

# THE AURORA.

"SCIENCE WITH PRACTICE."

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## A QUERY.

Is life worth the living?  
Is joy worth the giving?  
The hardships required to obtain it;  
Is the fruit and the flower  
Worth the storm cloud and shower  
We must suffer before we can claim it?  
  
Is the knowledge we're gaining  
By difficult training  
Worth the labor expended each day?  
Is the joy and the gladness  
Worth the heart-ache and sadness  
That dearly darkens our way?  
  
Is the turmoil forever  
Of human endeavor  
Worth the life that is lightsome as breath?  
Is the silvery stream  
Of life's trifling dream  
Worth crossing the river of death?  
  
Is the students devotion  
To text books a potion  
That makes the brain reel with despair.  
Worth the wisdom we wonder?  
That we get when we ponder  
And think into such trouble and care.  
  
Yes life's worth the living.  
The getting and giving  
Repay us a great many fold.  
The knowledge we're gaining  
Bespeaks a joy reigning,  
Its value can never be told.  
  
Yes the joy's worth the pain  
That it costs us to gain,  
As the rich loaf is well worth the leaven,  
The heart-ache and sorrow,  
The trouble we borrow  
Will be o'er paid by the pleasures of Heaven.

## JUNIOR EXHIBITION.

While other colleges are holding their commencement exercises in the "leafy month of June," our institution closes for only a three weeks vacation. The closing exercises, consisting of orations and music by the members of class '84, was the crowning event of the term. At an early hour on the evening of June 27th, the chapel was crowded with visitors from far and near. The Biennial Alumni meeting served to augment the numbers.

The chapel was tastefully decorated by class '83. Each graduating class was remembered by figures of "living green" placed on the wall, representing the years in which they graduated, while over all was "Welcome Alumni" in large letters. Across the stage in front was the class motto of '84, "*Virtute et Labore Vincemus*," in beautiful immortelles, while the whole was interlined with a broad band of smilax. In the center of the stage, immediately above the speaker, was the verdant horseshoe with " '84" suspended in the center for good luck. The heavy tinted curtains in the rear were laden with gay festoons of evergreen and roses, and the whole presented a harmonious and agreeable sight, for which much credit is due Mr. Keffer and his co-workers.

At eight o'clock the speakers marched upon the stage accompanied by President Welch and Prof. Wynn. Their appearance

was received with applause, and the usual two varieties of programmes. The audience was silenced by an earnest invocation by Prof. Wynn. The brass band then played a piece which, owing to its shortness, put the audience in good humor.

Mr. Geo. R. Chatburn, of Shelby County, was the first speaker introduced, and proceeded in an entertaining manner to discuss the practical subject, "Vocation." He said:

"Just how to live is the fundamental problem of the Universe. To solve this problem should be the highest aspiration of every life. The choice of a profession should be made in accordance with a person's physical, mental and moral abilities. Every one has some dominant talent, hidden it may be by adverse inclinations, but it is there, and if properly educated will govern the treasures which insure a successful life.

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'By virtue and labor we shall conquer' all the enemies of success, and finally wear the crown of laurels due to honest toil."

Mr. Chatburn is a pleasing speaker and did himself much credit.

Mr. L. M. Garrett, of Polk County, followed with a closely written production entitled "Letters Immortal." He said:

"There was a time before ever an epic poem was written or a tragedy produced by the genius of man. It was a time of vast and powerful empires; populous and wealthy cities, inhabited by ignorant and benighted people.

\* \* \* \* \*

When we ask what was achieved by these generations of thinking beings, whose natural genius was as bright as that of the Greeks, we are told that they built the pyramids of Memphis, the temple of Thebes, the tower of Babylon. But how brief is the immortality which the work of our hands can confer.

\* \* \* \* \*

But despite the wreck of time and the devastation of man the literary genius lives on forever."

Mr. Garrett is at home on the platform, and ably sustained his reputation as an effectual speaker.

