the professor of botany. Part of the garden is rather low, and on such seasons as that of 1883 considerable damage was done by three inundations, each lasting for about five days. These freshets came during the growing season, injuring many plants and killing others, especially such as were taken from high land. Spikenard, ginseng, adder's tongue, burdock, dandelion, catnip, motherwort, houstonia, wild lettuce, May-weed, mallow, broad-leaved plantain, and many others were killed or nearly killed.

Owing to the plan recently adopted by the board of agriculture, admitting carp into the ponds, the borders of the garden are to be raised in some places that they may all be above high water mark. For a time this must give the place an unfinished look; still there is at present much that is interesting. Here can be seen what plants are hardy as they are isolated, how they stand an open winter with many alternations of freezing and thawing, how much better they go through when the weather is steadily cold, especially if the plants are covered with snow.

Some of the asters, golden rods, hawkweed, great willow-herb, artichokes, lilies, bladder fern, iris, bur-reed, water weed, toad flax, germander, yellow pond lilies, and others I could think of, spread rapidly in every direction, and if not disturbed would monopolize all of the unoccupied land. Most of our common weeds are regularly kept down and do not get a chance to win battles with those in cultivation. A good many are more modest and spread little, but root deeply as though they had come to stay. Of this sort is the water dock, several species of the wild sunflower, elecampane, rosin plant, poke weed, comphrey, horseradish. Many are delicate and have not been managed rightly. They are shy and tender, and are likely to disappear. Such are the beautiful hepaticas and gold thread, trailing arbutus, winter green, cranberry, laurel, rhododendron, Labrador tea, shin-leaf, pipsissewa, and most others which have broad evergreen leaves. The hot suns of summer and especially the sun in March kill the leaves. Sweet vernal grass and meadow soft grass are examples of those which die out in the winter if left in small bunches, but do well when crowded by other plants of their own or other species.

Most ferns must be shaded a little and screened from the wind. Tall plants of many kinds need tying to stakes.

In the botanic garden we have a chance to study the effect of large masses of one species of wild plants. We learn something by a study of the shape and color of the leaves and the positions assumed by each. Almost any plant when massed and evenly cut back possesses attractions.

A bunch of hibiscus or rose mallow has an oval outline six feet in diameter. The leaves are light-colored on the upper side, and a few turn up the lower surface, which is still lighter. Late in summer the large pink flowers appear. The wild sunflower may be eight or ten feet high and the bunch five feet in diameter. The dark lanceolate leaves hang down, overlapping each other in a beautiful manner somewhat like the shingles of a roof. For the back part of a garden in front of a tall fence, a building, or some trees, these plants are appropriate and much more attractive than many suppose. The late Harry Owen, who took so much interest in our garden, found a plant of *Helianthus giganteus* in which the ray flowers were of a yellowish white color. This is still growing in the garden. One portion of the garden contains a thrifty mass of elecampane seven feet high. The leaves are very long and broad, and well curved, and have a subtropical appearance. Of a somewhat similar nature is the silphium perfoliatum or cup-plant, a mass of which stands eight feet high with a diameter of six feet. The leaves are large and attractive. The compass-plant does not here turn all of its leaves north and south as on the prairies. The leaves are deeply parted, but still present another kind of subtropical aspect.

A mass of some of the taller wild thistles is certainly very attractive, and has many points of interest. Some of them catch flies by the sticky scales outside the head of flowers; all of them have long lash-like threads on the under side of the leaves which keep crawling insects from reaching the flowers.

Leaf-cup (*Polymnia*), sneeze-weed (*Helenium*), rattlesnake-root (*Nabalus*), wild lettuce, when well grown in separate masses, each present specific points of interest. Wild lettuce has smooth pinatifid leaves which hang down from the erect stem, often ten feet high. It is a real beauty and worthy of cultivation for certain places. Wild senna has long pinnate leaves and racemes of yellow flowers. A

mass is five feet high, with a rounded top five or six feet in diameter, and cannot fail to awaken the admiration of every true florist. Spiked loosestrife and great willow-herb grow near each other by the large pond, both producing pink flowers, which are always covered with bees. If well grown they are both worthy of notice.

Several of the wild asters and golden rods, when placed in damp soil in bunches a trifle isolated will astonish any one, both by the beauty of their flowers and their graceful outline.

Some shrubs, like the basket willow, shining willow, and *salix pentandra* (?), the latter widely distributed by the Rural New Yorker, if cut back freely send forth a bunch of thrifty shoots which will always please. The catalpa, basswood, alianthus, the ashes, walnuts, and hickories can be treated in a similar manner.

We have a variety of white clover which bears purplish pink leaves and flowers. A mass of it is easy to grow and is always an ornament.

Solar Disturbances and Electrical Phenomena.

C. P. GILLETT.

It has long been thought that some connection exists between solar disturbances and electrical phenomena on the earth. To people in general the most common of these manifestations is the aurora borealis. Occasionally we have years remarkable for the great number of beautiful auroral displays. Such a one was 1882.

A careful examination of the records of astronomical observers since the invention of the telescope has revealed the fact that the reoccurrence of these years of maximum and minimum auroras are remarkably regular. Since 1608 the maxima have occurred at intervals of from 7 to 13.5 years, with an average periodicity of about 10 years. On further examining the records it was found that there were years of maximum and minimum numbers of sun spots occurring at intervals of from 10 to 11 years, and that there was a very remarkable coincidence of these years with that of maximum and minimum numbers of auroras.

On studying Wolf's table giving the number of auroras and sun spots seen each year from 1650 to 1868 it was found that the years having the least numbers of auroras and sunspots more nearly coincide than the years having the greatest numbers. Only twice out of the eleven reoccurrences of these minima did they fail to come on the same year, while the maxima failed seven times. Of these seven not coming the same year only two varied more than a year, and the greatest variation was three years.

The tendency of these phenomena to accompany each other has led to the belief that they exist as cause and effect, though they have not always reoccurred in anything like a definite ratio. It is yet to be determined whether or not these exceptions shall prove or disprove the rule. If from Wolf's table we select the six years having the least number (5) of auroras we find their aggregate sun-spot number would be 143.4, and the six years having the greatest number of auroras have for their sun-spot number 618.8. The six years having the least sun-spot number (15.8) had eleven auroral displays, and the six years having the greatest sun-spot number (798.4) had 446 auroras. These facts also tend to corroborate the sun-spot theory.

Some apparent exceptions to the rule are the following: The year 1778 had the greatest sun-spot number, 151.7, but had only 69 auroras, while years having little more than half that number of sun-spots had nearly as many auroras. The year 1780, for example, had for its sun-spot number 89.2, and its number of auroras 67. The years 1803 and 1816 were years of maximum sun-spots, but the number of auroras for the former is six and for the latter five. The number of auroras in 1803, however, was greater than they were for several years either preceding or succeeding that date, and the year of maximum auroras corresponding to 1816 came three years later. So we see these apparent exceptions to the rule may not be real. The data now at hand seem to prove quite conclusively that sun spots are a very fruitful cause of the aurora, but not the only cause. From the nature of the case they could not be the sole cause. It is the commonly accepted theory of the best scientific scholars of to-day that the immediate cause of the aurora borealis is the silent discharge of electricity between the atmosphere and the earth. The former being charged with positive electricity and the latter with negative, they would naturally tend to combine and neutralize each other. This tendency to combine would be greatest at the two poles of the great magnet, the earth, and would decrease to nothing at the equator, and here the aurora is never known. Then, admitting this theory of the immediate cause of the aurora to be true, there will be the strongest discharges of electricity, and consequently the brightest auroras, at times when the electric tension is greatest and the conditions of the atmosphere for conduction are best. If the atmosphere possessed at all times uniform conductivity, there would probably be few if any of the auroras seen except at times of great disturbances on the surface of the sun. If, on the other hand, the air was kept very dry near the poles for a long time, in which case it would be an excellent non-conductor, the two electricities would become so intense that when a moist current appeared, which would render the air a good conductor, there would undoubtedly be very beautiful displays of the aurora caused by the rapid discharge of electricity whether the sun showed a freckled face or not.