Music—Mr. W. H. McHenry and his violin delighted the audience, after which the

President introduced J. F. Armstrong, of Marshall County. He delivered an excellent oration entitled "The Death of a Century." We quote as follows:

"But spite of storm and cloud and thunderings unuttered now; and spite of the clamor of partizan statesmen and the din from an unthinking populace, the clouds break away, and Columbia is unveiled, outlined against an azure sky, a nation such as God himself can look upon, and looking bless.

It showed evidence of careful study and was delivered in a rich orotund voice.

Miss Olive Weatherby of Crawford county, next followed with an oration, subject "The Gospel of Rest," which showed careful thought.

Miss Weatherby spoke in a clear way that was pleasing to all.

Mr. Chas. Clark, of Colorado, was called for, but owing to sickness, much to the disappointment of all, he was unable to respond. His subject was "The Pillar of State," and Mr. Clark has permitted us to make a few extracts.

"Government is the product of mind and necessity. The latter exists now no more than in ages ago, but mind in its growth has given to government and is giving to-day such a stamp as makes it liberal, grand and real. \* \* Rome ruled, the queen of nations, yet her power though seeming grand and stable, fell at last from the giddy height, to which it had been carried because its foundation was not laid in the cultured intellect of men. \* \* \* \*

In our own America we see the embodiment of the true and good, the dreamland of Utopia with all its harmonies and happiness has dawned in reality and lives in our land the "Ideal republic."

Mr. C. H. Sloan, of Taylor county, was introduced with the subject "British Oratory." The thought was good and the enunciation was clear, we quote as follows:

"No, the mission of oratory has not been withdrawn from the world, but it lingers in a sad decline. The press rules in its once glorious realm. A materialism that gives no incentive to the soul-inspired, no impulse

to the chord that vibrating awakens in the human heart the deathless spirit truth, creeps like a fatal sleep over the modern mind.

"And we peering through the utilitarian mists may see the light of a Pitt, a Fox or a Burke shining like the lingering gleams from a constellation whose fire has long been extinct."

Miss Edna Bell, of Cedar county, gave an original poem entitled. Looking Worldward which was one of the most striking exercises of the evening. It told the story of a girl who had a pleasant home but desired on arriving at maturity to go out into the world and "do something for herself." But popular opinion thought that a woman should not choose a regular life work like her brother. "Her best place is by the fireside sheltered from earth's toil and pain." She pleads to take her place among the workers as well as the stronger sex. It won much admiration for Miss Bell.

Mr. McHenry and Miss Goode gave us some good music after which Mr. H. G. Wise, of Fremont county, was next introduced and gave us "The True Incentive," in a very excellent manner. Speaking of man under the influence of the true incentive, love, he said:

Filled with its idealistic thoughts, he has bounded off into the realms of infinity, made the universe his laboratory, his chapel at the throne of the Almighty."

It was one of the most artistic efforts of the evening.

Mr. C. Vincent, of Mills county, in an oration entitled "Christianity and Buddhism" made a strong plea for Christianity. Mr. Vincent did himself and class much credit. We print the oration in full in another place as the applause it received shows what scientific students think of Christianity.

Miss Addie Rice closed with "Harmony not Discord," one of the most excellent orations of the evening. She said:

"To the uncivilized the rarest symphony is but a tiresome discord, while to the intelligent musician it is divinely harmony. So to the ignorant followers of a blind faith science and religion are in sad conflict, while to the intelligent investigator with unbound-

ed faith that each new discovery will add to the glory of his God, there is a grand harmony." Miss Rice is a deep writer and a pleasant speaker.

The exercises throughout were marked by the evidence of careful training and were well enjoyed by all. The present Junior class numbers 38 clear headed earnest men and women, who are doing credit to themselves and honor to the institution.

## CHRISTIANITY AND BUDDHISM.

C. VINCENT.

Humanity lives in the future. Its hopes are its incentives. Its anticipations are its joys. Life is but a span. It is joyous or sorrowful; pleasurable or painful; a Heaven or a Hell. Youth is full of buoyancy and vigor. Age is replete with weight of years and the weakness of decline. On every hand is seen the dawn of life coupled with the decay of beauty and the infirmities of age. Here is the strength of manhood and the decrepitude of advancing years. In all, nature teaches the lesson of ceaseless change. From the blue eyes of spring, fringed in luxuriant lashes of green, the sparkling dew departs on the first morning sunbeam. The lark, springing from the meadow's blooming breast, hymning her morning carol to heaven's door; the woods that cover the hillsides with refreshing shade, and from whose leafy bowers a multitude of feathered songsters warble forth strains that thrill the soul of the listener with ecstatic joy; the pine, waving like a plume upon the mountain side; the eagle, from his eyrie throne, glorying in his strength,—all speak in no uncertain tones, of life rising to its zenith, only to sink and disappear in dark and dreary oblivion.

Shall man so drop behind the somber veil of death, or is he an exception to the law of progress and decadence?

Eternity is the problem awaiting solution, and one which each must solve for himself. Countless thousands have wrought at the mystery and have carried with them the record of their triumph or defeat, leaving behind them nothing save the fascinating secret, no key to guide the coming myriads. From the grave no answer comes to the repeated

questionings of man. In vain the longing heart seeks a reply from the speechless tomb. We live, we hope, we fear. "The golden bridge of life from gloom emerges and on shadow rests." Love is immortal and bids us hope. All nature points to an active future for man. In all the boundless universe, filled with revolving spheres, not an atom is lost; the beautiful and the useful come forth from the chemist's crucible; the soul shall ascend from its gross surroundings to live and grow in power and beauty through the never ending cycles of eternity. As hope whispers it, and reason teaches it, and life proves it—man believes it. Upon this belief, universally planted in the heart of man, is founded all systems of religion. All possess germs of strength, all have elements of good.

Of the many religions that have controlled man in past ages, the Christian and the Buddhist are the great survivors. Buddhism is five centuries the older and controls the religious thought of one third of the human race. From the lotus groves of India; from the teagreen gardens of China; from the snowcapped crests of Hymala; from the ice-fields of the north to the burning sands of Araby, swarm the disciples of Gautama and Nirvana is their goal.

Its author, Buddha, was born a prince and reared amid all the luxury of an oriental monarch. Wrapped in the silken folds of voluptuousness, living in unrestrained pleasures, he knew nothing of life beyond the licentious court, until in the prime of life his eyes were opened to see the miseries of his race, when he retired to solitude, and mused with himself for seven years the secrets of the dreary past oblivion, the secrets of the gloomy coming silence. He then returned and taught that life was a misfortune; that the future was an endless round of transmigration, except for those who attained Nirvana where the silence lives—a state of absolute peace—extinction. Love for humanity was his theme. "The world was his country, to do good was his religion," but this short life was all if man could reach Nirvana.

Immortality is the magic word Hope has ever been whispering to Love, but Buddha

sees only the mortal in the universe, he perceives only material power and not the Guiding Intelligence controlling the harmony of creation. Hoping for, praying for, expecting annihilation there is no incentive to mental labor, no desire but to mitigate the miseries of life and pass to sinless, peaceful rest in the upper heaven, where is vacancy, destitution of all properties and negation of all thought.

Faith in his religion has made the Buddhist a servile slave to kings and priestly power. His highest ambition is to wrong no one, deal justly and pass to Nirvana; it has kept him stationary in his attainments; for centuries the cycles of life have revolved but not advanced, keeping the Buddhist forever amid a round of false pleasures, and sorrows that are not false. Conservative throughout and held in the bonds of superstition, the orientals oppose modern civilization for the old systems are sufficient to secure passage to Nirvana.

Faith in his religion has made the Christian supreme in the world of thought. For him the possibilities of life are ever widening with ever increasing ratio, till now the wonders of the nineteenth century stand on every side, every moment sparkling with some new gem of attainment, enduring testimony to its living force and progressive nature. We look in vain for any token of advancement among the adherents of Gautama. The Indian rushlight shines brightly in contrast with primeval darkness, but even the intense and classic light of ancient Greece pales its ineffectual glow in the brighter splendor of the noonday sun of Christian civilization. Life to the Buddhist is misfortune, a station on the road from shadow to gloom. To the Christian it is fortune, the college of the present, the school of the future, the kindergarten of eternity. The virtues of Buddhism are negative. Bound in the ever tightening coils of superstition, its devotees are groveling amid the poisonous swamps of moral degradation, lower than those from which centuries since Christianity lifted the western world. Buddha, though just and pure, presents no incentive to high morality or intellectual culture: Christ lifts

man from ignorance to knowledge and fires his soul to fathom the infinite. Buddha is good; Christ is God.