The cases where the magnetic needle and electric machines have been disturbed in connection with solar disturbances is equally marked.

Loomis has registered the extent of sun spots for six days preceding and succeeding magnetic storms at Greenwich for 23 years, and finds a remarkable coincidence of the two phenomena. He concludes that the earth's electrical disturbances are accompanied by unusual disturbances of the sun's surface on the very day of the storm, and that a smaller disturbance precedes the greater storm by three or four days.

A remarkable case of simultaneous disturbance is that of September 1, 1859. On that day R. C. Carrington, while observing the sun, saw a very sudden and violent outbreak of bright white light upon its surface, which lasted but five minutes and traveled during that time not less than 35,000 miles. At the same instant there was a moderate disturbance of the three magnetic elements at Kew in France lasting for about the same time, which was followed by a much more violent disturbance a few hours later.

Our last year of maximum sun spots and electric disturbances was 1882. The almost unprecedented brilliancy and splendor of the auroras and the great violence of the electric storms of that year are fresh

in the memory of all. The heavens at times were so brightly and suddenly illuminated that fire companies turned out in some places thinking there must be a conflagration in the vicinity. The magnetic needle was rendered entirely unreliable and useless. Telegraph operators were unable to work their instruments, and if they attempted to do so they were liable to be knocked down by a severe shock. At some places the intensity of the electricity was sufficient to set fire to the switch boards, melt the keys, and burn up the screws, and electric lamps were made to burn brightly without the use of a battery.

Shall we say, then, that sun spots do or do not produce electric disturbances on the earth? Probably we are not warranted in making either unqualified statement, but it does seem safe to say there is an intimate connection between them. They may and probably do stand in the relation of partial cause and effect, and they may both be the effects of a common unknown cause. But in either case the phenomena manifest to us would be modified by the electrical conditions of the earth and its atmosphere.

Bacteria.

Any investigation which throws light upon the contagious diseases which often bring sorrow to thousands of homes as they hang the crape upon the door, or terrible loss of property, as thousands of our domestic animals are swept off as by fire, can but awake deep and wide-spread interest.

That many if not most of our worst diseases, like cholera, typhoid fever, scarlet fever, etc., owe their existence to the presence in the body of minute vegetable organisms known under the general term of Bacteria and which develop and increase at the expense of the body, has long been suspected.

Of late positive discoveries have settled this question, and have already suggested remedial action, that promises great and most valuable results. That we have only had a mere taste of the valuable practical fruits of these investigations, as compared with what is soon to be developed, is most certain.

The Bacteria have been divided into four classes:—(1) Micrococci (round bodies), (2) Bacteria (minute oval or rod shaped bodies), (3) Bacilli (larger rod shaped bodies), and Spirilla (spirally twisted rods).

Lister of England has shown that in case of ugly vicious sores, the impediment in the way of rapid healing is to be found in the presence of some of these minute Bacteria. The Listerian treatment in surgery, which has been found so helpful, consists in spraying wounds with carbolic acid, during severe operations. Carbolic acid as is well known is a powerful bactericide.

Koch showed that the fatal charbon or anthrax which removed horses, sheep, and cattle in Europe by thousands was due to a specific Bacillus. Pasteur found that by cultivating this Bacillus in artificial organic liquids, like beef broth, the Bacilli became less harmful, and if used to inoculate healthy animals, would protect them against attack from the more deadly anthrax. This masterly discovery has already saved thousands of dollars to Europe. Pasteur has farther shown that the same holds true in chicken cholera, which is also the result of attack from a species of Bacillus.

More recently Pasteur has shown that hydrophobia was to be explained in like way. He has also found a way to inoculate this malady by degrees so as to render it harmless. So positive is Pasteur that he is correct that he is ready to operate upon himself.

When we consider the deadly nature of this awful disease, and its heretofore incurable nature, we can appreciate the value of this, another of Pasteur's invaluable discoveries.

Foul brood, the most fatal and dreaded disease which attacks bees is also due to the presence of a minute Bacillus, as was first shown by Shönfeld of Germany. This scientist found that he could easily inoculate healthy bees by sowing among their brood the germs of the Bacillus from a diseased colony. Herr Hilbert, also a German, was the first to point out a method of cure. In this case salicylic acid was the fungicide. Its value has been proved several times in the United States.

It has been definitely proved that septicæmia of the mouse, erysipelas, tuberculosis, and glanders, are all the result of attack from these minute vegetable growths. By inoculation the germs have been introduced into healthy animals, and the specific disease in each case induced.

In case of septicæmia of the house mouse, it is an interesting fact that while inoculation is speedily effective in case of healthy house mice, field mice are entirely exempt. This indicates that some difference in the condition of the blood exists, which renders the one susceptible while the other goes free. This also suggests the probability that some medication might so change the blood of other animals, and even man, as to render them exempt from bacterial diseases.

Koch has recently proved that a specific Bacillus is always found in the intestines of cholera patients. He has also shown conclusively that this Bacillus causes the cholera. This cholera Bacillus is not straight like other species, but curved much like a comma. These are easily cultivated in artificial liquids and move with considerable rapidity. So far it has been impossible to inoculate any of the lower animals with this Bacterium. Koch says the same is true of typhoid fever and leprosy, both of which he says are caused by Bacteria. The cholera Bacillus develops rapidly on the linen soiled by evacuation of cholera patients so long as the excreta are kept moist. It is found that drying for a short time or an acid liquid kills these Bacilli, neither can they pass through a healthy stomach without being killed. It is only then where persons have disordered stomachs that they are attacked with cholera. It has long been observed that those persons suffering from indigestion are the ones attacked by cholera. These researches of Koch are full of interest, for although as yet no practical results are seen, we are never so near a cure for an evil, as when we know the precise nature of the ill which it is desired to remedy.

Natural Science in Common Schools.

There is no question but that the most successful way to present natural history to young pupils is the oral method. The young are always ready to drink in information in full draughts if nature is presented; but to give a young pupil a book which may discourse upon some natural objects most eloquently is not like letting them see, feel, and handle the very thing itself. He who would succeed best in teaching natural history must make himself familiar with the subject and then talk in a familiar manner of the things presented, always showing everything he talks about. This makes the study of natural history fascinating, and in the highest degree useful. We believe that books on natural history are out of place in the common school.

Yet, as some are not willing to use the oral method, and even think they cannot, we are glad to call attention to some most admirable books if books are to be used. In physiology we know of no book comparable to "Martin's Human Body." It is accurate, concise, and the subject matter is well chosen. It is the work of a practical physiologist and a master. "Winchell's Geological Excursions" is a helpful work in presenting the wonderful truths of geology to the young. Its very simplicity, familiar style, and lucid explanations will make it the more valuable. Some may doubt the propriety of teaching geology to pupils in the primary or common schools. It may be suggested by the time the three R's and possibly physiology are well taught the pupil will be gone. But if geology is to be taught, and oral instruction cannot be made available, then we would suggest that this work of Dr. Winchell be selected as an aid.

THE COLLEGE SPECULUM.

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— OF —

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LANSING, MICH., AUGUST 1, 1884.

"WITH THIS number of THE SPECULUM the present board of editors enters upon its duties." A little observation will doubtless render it unnecessary for us to say, that we are all entirely inexperienced in this business. However, the students have seen fit to thus entrust the management of their college paper, and while we sincerely hope they will have no cause to regret their choice, time alone must prove the wisdom or folly of their judgment; hence it would be useless to make any promises of what is to be done.

We did not come to college to edit papers, or to study the art and science of journalism, therefore the work pertaining to this paper must be secondary to college duties. You who have been for any length of time under the instruction of our faculty, will at once recognize that the time to be taken from regular studies, is wholly inadequate to obtain the best results in conducting a college paper. With these considera-

tions we render our services, and submit the SPECULUM to your impartial or partial judgment, and to your favorable or adverse criticism.