I plead to-night for Christainity at whose magic touch justice, truth, purity and love stepped forth, the guides to human action; for the religion that has opened to our view the hidden secrets of nature, and teaches us to interpret aright the ages which are but the pulsebeats of eternity.

I plead for Christainity because it has never polluted a single life; because it has advanced the world from chaos to order; from barbarism to civilization; from weakness to power; from vice to virtue; from brutal passion to perfect self-control.

I plead for Christianity because it sprang into the arena when all others had signally failed, and which snatching up the trailing banner of morality and love, bore it in triumph aloft, and which is now guiding humanity in ever ascending circles up to the source of all wisdom, truth and love—God.

#### ARE COLLEGE COURSES IMPRACTICAL?

There is at the present time quite a stir in the educational world concerning the value of collegiate education and the utility of education in general.

The ignorant laborer looks upon the educated with the opinion that the latter has a knowledge whereby he may escape the heat and broil of the noonday sun in the struggle for existence. There is no doubt but there is just grounds for his opinion. And as what we are we owe in great part to our education, there must be some defect in it. In order to correct this, people are urging the need of industrial education.

It is universally admitted, we believe, that the country boy or girl, alternating mental and physical labor, forms habits of industry that are the foundation of a successful life in after years. To those who have acquired such habits and strengthened both body and mind, a college course is the crowning work—the cornice that adds beauty and strength to the building.

In our opinion the nine or ten months term of steady work in our public schools,

*without the healthful physical alternative, is conducive of many bad results.*

It is the opinion of our college professors gained through extensive observations, that those students are most benefitted by a college course who have mingled well their physical and mental labor. To such a man the truths of science and the beauties of literature make lasting impression on his mind, and the result is a practical education. What is needed is a thorough understanding of the principles of education in the primary departments, then no one need question the utility or practical benefits arising from a good collegiate course.

The boy or girl whose highest ambition is to graduate and excel in the polite accomplishments, without ever earning a dollar by physical labor may succeed, but the chances are against them.

While we believe that mental labor should receive its reward, yet we believe that no man can fully appreciate it who has not put forth exertion in his own behalf.

Then we would say to boys and girls, get a collegiate education if possible, and remember physical labor only sharpens the appetite for mental labor. If you can do this you will make of yourselves broader and deeper men and women, and will lay the foundation for future success, and will pass by “as the idle wind” the cry that a collegiate course is impractical.

#### THE OLD AND THE NEW SCHOOL OF AMERICAN NOVELISTS.

James Herbert Morse, in the *JUNE CENTURY*, in writing about American fiction before the war, contrasts as follows the early school of writers with the novelists of to-day: “The invention of our early writers was quite equal to that of their English brothers, but in the choice and artistic disposition of material they were not held to so high a standard. Indeed, until the time of Hawthorne, it is difficult to find any rigidly conscientious work done in the department of fiction; and the magnificent success of novelists like Cooper seems due to their wealth of new matter, and to a certain breadth rather than delicacy of treatment—a gift of

nature and not of art. To-day, the competition is great, and, by a process of critical selection, the artistic side of novel-writing has been developed, without, it would seem, any corresponding accession of imaginative power; so that the highest places are held by literary men who have but little creative force,—men who can strike an average, classify characters, and give a certain shape and body to their classifications, but cannot vitalize them with anything like spiritual vitality. The atmosphere of criticism is so largely tinctured with scholarship that fine writing is often credited with the essentials of fine imagination, and fine imagination, without the graces of style, has a hard time in getting a hearing. This is a natural reaction from the old excesses, where imagination was rank and art was slighted. The poverty of exacting criticism was lamentable. But the new process may well have its own excesses, and produce in time a new reaction."

—*Ex.*

### LITERARY BRIEFLETS.

#### SOLITUDE.

BY ELLA WHEELER.

Laugh, and the world laughs with you ;  
Weep, and you weep alone ;  
For the sad old earth must borrow its mirth,  
But has trouble enough of its own.  
Sing, and the hills will answer ;  
Sigh, it is lost on the air ;  
The echoes bound to a joyful sound,  
But shrink from voicing care.  
Rejoice, and men will seek you.  
Grieve, and they turn and go ;  
They want full measure of all your pleasure,  
But they do not heed your woe.  
Be glad, and your friends are many ;  
Be sad, and you lose them all.  
There are none to decline your nectared wine,  
But alone you must drink life's gall.

Feast, and your halls are crowded ;  
Fast, and the world goes by ;  
Succeed and give, and it helps you live,  
But no man can help you die.  
There is room in the halls of pleasure  
For a large and lordly train,  
But one by one we must all file on  
Through the narrow isle of pain.

[*Ex.*

The two best rules for a system of rhetoric are: first, having something to say; and next, say it.

—*George Emmons.*

The truly valiant dare everything but doing any other body an injury. —*Sidney.*

The light in the world comes principally from two sources—the sun and the student's lamp. —*Bovee.*

The seat of knowledge is in the head; of wisdom in the heart. We are sure to judge wrong if we do not feel right. —*Hazlett.*

Man carries under his hat a private theatre, wherein a greater drama is acted than is ever performed on the mimic stage, beginning and ending in eternity. —*Carlyle.*

It is beauty that doth oft make women proud; it is virtue that doth make them most admired; it is modesty that makes them seem most divine. —*Shakespeare.*

Pride is like the beautiful acacia, that lifts its head proudly above its neighbor plants—forgetting that it, too, like them has its roots in the dirt. —*Bovee.*

If I am ever obscure in my expressions, do not fancy that therefore I am deep. If I were really deep, all the world would understand, though they might not appreciate. The perfectly popular style is the perfectly scientific one. To me an obscurity is a reason for suspecting a fallacy.

—*Charles Kingsley.*

There were 168 business failures in the United States last week, being an increase of nine over the previous week. —*Ex.*

"A Russian paper has been suspended for a year for publishing an essay in praise of Walt Whitman." The Czar read a portion of Walt's works and thought it was a nihilistic manifesto. It is a great wonder the Russian editor escaped the gallows.—*Ex.*

An Austin lawyer caught a tramp in his office stealing some law books, which the latter intended to pawn. Seizing the intruder by the collar, the lawyer exclaimed:

"You scoundrel, I'll have you tried and sent to the penitentiary."

"Let go my neck, colonel. If you are going to have me tried, I reckon I had better engage you as my lawyer, as you have the luck to be on hand"—*Siftings.*

## THE ECLIPSE EXPEDITION.

## DR. HASTINGS'S OBSERVATIONS—A NEW THEORY OF THE CORONA.

We clip a part of an article under the above caption from the *Baltimore Sun*. After giving an account of the trip to the Caroline Island the article proceeds to say:

"Dr. Hastings's observations have led to the production of a new theory of the nature of the corona, briefly stated in *THE SUN* of June 13, and which is now published in full for the first time in *THE SUN*. Briefly stated, the theory is that the light seen around the sun during a total eclipse is not due to a material substance enveloping the sun, but is a phenomenon of diffraction.

From his observations during the eclipse of 1878, made at Central City, Dr. Hastings conceived the first idea of this explanation of the solar corona. Further study served to convince him of the truth of this theory, but he had no means of proving it. Before the present eclipse, however, he devised a crucial test of his theory. This test is based on the following already known phenonema: When the moon covers the face of the sun an envelope of light is seen all round it, the envelope is not visible when the sun is shining on account of the sun's greater brightness; this light is called the corona; it is extremely irregular in outline. According to the drawing of Mr. J. E. Keeler at the eclipse of 1878, it enveloped the sun as a hazy glow extending for a distance of several minutes of arc from the sun's limb, and at two nearly opposite points it extended out in two long streamers feathering off into space. The opinion has been that this light was due to an atmosphere extending for millions of miles from the sun. According to Dr. Hastings's view it must be light from the sun which has undergone refraction; *i. e.*, has been bent from its regular course by the interposition of an opaque body like the moon.