THERE IS perhaps no department of the college with the results of which the students are so generally dissatisfied, as with the rhetorical and literary work. Is this because of an impossibility advantageously to pursue at the same time the general scientific and fair English courses offered at this college? Or is it because the professors in charge of this department are overloaded with work? Or ———?

Undoubtedly these courses require different tastes, and are more or less difficult to conciliate. But there should be no such disproportion in the results derived from these as exists in our college. While scientific scholars generally may not be the best literary students, yet it is not necessary to go outside of our own college to find those who not only have reached a fair degree of success in both, but have attained no inconsiderable reputation.

Surely no one will deny the desirability and the necessity of developing some literary ability. Ideas, without the power to intelligently express them, often lose much of their value. To become forcibly convinced of this, one needs but to take notes of the lectures delivered by some of our scientific professors. The present junior class was deprived of much of the benefits that might otherwise have been derived from the course in physiology, had the lectures been written up with more observance of the common rules of rhetoric. Why, then, should we not be afforded better literary instruction?

Every other department has more or less students earnest and enthusiastic in pursuing the studies of that branch, but there is absolutely no enthusiasm, and but very little interest manifested in the literary studies. Students work simply to get through with their required exercises. They take no pride in their work, but rather boast of their inefficiency and of the ease with which they are disposed of. They make the plea of lack of time and distaste for the studies, but the taste would come, and the time could be found, had they interest in the work.

Much of this perhaps could be explained by the fact that the other departments require of the students so much extra work. Nearly every professor becomes so overly enthusiastic in his work, that he imagines his studies to be the only important ones in the course, and thinks that every student should give all his spare time, and much that he cannot spare, to studies and investigations in his department. They thus succeed in robbing the literary professors of their share of the students' time and interest. Few college professors, however, would be willing to admit that they could be thus deprived of their rights.

There certainly is no dearth of literary work laid out, but it is an undeniable fact that the students fail to derive from it the benefits that should be expected. A great part of the meagre criticism given is but little

better than a farce; that obtained in the literary societies in a large majority of cases is far better. Not mentioning the quantity, the quality of our literary exercises is a standing and sufficient proof of this assertion. Our public "orations" are the laughing stock of all who hear them.

Many endeavor to do better work in this branch of the course, but soon become discouraged and either leave the college or seek special employment in the more congenial fields of science where they can obtain facilities, and can receive encouragement and instruction second to that afforded by few other institutions.

Such a state of affairs should not exist. This branch of our school should have its share of enthusiastic students, and the success such might attain would have a stimulating influence on the literary work done in the school, and would thus create a wholesome interest in literary culture.

How can this fault be corrected? All who have taught school will recognize that the best way to instruct your pupils is to awaken an interest in the school, and the only way to accomplish that, is to have them see and know that they are learning something.

When the students of this college shall see that they can obtain and are receiving proper benefit from their rhetorical exercises, interest and enthusiasm in the subject will increase in proportion.

THERE HAS BEEN an undesirable change in the matter of room rent. The rooms have been arranged according to their desirable situations into five classes, and to obtain a first-class room a student has to pay seven dollars, and two students in one room pay ten dollars and fifty cents; second-class rooms, six dollars and fifty cents for one person, and nine dollars for two persons; the lower rooms are a little cheaper than before.

There is manifested considerable dissatisfaction in this matter among the higher classmen. Heretofore seniors have had first choice, and juniors second choice, of rooms, and no one has complained of any unfairness in this arrangement. But, under the new departure, those of lower classes who by their necessary but unfortunate rank have been kept in poor rooms, now that by the revolution of time, and by their own industry and perseverance have reached more advanced positions, are still obliged to remain in their old quarters unless their financial conditions be such as to allow them to maintain the increased expense of an "aristocratic room," and the probabilities are that they will not be thus situated by the end of their second or third years. The way the matter stands now, a young sap-headed freshman with his pockets full of his father's money, and who is of that class who stay but a term or two, and generally do not deserve the best rooms, can by the mere power of his money obtain such rooms.

It is argued as an advantage due to the labor system that socially the students are kept on a nearer level than they otherwise would be; but this system

of room rent certainly is not intended to assist in maintaining this level.

Again, in order to have a room alone the occupant must pay an extra price. What is the use of this when so many rooms are vacant, and if expenses continue to increase, matters begin to look very much as though a great many more would be unoccupied.

During the past two or three years the greater portion of these better rooms have been papered, painted, and fixed up in various ways, and thus made more desirable by the students themselves, and now they have to pay extra for these rooms. No one who attended school here before the students were allowed to improve their rooms, will deny the beneficial influence it has had on the general conduct of the students, and upon the care of the rooms and the dormitories generally. That species of vandalism which exhibits itself in marking, marring, and in various ways defacing the walls and buildings, has almost if not entirely disappeared. Now, if it be intended by this increase of rent to improve the rooms, it is not a politic movement; students prefer to fix their own rooms according to their tastes and circumstances. They will have more interest, and will take greater pride in the care of them than though the college bore the expense of improvement, and the rooms would thus be preserved in better condition.

We can not, therefore, see the advantage to be gained by this method, and submit that it is not only unwise, but it is unfair to the upper classmen who by their long connection with the school, have superior claims to the better rooms.

THERE IS justly felt a considerable pride in the "M. A. C." base ball team. (This has no reference to the game with the university team.) It has achieved a considerable degree of success for a ball nine at this college, which has never been noted for such attainments. Its success has also resulted in awakening some interest in other athletic sports, enough so to give birth to our first field day, which was held on the grounds June 14th. Although it was a failure in point of visitors, except at the ball game, it was a gratifying success in point of games.

It is to be hoped that this interest may be kept up, and the field day become a permanent feature of the college. But this can hardly be expected, and the occasional interest manifested in such matters must continue to be more or less spasmodic so long as the present system of compulsory labor is in vogue; for students have neither the time nor the inclination after three hours labor daily, to engage in the necessary systematic practice to attain that proficiency which will keep alive interest in the sports.

UNLESS PAST experience be no criterion, we as students are soon to enter upon another of those periods which are such important features in college society; namely, a sort of petty warfare to obtain membership among the different literary societies, from the incoming class.

Although the rivalry in this matter almost always becomes quite fierce, yet it is not to be deplored in so far as it does not go to extremes and produce open quarrels and the destruction of friendships, for it is this competition that keeps alive our literary societies, and gives vigor to that life. It is through the influence of this, that the best work is done in the societies to build up and maintain their reputations; and thus do the members derive the greatest benefits.

The competition is good practical experience, and aids in developing the ability to read character and contend with human nature. But in conducting such matters we should be careful not to allow our passions and prejudices to exercise undue control over our better judgments and reasons. Act the part of men; all strive honorably and to the best of their abilities for the good of their societies, as all not only have the right to do, but are in duty bound to do. If we adhere to these principles, no one will be harmed, but all will be benefited by the strife.

THE DIFFERENT departments are from time to time engaging men to work at extra jobs on the college premises, paying them from one dollar and twenty-five cents to one dollar and seventy-five cents a day of ten hours. Many of the students have on Saturdays requested work on these jobs at the same rate of pay as the men are receiving, but have been refused because the rules do not allow paying students more than eight cents an hour. Although there may be objections to allowing more than the usual rate for all kinds of extra work, yet we fail to comprehend why the student who is able and willing to work with these men should not receive equal pay. In fact it would seem no more than right that they should have the first privilege to work on these jobs. It should be considered a duty by the authorities to thus aid needy students who want to work, and who, providing they receive the same pay, will do just as good, if not better work than those Dutchmen are doing, who shirk worse than the students, as a whole, ever thought of doing. What difference does it make to the state whether this money be paid to the students, or to a lot of ignorant foreigners? Let us have "protection from foreign competition." The college may thus assist and encourage students who are trying to pay their own way, without any detriment to the institution.