In order to make this perfectly plain, suppose the front of a surface of waves of any sort to be striking an object which resists them. If an organ of sense is placed in the resisting object, it will judge the direction

of the waves or the direction of the object producing them by a line at right angles to the wave front. Now suppose a body is placed between the object producing the waves and the sensitive organ. The waves must go around this body and will produce an eddy behind it, so that the wave front will have a different direction, and the organ of sense will conceive the origin of the waves to lie in a direction different from that before the body was interposed. Now consider the waves to be waves of light, and their origin the sun. The organ of sense is the retina of the eye. The moon is the opaque body interposed in the course of the waves, and they, being bent, make the impression on the eye that the light comes from beyond the edge of the sun. The moon covers the sun during the eclipse and a little more, so that it can move for about five minutes and still cover the sun entirely. This movement is very slight, and if the corona consists of light from the solar atmosphere, it should not change at all during this movement of the moon. But if diffraction is the cause of the light, then the slightest change in the relative positions of the sun and the moon should change the configuration of the corona; *i. e.*, the corona should not remain exactly the same during a total eclipse. The character of the light as shown by a spectrum analysis should change.

To determine this point Dr. Hastings invented the following instrument: Two lozenge-shaped prisms of glass were fastened in the form of a letter "V" and so arranged that all the light falling within the aperture of the V was lost, and that falling on the ends of the glass prisms was transmitted by a series of reflections to the apex of the V, where the prisms touched; here was placed a refracting prism, so that the light could be analyzed. This instrument was attached to the eye-piece of the telescope and the image of the eclipse reduced to such a size that the moon just fitted into the aperture of "V," while opposite sides of the corona were reflected through the prisms to the place where they came together. In this way both sides of the corona were seen through the

eye-piece at the same time. On looking at the eclipse this is what Dr. Hastings saw: The light of the corona was divided into its constituents. Prominent among them was a bright green line, which is designed by the number 1,474; to this line attention was directed. Its presence in the spectrum has been an argument in favor of the view that the corona is a solar atmosphere. If this is the case, the line should remain fixed during the eclipse; but if the corona is due to diffraction this line should change; it should grow shorter in the light from one side of the corona, and longer on the other. The observation was now reduced to watching for a change in the relative length of two green lines.

At the beginning of totality the line from the west side was much the longer, but as the eclipse progressed it shortened notably, while the line from the east side, shorter by about one-third at the beginning of the eclipse, grew longer. When the eclipse ended, the proportions of the lines were reversed. There had been a change equal to two-thirds the length of the lines, while the sun and moon had only changed their relative position by an extremely small amount. The only way in which this phenomenon can be accounted for is on the diffraction theory. The material view of the corona will not answer for it. But there are other discrepancies in the older view which have been known for some time. The principal ones are: 1. It is known from study of the sun that the gaseous pressure at the surface must be less than an inch of mercury, and is probably less than one-tenth of an inch, but an atmosphere extending to the supposed limits would cause an enormous pressure at the sun's surface, especially since the force of gravity on the sun is very much greater than on the earth. 2. The laws of gravitation would require a solar atmosphere to be distributed symmetrically around the sun, while the corona is enormously irregular in form. The sun is irregular in outline, which would make its diffracted phenomena show the observed irregularity, but it is symmetrical as regards density. 3. The most interesting discrepancy of the theory

of the solar atmosphere is the fact that while it is supposed to extend for millions of miles from the sun, the recent comet passed within two hundred thousand miles of the sun, and yet its orbit was not affected in the least—as it would have been if it had ploughed its way through a material substance. In taking photographs of the corona it is seen to be larger as the time of exposure is longer. This shows that the corona extends indefinitely, and it decreases in brilliancy in exact accordance with the mathematical laws of diffraction. These laws involve very complicated mathematics, but by them alone Dr. Hastings has proved that there must be diffraction where the corona is, and that it must follow the same laws as those observed. There is a small envelope around the sun, but in the opinion of Dr. Hastings it does not extend beyond what is known as the chromosphere. Dr. Hastings took advantage of the expedition to discover and map out the position of fourteen new double stars, and Prof. Holden also succeeded in finding about the same number of still other new ones.