NEXT TERM, it is confidently expected, a new class will enter college. Should former customs be revived and continued, more or less hazing will follow. But the severe check received by such practices last fall, will effectually prevent any very violent demonstrations in that direction in the near future.

But to hope that the practice will disappear altogether, is to hope that there will be a radical change in human nature before the beginning of next term. So long as such consummately verdant, and at the same time preposterously wise, freshmen, enter the precincts of college life, as are usually seen here, so

long will the sophomore element of college society enjoy fun and practical jokes at the expense of such freshies. And it undoubtedly serves "to brace up" such fellows.

Although the students signed no paper to that effect, there has been more or less of a tacit agreement among them, that all hazing should and must be discontinued. The class of '85 that did so much in that direction last fall will with the assistance of '86 continue the good work if necessary. And we have, therefore, no hesitancy in saying that the freshmen who conduct themselves properly need have no fears of ill-treatment at the hands of upper class-men.

THE CLASS of '83, in its overflowing love and patriotism for its Alma Mater, and more especially in its commendable desire to perpetuate its own name and supposed glory, donated to the college a handsome fountain, which, of course, was expected to be kept in working condition.

The fountain, however, has been running in a proper manner but a few times this year. A member of '83 returning to the scenes of his college days, would hardly have a very enthusiastic regard for the manner in which this beautiful addition to the ornaments of the lawns, is managed. Is it any one's fault? If so, can it be remedied?

Since this article was written, it has been learned that water for the fountain has been plentifully supplied, but that the students or some barbarians have stolen the nozzle, in consequence of which the fountain cannot be worked. A new nozzle has been ordered.

No one, however, has taken the pains to purloin the fungus growth and other disgusting foreign matter which has been allowed to collect in the basin of the fountain.

A MATTER that is attracting the attention of all who are in any wise interested in our college, is, how can we increase the number of students?

It is well known that a very large proportion of our students are drawn from the agricultural classes; and the many students who have taught district schools during the winter vacations, can testify to the large number of young men throughout the State, who much desire to attend the college, but who, unless they are so situated as to attend a good high school, are unable to fit themselves to enter college.

Why, then, could not this matter, in a great degree, be remedied, by establishing here a short preparatory course in grammar, algebra, arithmetic, and geography. The freshman class might thus be much better fitted to go on with the regular course than, in many cases, they now are. If necessary this could in part be conducted by the higher classmen. This is, we think, the only college in the State which has not some such a course. And therein, with the exception of the University, is explained why they have more students than are to be found here.

THE department at Washington has established a postoffice at this place, R. G. Baird, P. M. Hereafter all mail destined for the college will be addressed Agricultural College, Ingham Co.

The mail carrier will run a four-seated covered wagon, and will leave the college every day at 1 P. M.

While this is some improvement over the old system, it is not all that is desired. It gives a regular conveyance to and from the city, but brings us our mail only once a day. Should the carrying of passengers in time become sufficiently profitable to warrant two trips daily, we will then have two mails but the appropriations are not sufficient to obtain that at present.

MR. WALTER F. LANDRETH was the editor-in-chief elected for this year, but unforeseen circumstances prevented his remaining in college. Mr. Landreth is at present private secretary to President Wm. Whalen of the Whalen Consolidated Copper Mining Company, Chicago, Ill., and expects soon to start for the mining districts of Nevada. We are all very sorry not to have "Landy" with us through the remainder of the course. We miss in him a good friend and jolly fellow, and the paper has lost one who would have made an excellent editor. The SPECULUM extends to him, its best wishes for his success and happiness.

THE ATTENTION of students, and those connected with the college, is respectfully called to the advertisements in the SPECULUM, with the request that they consider the purpose for which they were inserted.

COLLEGE NEWS.

Prof. Carpenter is the father of another plump boy. President Abbot rejoices in several new dictionaries. At present, there are eighty head of cattle on the farm. Thirty sheepskins are now prepared at the Secretary's office. Three graduates of our college are officers at Perdue University.

The new house will be ready for Prof. Satterlee the latter part of August.

Prof. Cook's sister has been visiting him at the college for some time.

A good deal of tilling has been done on the farm this term, about 500 rods in all.

The next meeting of the State Board of Agriculture will be at Commencement time.

President Abbot will spend the coming vacation with relatives in New England.

C. B. Collingwood's leg was accidentally broken not long ago, while he was playing foot ball.

Mrs. Ella Baird Knappen and husband are spending a few weeks with her father, Sec. Baird.

Little Robbie Baird has been quite sick, which deprived his father, the secretary, of his vacation.

The basement windows of Wells hall are to be guarded against stones by iron window guards.

Hay and grass are a good crop on the farm this year, in No. 9 and 3 yielding over two tons to the acre.

The Freshmen held their class day at Pine Lake this year on July 25th. They report a "splendid" time.

The design of the flower bed southwest of the chemical laboratory is very appropriate, —'84 in a goose egg.

On last Friday evening, in the chemical laboratory, Dr. and Mrs. R. C. Kedzie gave a grand reception to the students who had been under the Doctor's instruction.

The dry weather has materially injured the crops on the farm. The oats are not filling well on that account.

The drouth injured the fine appearance of our lawn somewhat but it is rapidly regaining its former beauty since the rain.

The name of the moth, the larva of which did so much damage in the Saginaw valley, is *Agrotis fennica*, of the cut worm family.

Rodney Abbot, H. W. and W. S. Baird are going to Grand Traverse region next vacation, and live somewhat as Indians.

L. W. Hoyt, of '82, visited the college a short time ago. C. H. Eldridge, of '83, also visited the college about the same time.

The severe frost of May 29th destroyed the prospects of a grape crop. The vines are making a handsome growth, however, since.

On August 21st Ingham County Grange will have a picnic on the College grounds. Cyrus G. Luce is expected to deliver an address.

Dr. Beal has just received 2,000 specimens for the herbarium from Harvard. Harvard received them from Kew gardens, England.

A new sphingidae was lately discovered at the College. The anterior part of the wings resembled those of an American silk moth?

The Botanic Garden still bears the marks of last spring's freshet. Dikes are being erected to prevent such a disaster in the future.

Wheat in No. 10 is rather thin on the ground, but yields fairly. Clawson and Egyptian were the kinds sowed, and Clawson yields best.

Mr. C. M. Weed has presented to the faculty, for the degree of Master of Science, a thesis on the Food Relations of Birds, Toads, and Frogs.

The Entomological Department is about to issue a bulletin which will contain description of some new insects, and also new discoveries as to insecticides.

The family of the late Prof. W. K. Kedzie is on the grounds, also the wife of the late Prof. Robert F. Kedzie. They are spending a few weeks with Dr. Kedzie.

The road from the main highway to Trowbridge station has been laid out and paid for by the town. The College is anxious to see it put through, as it will be a convenience to it.

Prof. C. K. Adams, dean of the school of political science at the University, under the auspices of L. S. L. A., delivered an interesting discourse on Modern England, in the chapel, June 20.

The chimney to the boiler house is now completed. It measures 68 feet from base to top. The flue is $3\frac{1}{2} \times 3\frac{1}{2}$ feet. It is expected that there will not be so much smoke with this chimney.

The college has two fire companies at present, each composed of eleven men. With the water-works here, water has been thrown 80 to 100 feet up. This would be to the top of our highest building.

The barn, for experimental purposes, that is to be erected on the farm, will contain an office, feed room, and box stalls, for experimental feeding. Experiments in this line promise great practical results.

The present year has been remarkable for insect depredations in the N. W. States. The special offenders are bark and plant lice, as is shown by the number of inquiries sent to our Professor of Entomology.

Dr. Beal recently received from the Rural New Yorker, four heads of wheat and rye, hybridized. No two heads are alike. Three resembling wheat are well filled, while the one resembling rye has not a kernel in it.

The topographical survey of the college grounds has been continued this term, and now all grounds belonging to the horticultural department have been surveyed. It will take another year to finish the survey of the whole grounds.

Prof. Satterlee reports that the seedling strawberry called, by its originators, Lauer's Mammoth Excelsior, has proved very vigorous and productive the present season, and that the Cuthbert still takes the lead among the red raspberries in the garden.

Prof. Cook has sold his high bred Jersey cow to Judge Marston, for \$200. It is rumored that Prof. R. C. Carpenter is about to buy a thoroughbred Holstein. Did our Professors fall with their fast horses that they have gone to dealing in cattle?

Dr. Beal is having some cases made for the botanic museum. In one set of cases polished woods of different kinds are to be exhibited. He mentioned that the wainscot of Capital grange was made of 70 different kinds of wood, and that here is a good place to study them.

Dr. W. J. Beal, Prof. Louis Carpenter, and Mr. C. M. Weed are expecting to attend the meeting of the British association for the advancement of science which meets August 26th at Montreal, and also the American association which convenes at Philadelphia the following week.

T. H. Rees, once with '85, and his friend Mr. Forrester, a successful farmer of Williamston, who would not leave the farm for a salary of \$10,000, and who says a young man who throws corn over his left shoulder to the pigs won't make a successful farmer, visited the college a short time ago. Mr. Rees has been in West Point Military Academy two years.

The meeting of the executive committee of the State Agricultural Society, the executive committee of the State Horticultural Society, and the visiting committee of the State Grange with the State Board of Agriculture was held at the College June 11th. Interesting speeches were made by C. G. Luce, Philo Parsons, T. T. Lyon, Wm. Ball, and others.

At the June meeting of the State Horticultural Society, held at Bay City, Dr. Beal presented a paper on Science in Strawberry Culture. Prof. Cook had a lecture on Injurious Insects. Prof. Satterlee lectured on Neatness in Gathering and Marketing. C. M. Weed had a paper on the Food of Young Birds, and James Troop read one on the New Strawberry Pest.

The $\frac{1}{2}$ -acre experimental plats of wheat on the farm, although somewhat winter-killed, seem to indicate that the Champion, Wysor, and German Amber wheats are the best. Among other kinds sown were Rickenbrode, Bennet, Heize's Prolific, Zimmerman, and Arnold's Gold Medal. Several different kinds of potatoes are being experimented with on the farm this year.

The present system of boarding has passed through five terms without much trouble, which indicates its success. The stewards elected for next term are as follows: Club "A," R. M. Bates; "B," H. T. French; "C," E. R. Lake; "D," J. E. Hammond; "E," J. R. Newton. In the different clubs it has been deemed best to board but two cooks that do the work. At the present time the secretary of the college has charge of the board funds.

The new gravel pit, opened last fall east of No. 7, has proved more extensive and satisfactory than was at first supposed. The drive from the north entrance to the barns has been graveled, as well as soft places in the drives upon other parts of the grounds. A thin layer of the gravel is suitable for walks, and has been used to repair walks in some places. There is much more work of a similar nature needed in various parts of our extensive grounds.

The boiler house will be finished about October 1st. When the boiler house is completed it will contain rooms for the engineer, a shop for working in iron (blacksmith and pipe work), a room with steam engine, lathes, shaper, and tools for the machine work of iron in it; and a boiler room which will hold two more boilers than we now have. There is also a project for adding bath rooms to this building.

The improvements at the greenhouse consist of a new brick pit for wintering half hardy roses. Its dimensions are 36 feet by 10 feet; its depth is five feet. The whole is to be covered with sash. Also a brick pit in the palm house, to be filled with spent tar, in which to plunge the pots. The pit is floored with plank, under which the warm air can freely circulate. This takes the place of the old bed in which the plants were set in the earth on a level with the floor. The south end of the greenhouse is being reglazed and thoroughly painted. The entire exterior of the house is being painted in pleasing colors.

A fish station is to be established at the College. The dam across the Red Cedar has been substantially raised to give a sufficient depth of water. A canal has been formed leading to the flats back of the botanical laboratory, where three ponds will be formed for the fish: one very deep for wintering, and one two or three feet deep for summer, and one very shallow for breeding and feeding. Dikes are to be constructed along the river to prevent its flooding the ponds in a freshet. The State Fish Commissioners have agreed to make this their headquarters for German carp. The cost of the whole work will be about \$850, \$250 of which is furnished by the College. Prof. Carpenter and Dr. Beal are planning for an artesian well to supply fresh water for different fish.

The following notes are from the library: The department of veterinary science has received several valuable additions. Little's Living Age, complete, has been purchased and will be on the shelves during the fall term. The "Blaine Record" makes us long for a full set of Congressional reports.—We wonder where all our new books have gone; there is yet so much room.—Three of our recent purchases bear the coats of arms of former owners.—Watts's Dictionary of Chemistry, nine volumes, is the largest purchase in that department.—We were just too late to get volume one of the Nation. We are still looking for it.—The Queen, in her new book, has a fine engraving of the famous

John Brown, her faithful Scotch serving man.—Why should we wish to make our impressions of books public property? In order that people may be informed, some vandals resort to the process of interlining and adding marginal notes in pencil, and occasionally in ink,—a villainous practice. Don't! Remember it is a bit of ill breeding to impose our opinions when they are not asked.—The begonias grow well in our windows. The sun coaxes out the tints, making them unusually brilliant.—We shall miss some of the every-day readers of '84. They have set a good example, especially the class politician.—About \$1,200 is to be expended in books this year.

Natural History Society.

JUNE MEETING.

Mrs. Merrell presented a paper on the value of reports in the library.

A lengthy paper on Sea Weeds was read by Mr. Troop, who gave a description of this class of plants, and added interest to his paper (remarks) by exhibiting numerous specimens, which were collected by himself on the coast of Massachusetts. The paper was of special interest to the students of botany, who have not had an opportunity to study marine algae except from books.

Dr. Beal presented a paper of considerable length on the Torsion of Leaves. He spoke of the torsion in the leaves of cat tails, and other pond living plants. Some twisted one way, and some another. The cat-tail leaves almost always turned to the right, with the sun, perhaps the sun had something to do with it. The stem also twists in the same direction.

The paper states that the majority of the leaves of these plants turn with the sun, but that the gladiolus is an exception, and that some species of cat-tails vary.

The Doctor states that one cat's tail he has especially studied. He says "if the hair stands out straight, making the tail fearfully enlarged, a row is brewing. If the tail risks gracefully to the right, it indicates a playful spirit. If it comes to the left, the owner wants a piece of raw beef. If the tail is perfectly erect and not enlarged, with the tip bending one way or the other, the cat is in good spirit and has some strength left, but if the tail droops so that the end drags on the ground, and the tip turn to the left, the cat is starved, or has been beaten in a fight." "Thus," he says, "I have found it comparatively easy to decide the meaning of the changes of position of feline cat tails, but whether I understand correctly, the reason for the twist in the leaves of cat-tail flags, I am unable to tell."

Mr. Hoyt exhibited a magic camera of his own construction. It consisted of a tight box, with a tube the size of his lens coming from one side; inside was a lamp and a reflector to throw light on a picture or an object placed twice the focal distance of the lens away from the lens. The light was reflected from here through the lens onto a screen, showing the picture much enlarged. This was a product of the chemical club. It was thought by some of the Professors that they could make use of this in illustrating in the class-room.

JULY MEETING.

At the meeting held, Mr. Troop gave an account of some of the insects which are doing injury to the strawberry plants in many portions of the country. One of these is the crown borer (*Tyloclonus fragariae*), which has done much damage in some sections, but so far as known, has not made its appearance in this State.

Another of these pests is the *Otiorynchus ligneus*, which was discovered by Mr. Troop during the past season working sad havoc in the older strawberry beds of the college garden. This little beetle is a near relative of the crown borer, both of which belong to the family *Curculionidae*, and hence are closely related to the plum curculio. It has never been known before to do any damage to fruit, but this year has come in great numbers. It does its work while in the larva state, by eating into the center of the plant, causing the death of the plant in a short time. The paper was illustrated by drawings of these insects, showing the different stages of their development.