## THE DETERMINATION OF MAGNESIA

F. J. S.

In determining quantities of magnesia we have the choice of two general methods, either by volumetric or by gravimetric analysis. The gravimetric method is preferable when but one determination of magnesia is to be made. But when, as is frequently the case, a number of mineral waters are to be analyzed for their per centage of magnesia, it is the better plan to take the volumetric method.

Let us first take up gravimetric methods, of which there are four principal methods, as follows: we can determine the magnesia as the sulphate, as the pyro-phosphate, as the carbonate, or as the pure magnesia.

Those salts of magnesia having volatile acids, and containing no non-volatile substances, are more readily determined as the sulphate. Their determination involves the following process: to a solution of the salt, pure dilute sulphuric acid is added in such quantity that it is in excess of the quantity



required to associate with the magnesia. This solution is evaporated to dryness in a weighed platinum dish, over a water bath, then carefully heated after putting on the cover. The heat should be applied from above until the excess of  $\text{H}_2\text{SO}_4$  has passed off, then we heat to faint redness, allow to cool and weigh. If after heating strongly no sulphuric acid vapor escapes, more sulphuric acid must be added. The residue should be weighed rapidly, as it takes on water.

All magnesia salts may be determined as the pyrophosphate. The process is as follows: to the solution ammonium chloride and ammonia are added, in excess, and then  $\text{HNH}_2\text{PO}_4$  added to precipitate all the magnesia present. It must be carefully stirred, not allowing the glass rod to touch the sides of the containing vessel, as crystals would form there, which would be separated with difficulty. It is now allowed to stand well covered, for twelve hours, and then filtered, the precipitate transferred to the filter paper and thoroughly washed with three parts of water plus one part of ammonia, until the washings will not give a precipitate with nitrate of silver and nitric acid. The precipitate is carefully dried, transferred to a platinum crucible and heated, at first very lightly, gradually increasing the temperature until the highest heat of the blast lamp has been given it. This method when carefully conducted gives good results.

To determine as pure magnesia it must be combined with organic acids, or with an easily volatile inorganic acid. Also all compounds that can be converted into the chloride. The salt is heated in a closed platinum crucible carefully, gradually increasing the heat until no more vapors come off, the cover is removed and the residue heated until perfectly white. This method gives more satisfactory results if the temperature is increased gradually. Generally the results are somewhat low, as portions of the magnesia pass off with the vapors. Magnesia salts with easily volatilizable inorganic acids ( $\text{CO}_2$  or  $\text{N}_2\text{O}_5$ ) can in a similar way be determined by heating to a very high temperature, and even the sulphate can, if heat-

ed to a high enough temperature, be obtained perfectly free from acid.

All chloridess, or such salts as are convertible into chlorides, admit of determination as  $\text{MgO}$  by taking their concentrated solutions and treating with pure oxide of mercury suspended in water, in such quantity that the oxygen of the mercury is more than sufficient to change the  $\text{MgCl}_2$  into  $\text{MgO}$ , then the mixture is evaporated down in a water bath, and finally heated to redness until the mercuric chloride and the excess of  $\text{HgO}$  has been driven off. The residue contains magnesia, and possibly some impurities, which are removed by washing with hot water.

It finally may be determined as the carbonate by precipitation with potassic carbonate, or ammonium carbonate in presence of alkalies. This method, however, is not often taken, as it is not exact. The process is as follows: the magnesia to be precipitated is treated with a solution of ammonium carbonate. The magnesia must be contained in a very concentrated solution. If the solution is acid, it is neutralized with the ammonia before adding the  $(\text{NH}_4)_2\text{CO}_3$ . After adding the ammonium carbonate a voluminous precipitate appears which is again dissolved by stirring. After a time, however, a crystalline precipitate appears that gradually increases, and which consists of a double salt of  $(\text{NH}_4)_2\text{CO}_3$ , and  $\text{MgCO}_3$  which is not soluble in a concentrated solution of  $(\text{NH}_4)_2\text{CO}_3$ . It is allowed to stand for 24 hours, then the precipitate is washed with a concentrated solution of  $(\text{NH}_4)_2\text{CO}_3$ . It is then heated to redness and weighed as  $\text{MgO}$ .