Dr. Grange, at the meeting on July 11th, presented the following "Notes on Ergotism." During the spring of the present year very startling reports came to us from the west of an outbreak of the foot and mouth disease, which created considerable excitement in cattle raising districts. Various theories were indulged in as to the cause of the disorder, at one time said to be the dreaded disease of the Old World, imported by two Scotch emigrants who were said to have brought it in their clothes. The emigrants were supposed to have come from infected districts. Again it was thought to be ordinary foot rot, caused by the irritating effects peculiar to the soil in the afflicted districts. The balance of testimony went to show that the disease was dry gangrene, caused by consumption of ergotized grasses.

The word ergot is derived from an old French word argot,

which means cockspur. Ergot is a parasitic disease of the rye and other grasses. It is common in wet seasons.

This substance, although used in veterinary practice in the treatment of certain disorders, if consumed in considerable quantities often produces very disastrous enzoötics, differing, however, in their apparent symptoms. 1st, it attacks the nervous system principally, throwing the animal into convulsions, from which it may not recover. 2d, it acts upon the arterial system, causing decrease in the calibre of the small arteries and capillaries to such an extent that the supply of blood is cut off from the dependent parts, which being starved, shrivel up, die, and eventually drop off. The ears, tail, and lower portions of the extremities are the parts generally effected, no doubt from the fact that the current of the blood in these parts has not sufficient force to overcome the stypitic action of the poison.

The effect of this drug is not confined entirely to cattle, but experiments have shown that swine, fowl, and other animals may be affected in a similar way. Even man himself is not exempt from the influence of ergot, as there are numerous records of endemics occurring in France and Germany among the peasants who ate large quantities of rye bread made of diseased grain. Gangrene of the hands and feet were the common symptoms.

The poison to be effectual requires to be consumed before it has lost its virtue by exposure to the air, which no doubt accounts for the great diversity of opinion which exists as to the poisonous effects of the drug.

Field Day Contests.

Welch threw Redman twice out of three times at sidehold wrestling. Hinebauch threw Sayer twice out of three times, at collar and elbow wrestling, and when he wrestled with Mathews, Mathews was under three times. At throwing heavy weights Hinebauch was ahead, throwing a 35 lb. weight 14 feet. Running jump, Hinebauch leaped 19 feet 2 inches. In the foot race, 100 yards dash, Osborne came out best. Bartmess was best at high kick, kicking 7 feet 8 inches; he also jumped farthest on broad jump, jumping 12 feet 4 inches. There was a foot ball game after this, the college eleven against a picked eleven.

Tug of war, '86 vs. '87, resulted in favor of '87. In the contest the understanding was that one side should draw the last man of the other side over the line; but after '86 had drawn '87 several feet, and been drawn nearly back, time was called, and then it was decided that if either side should draw the other four feet over the line they were to have the contest; '87 took its place to pull, but '86 failed to respond and the contest was decided in favor of '87. *Referee.*

The base ball game score was as follows:

LANSING NINE.									
NAME.	Pos.	At Bat	R.	I.B.	T.B.	P.O.	A.	E.	
Vance.....	p.	5	0	0	0	1	15	2	
Welch.....	1 b.	5	0	0	0	13	0	4	
Hinebauch.....	3 b.	4	0	1	1	4	0	4	
Sage.....	c.	4	1	1	1	9	3	2	
Lawson.....	c. f.	4	2	3	3	0	0	1	
Ross.....	s. s.	4	0	0	0	0	4	0	
Gammon.....	2 b.	3	0	1	1	0	1	0	
Mathews.....	r. f.	4	0	0	0	0	0	1	
McColloch.....	l. f.	4	0	0	0	0	0	0	
Totals.....		37	3	6	6	27	23	14	

UNIVERSITY NINE.									
NAME.	Pos.	At Bat	R.	I.B.	T.B.	P.O.	A.	E.	
Walker.....	3 b.	5	4	4	5	4	2	2	
Weatherwax.....	2 b.	5	1	2	3	1	2	2	
McMillan.....	s. s.	5	1	0	0	1	1	0	
Condon.....	l. f.	5	1	1	1	0	0	0	
Hibbard.....	p.	5	1	0	0	2	8	2	
Payne.....	r. f.	5	0	1	1	0	0	0	
Palmer.....	1 b.	5	0	0	0	14	1	1	
Bast.....	c. f.	4	2	1	1	0	1	0	
Smith.....	c.	5	3	2	2	4	6	1	
Totals.....		44	13	11	13	26	21	8	

Earned Runs—University 2; College 1. First base on errors—U. 9; C. 6. First base on called balls—U. 2; C. 1. Total called balls—U. 44; C. 83. Struck out—U. 9; C. 5. Total strikes—U. 36; C. 56. Left on bases—U. 4; C. 6. Two base hits—U. 2; C. 0. Double plays—U. 1; C. 1. Passed balls—U. 1. Wild pitches—U. 1; C. 2. Flies caught—U. 2; C. 1. Fouls caught—U. 2; C. 1. Time of game, two hours and fifteen minutes. Welch out on being hit with batted ball.

The score of ball games played after field day, is as follows. Game at Ionia, played July 4th:

	R.	I.B.	E.
College.....	4	1	0
Greenville.....	3	0	1

Pitchers—Kemp and Vance Umpire—Frank Greenville.

At Flint:

	R.	I.B.	E.
College.....	6	0	1
Flint.....	1	0	0

Pitchers—Vance and Cook. Umpire—McColloch.

PERSONALS.

THE Editor of this Department desires the earnest co-operation of the alumni in aiding him to fill these columns with interesting items. Give occupation since graduation, what offices held, whether married or not, etc. Let this receive prompt attention from every alumnus.

J. L. H. Knight, '81, is married.

A. C. Bird, of '83, is banking at Fentonville.

Jeff. H. Irish, of '82, is at Battle Lake, Minn.

F. J. Annis, of '75, is a lawyer at Ft. Collins.

W. R. Hubbert, of '81, has returned to Detroit.

W. E. Hale, of '82, is farming near Eaton Rapids.

W. C. Latta, of '77, boasts of being father of a girl.

J. W. Beaumont, of '82, has been admitted to the bar.

M. A. Smith, once with '85, is stock raising in Dakota.

T. O. Williams, once with '85, is farming near Allegan.

Wm. Bahlke is taking a course in elocution at Chicago.

J. Doronan, once with '78, is on the Detroit police force.

W. D. Watkins, once with '85, is in a bank at Union City.

Wm. H. Parker, once with '86, is now at Ida Grove, Iowa.

F. E. Delano, of '82, is farming in Oxford, Oakland county.

Archie Miller, with '85, is farming at Schwartz Creek, Mich.

H. H. Granger, once with '85, is farming at Sherman, Mich.

A. A. Crozier, of '79, is taking a special course at Ann Arbor.

J. T. Root, once with '80, is a prosperous farmer at Plymouth.

J. E. Coulter, of '82, is superintending a large farm in Minn.

L. H. Harrison, with '85, is in his father's store at P. w Paw.

Arthur C. Stebbins, with '80, is practicing medicine at Caro, Mich.

C. E. Kelley, once with '84, was married June 24th, at Berlin, Mich.

W. W. Palmer, of '81, is a successful farmer near Garrison, Iowa.

John E. Simonson, of '74, is Prosecuting Attorney of Bay county.

W. T. Langley, of '82, is farming at Constantine, St. Joseph county.

M. A. Jones and A. J. Chappell, '82, are taking a normal course at Olivet.

C. P. Cronk, of '79, is at the Signal Service Station at Cape Henry, Va.

W. S. Hough, once with '83, has gone to Europe to study philosophy.

B. S. Palmer, of '81, is doing a flourishing business as dentist, at Paw Paw.

Miss Alice Weed, of '82 is to teach in the Lansing schools the coming year.

R. M. Brooks has removed from Wacousta to Ashley, and is still farming.

Frank Storrs, once with '85, is now in a drug and news office at Muskegon.

Frank Carpenter, of '73, is doing a successful law business at Grand Rapids.

Wm. Thurm, once with '84, is still in the drug business at Grand Rapids.

Geo. A. Royce, of '75, is a dealer in pine and mineral land at Baraga, Mich.

G. M. Allen, once with '86, has settled down to married life at Harvard, Ill.

W. D. Morse, once with '85, will teach the Middleville school the coming year.

H. A. Brown, with '86, is managing his mother's farm at Breedsville, Mich.

C. B. Plummer, of '82, is in the lumber business with his father, at Harbor Springs.

James A. Porter of '77, is a farmer, bee-keeper, and editor at Boulder, Colorado.

C. F. Davis, of '80, is highly spoken of as Professor of Chemistry at Ft. Collins.

M. W. Clark, once with '86, is attending college at the University of Vermont.

W. D. Bowser, once with '86, is now bee-keeping at Woodland, Barry county.

G. C. Nevins, of '73, is principal of schools of Duncan, a suburb of Cheboygan.

Chas. D. Prichard, with '87 one term, is now attending college at Valparaiso, Ind.

Jeddie Smith, of '83, has accepted a position as assistant engineer for the city of Niles.

F. S. Sleeper, deceased, of '68, willed his collection of plants and beetles to the college.

E. J. Rauchfuss, of '79, is selling agricultural implements for Bement & Sons, of Lansing.

P. H. Felker, of '71, is editor of the St. Louis Grocer, a monthly published at that place.

Sherm. Upton, '81, has tired of chalk-talk and goes to Dakota to engage in business with a friend.

Will Bristol, once with '83, is now studying law in the office of W. R. Hindrick, at East Saginaw.

James L. Morrice, of '73, is county treasurer of Emmet county, and is a very efficient officer.

Dr. J. Groner, of '74, is making his mark in his profession and getting a fine practice at Big Rapids.

Cyrus Crandall, of '80, is nominee for county clerk, Lenawee county, Fancy Cyrus on the stump.

Robert B. Barbour, three years with '82, is improving in health, and lately visited the college.

A. W. Troupe, of '81, has settled as M. D. at Springport, Jackson county. Is Troupe married?

S. D. Fellows, once with '78, is now timekeeper on the Michigan Air Line of the Grand Trunk R. R.

And slowly they are gathered in. Dwight A. Harrison, of '68, who was recently married at Paw Paw.

Boyd Skelton, who was two years with '74, is a successful farmer and miner at Greeley, Colorado.

D. F. Griswold, of '75, made a large quantity of maple sugar last spring, from trees set by his father.

T. F. Milbaugh, of '81, is in the drug business at Walden, N. Y., but hopes sometime to be a farmer.

J. M. Hollingsworth, of '82, manages a fruit farm and vegetable garden at Sheridan, Montcalm county.

Prof. Cleveland Abbe, who was once instructor in mathematics at this college, is also in the Signal Service.

L. H. Bailey, of '82, assistant to Dr. Gray at Harvard University, is also taking special studies in botany.

Arthur Jones and H. A. Price, of '81, have entered into partnership with Clink, an old attorney of Muskegon.

C. B. Fisk Bangs, '76, has at last returned to his first love, and is now engaged in bee-keeping at North Lansing.

Wm. Lightbody, one term with '87, has been kept from college by sore eyes. He intends to return next year.

S. M. Millard, of '64, is one of the trustees of the Illinois Industrial University, and a successful lawyer at Chicago.

Frank Bacon, who was at the college as a special in '78, is now a farmer and county examiner of Barry county.

F. F. Rogers and Eugene Law, of '83, are meeting with excellent success as surveyors at Marlette, Sanilac county.

Prof. W. W. Remington, of '80, at Ft. Collins, with his family, goes to the mountains for a month or two of recreation.

F. R. Osborn, two years with '85, graduated this year at the State Normal. Here's wishing his return to the M. A. C.

J. K. Gailey, of '74, has an extensive medical practice in Detroit, besides being superintendent of Harper Hospital.

O. Clute, of '62, is giving instruction in apiculture the present season. He is also president of the Iowa association.

C. W. Garfield, of '70, is one of the commissioners to look to Michigan's interest at the coming exposition at New Orleans.

A. G. Gulley, of '68, is raising seeds for D. M. Ferry, at South Haven, on a contract. He says he wants to vote for Butler.

Fred Brown, with '76, is surveying and looking land for the Detroit & Mackinaw R. R., with his headquarters at St. Ignace.

W. S. Holdsworth is sketching from nature in the Grand Traverse region. He says he intends becoming a cultivated tramp.

R. Haigh, of '69, is working for the Michigan Mutual Life Insurance Co. He calls it missionary work, as it is about as thankless.

R. T. McNaughton, of '78, continues in the real estate business at Jackson. He also carries on a vegetable and fruit farm at that place.

Herbert Bamber, of '81, is at his old home at Highland, Oakland county, for a vacation. He is in the employ of the U. S. Lake survey.

D. S. Lincoln, of '81, has married the nicest girl in the country, and is successfully practicing his chosen profession, horticulture, at Big Rapids.

Arthur Lowell, of '74, is in Coopersville. He is not yet married, but the man he boards with is very anxious to have him "jump the broom-stick."

Prof. C. E. Bessey, of '69, of the Iowa Agricultural College, has been offered the professorship of Botany and Horticulture at the Nebraska University.

All the Agricultural College alumni in Ottawa county, except "Kit" Harper of '73, are solid for Blaine and Logan. Kit is now, as he always was, for reform.

W. F. Hoyt, of '82, who has spent the past year at the Starling Medical College at Columbus, Ohio, is engaged at present in the hospitals of that place.

Prof. S. M. Tracy has been appointed superintendent of plants and trees at the World's Industrial and Cotton Exposition, to be held at New Orleans this year.

A. H. Phinney, of '70, is now one of the chief owners and business men of the new town of Ashley, on the new railroad between Owosso and St. Louis.

Albert Dodge, of '77, has a wife and three-years-old girl at Fowlerville, Mich. He is doing a successful business as lawyer and real estate agent at that place.

Walter Lillie, of '81 has been admitted to the bar, and is now conducting a very successful business. His friends talk of running him for county commissioner this fall.

James Cassidy, who was once florist at this college, now Professor of Botany and Horticulture at Ft. Collins, Col., has had his salary raised \$200 for the coming year.

G. W. Park, of '86, will return to college next term. He is editor and publisher of the oldest floral magazine in the country, also runs an extensive seed farm at Pinnitsburg, Penn.

Frank Benton, of '79, is no longer connected with D. A. Jones, but has entire charge of large apiaries in Syria, Cyprus, and Germany, where he is principally engaged in raising queens.

B. A. Nevins, of '75, had a narrow escape, and received quite an injury. He jumped from a barn door, to escape falling timbers, striking on a stone pavement, and was severely injured.

Edgar Grimm, of '83, is Professor of Agriculture and Chemistry at the Oregon Agricultural College. He gives the best of satisfaction, his salary being raised \$200 for the coming year.

E. M. Shelton, of '71, is showing much enterprise as Professor of Agriculture in the Kansas Agricultural College. It is very common to see notices of his good work by the Agricultural Press.

Prof. Frank A. Gulley, of '80, is expected to visit the college in August, while on his way to attend the meeting of the Society for the Promotion of Agriculture at Philadelphia, being secretary of the society.

Benj. T. Halstead, of '73, is doing a successful law business at Harbor Springs. He is supervisor of his township, member of his school board, and prosecuting attorney. He does not aspire to any office this fall.

Chas McKenny, of '81, spent his first year out of college loafing. Since then he has been teaching in the grammar department of the Charlotte schools. He has the honor of being the only gentleman in Michigan working with a lady superintendent.

J. P. Finley of '73, has been promoted to Lieutenant in the U. S. Signal Service. He has charge of the Bureau relating to tornadoes. Ninety-five (95) per cent of his predictions on this subject proved true. He has charge, also, of the publications of the Signal Service.

D. H. Kedzie, of '76, is still in the newspaper business at Grand Haven, and has a \$25,000 libel suit on his hands, brought on by the oil inspector. Kedzie puts in his odd time bucking up delinquent subscribers, and inquires if the editor of the Speculum has a snap on that job.

Roswell Lillie, '70, enjoys a lucrative law practice at Coopersville, and is a member of the firm of Lillie & McNaughton in the sale of agricultural implements, and is doing a large business. Mr. Lillie married Miss Mary Bennett of Ann Arbor, in 1873. His family is now complete with two children, a boy and a girl.

Prof. Charles F. Davis of Ft. Collins, has been making analysis of "Irrigating Water," to determine the amount of fertilization the land receives through the season by reason of irrigation. Also analyzing Colorado grown corns compared with those grown in the east. He is also making a series of soil temperature observations to see and study the effect of irrigation on temperature, and how long such effect lasts, this work being peculiar to Colorado.

Prof. C. L. Ingersoll, of '74, has closed a very successful year as President of Colorado Agricultural College. In two years he has built up the school from 17 students to 77, and put the school, largely through his efforts, on a firm financial basis. The school this year secured about 94,000 acres of land which is now being located, and having a continuous support of one-fifth mill tax on the State valuation. This gives the school such support that it is not forced to beg once in two years for its life sustenance. Prof. Ingersoll was also unanimously reelected treasurer of the board of education for two years. The college sent out its first graduating class of three, all native Coloradans.

Frank P. Davis, of '68, graduated with the civil engineering class of the Michigan University in '76. He was then appointed as engineer on Public Works, under Col. Casey, at Washington, D. C. He resigned that position to accept that of resident engineer on the Denver & Rio Grande R. R. In 1882 he accepted the position of locating engineer on the Canadian Pacific R. R., which position he retained till work was given up in 1884. He then took position as chief engineer of the Jackson & Cincinnati R. R., with headquarters at Jackson, Mich. That railroad not being pushed to completion he recently accepted a position as city engineer of sewers for the city of Washington, D. C.

COLLEGES.

The Persian language is now taught at Cornell.

The new telescope for Albion college will cost \$5,000.

Oberlin has received fifty thousand dollars to found a school of music.

Vermont school teachers are prohibited by law from the use of tobacco.

The first medical school in the Christian world was founded at Salerno, in 1150.

The Ohio State University held its commencement exercises, of this year, in a grove.

Professor John Trowbridge of Harvard, has written a book entitled "The New Physics."

The total attendance at Oberlin college is 1,474, of which more than one-half are ladies.

The editors of the "Dartmouth" of Dartmouth college were indefinitely suspended by the faculty.

Harvard students have a swimming tank in their gymnasium. While we long for bath-rooms in our dormitories.

The University of Nebraska held its commencement exercises in the representative Hall of the State House.

The Freshman class of Cornell has representatives from Germany, Spain, Russia, Australia, Canada, and Central America.

The High School of Philadelphia confers the degrees of A. B. and A. M., without requiring the study of Greek or of the Commentaries in Latin.

At a mock convention held at Oberlin, the students netted one hundred and sixty-five dollars. The money will be used to fit up society rooms.

A number of the leading colleges are forming student's coöperative societies, for the purpose of obtaining students' supplies at reduced rates.

President Thompson of Rose Institute, says that "all attempts to organize industrial work in connection with academies and colleges have failed."

A number of changes has been made in the curriculum at Harvard, and at Yale, so as to give more freedom to the undergraduates in the choice of studies.

The seniors at Blackburn University have erected a fine monument on the college grounds. The names of the members of the class were placed on the stone.

The Southwestern University of Texas, boasts of a lady student, who during the three years' attendance at college, has been absent from classes but one day.

We are indebted to Mr. Voight, of '81, for a copy of the "College Review." The paper is published at the University of Southern California. This University graduated its first class this year.

It is said that the majority of students attending King College are from a distance.

Professor Huxley says that "nothing should be called literature which does not contain the expression of some noble trait in language that touches the hearts of all men."

During the class exercises, of '84, at Franklin and Marshal colleges, while the prophecy was being read, each member of the class filled a clay pipe with tobacco and smoked until the prophecy was concluded. The pipes were then broken.

The classes of '84 in the several colleges in Michigan number as follows: University 261, of which 102 were from the literary department. State Normal 95. Hillsdale 22. Albion 22, eleven being from the literary department. Adrian 9. State Agricultural College 30.

The senior class at Allegheny college requested that some noted orator be engaged to speak at "commencement," instead of having the usual exercises. The faculty did not grant the request, but by way of a compromise, we suppose, they cut the time for commencement orations down to five minutes.

The societies of the Ohio State University held their commencement privately, and a large number of the students went home immediately after their examinations. But little interest was taken in commencement, owing to the dissatisfaction among the students regarding certain actions of the president and faculty.

Cornell has another mummy. The body is that of a certain Peupi who lived 800 B. C. It is the gift of Mr. Pomeroy, United States Counsel in Egypt. The Fortnightly Index says: "We are sorry to learn that the astute sophomores of Cornell mistook this mysterious Egyptian for a freshman, and are now wearing bits of his garments as trophies of their very reprehensible attempt at hazing."

EXCHANGES.

The "Aurora" from Iowa Agricultural College, is on our table for the first time.

Every member of the faculty of Amherst college is a graduate of that institution.—*Ex.*

During this summer a crowd of nine Princeton professors will make a raid on Europe.—*Ex.*

During the last eleven years Yale has graduated 916 free traders, and only 34 protectionists.—*Ex.*

The richest University in the world is that of Leyden, Holland. Its real estate alone is worth four million dollars.—*Ex.*

Our late exchanges have been unusually interesting. Most of them are commencement numbers, containing commencement orations, and many other able literary articles.

Several of our exchanges come to us with a hurrah for Blaine. The "College Speculum" is not a political organ, but we will say that the majority of its editors are Cleveland men.

The "Lantern," one of our best exchanges, reports a stormy year at the University of Ohio. The president is severely criticized in regard to his method of teaching, and is accused of unfairness in his examinations.

Nearly all of our exchanges are monthlies, and we see no reason why our paper should not also be made a monthly. If necessary those upon whom most of the work falls, should be excused from a part of the class rhetoricals in order that proper attention may be given to our college paper.

We clip the following from an interesting article in the Oberlin Review, on "Western College Oratory:" "In the first place westerners choose themes differing from those which we usually select. In general, our western brethren are wide-awake. They search for something new or intensely practical. We traverse the same old valleys and gorges that our forefathers have traversed before us. Clearly the productions will be different. We plan, and argue, and combat, and arrive at conclusions that a thousand minds have reached before us in a much more satisfactory manner. They come forth with something newer, more striking, not requiring much of a plan, or line of argument, but which we have scarcely thought about. Now, judge for yourselves whether they or we choose the best themes." * * "Their style is more an imitation of Addison; ours of Johnson." "Our western brethren are more sensible in their delivery than we think. They do not count delivery as one-half, but only as one-third. This lessens the tendency to strive merely after the dramatic. * * * Earnestness is visible in their movements and words, but scarcely ever is there passionate earnestness. On the other hand, the writer says that the western orators are "perhaps too practical, that they neglect the historical, place undue reliance on expression, lack in unity, distinctness, and definiteness of plan."

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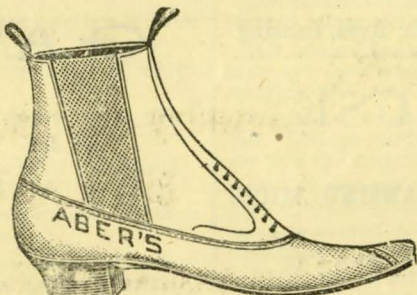
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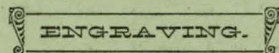
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