The second general method for determining magnesia, especially when a number of analysis are to be made, is to determine the magnesia by volumetric methods. I will give but one method, which depends upon the precipitation of magnesia as the hydrate, in a solution containing neutral oxalate of potash. The process requires a normal solution of sulphuric acid, a normal solution of sodium hydrate, a dilute solution of neutral oxalate of potash and one drop of rosolic acid solution for an indicator.

The process only succeeds when the water is free from all free or combined  $\text{CO}_2$ , and therefore we can determine the  $\text{CO}_2$  at the same time we remove it from the solution.

To determine and at the same time drive off all  $\text{CO}_2$  the following process is used: about 100 c. c. of water are boiled for some time to drive off uncombined  $\text{CO}_2$ , titrated with  $\text{H}_2\text{SO}_4$ , boiling after every two or three drops. The point at which no coloration appears is finally reached and the c. c. of sulphuric acid calculated for carbonic acid.

This water freed from carbonic acid is treated with a solution of oxalate of potash in excess, and upon the subsidence of the precipitate, a certain volume of  $\text{NaOH}$  is added, the solution and precipitate boiled, and filtered while hot. The filtrate is titrated back with a normal solution of sulphuric acid as before, the number of c. c. of  $\text{NaOH}$  is calculated for magnesia.

In order to make the process, which admits the determination of 0.002 gm. magnesia in one litre of water with absolute certainty, I will give a practical example of the determination of  $\text{CO}_2$  and  $\text{MgO}$  in a well water. One hundred c. c. of the water was, after a short boiling, treated with 4 c. c. normal sulphuric acid, (1 c. c. = 0.00416 gm.  $\text{SO}_3$ ) after a short time it is treated with 3 c. c.  $\text{NaOH}$  (100 c. c. = 0.004264  $\text{NaOH}$  104 c. c.  $\text{SO}_3$ ) and a total addition of 3.1 c. c.  $\text{H}_2\text{SO}_4$  was made after that. Altogether 7.1 c. c.  $\text{H}_2\text{SO}_4$ , from this must be taken 3 c. c. of sodium hydrate (equal to 3.12 c. c. sulphuric acid) which leaves 3.98 c. c. of sulphuric acid, that was necessary for the decomposition of the  $\text{CaCO}_3$  and calculated for this gives .2039 gm.  $\text{CO}_2$  for one liter of water.

To this neutral solution, free from  $\text{CO}_2$ , an excess of  $\text{H}_2\text{SO}_4$  30-40 c. c. of oxalate of potash is added, and after the precipitate has completely precipitated, 20 c. c. of  $\text{NaOH}$  is added, the whole is boiled, filtered, diluted to 150 c. c., and of this 100 c. c. are titrated back with 12.45 c. c.  $\text{H}_2\text{SO}_4$ . These calculated for 150 c. c. and changed to the scale of the sodic hydrate, gave 17.95 c. c. There had disappeared therefore of the original 20 c. c., 2.05 c. c., which were required for the precipitation of the magnesia: that is  $0.002132 \times 2.35 = 0.00437$  gm. magnesia, or for 1 liter = 0.437 gm. magnesia.

## A GRAND PIECE OF ENGINEERING.

A survey is about to be made through the heaviest portion of the Black Canyon of the Gunnison. For a long distance the walls of the syenite rise to the stupendous height of 3,000 feet, and for 1,800 feet the walls of the canyon are arched not many feet from the bed of the river. If the survey is successful, and the Denver & Rio Grande is built through the canyon, it will undoubtedly be the grandest piece of engineering on the American continent. The river is very swift, and it is proposed to build a boat at the western end and provision it for a length of time, allowing it to float with the stream, but controlled by ropes. If the boat goes, the chances are that the baby road goes, too.

—*Denver Tribune*.

At the recent meeting of the New York Academy of Science cases were related of trance anaesthesia (or abolition of sensation of pain under mesmerism) in which important surgical operations were performed, and President Newberry said he had seen such things twenty-five years ago.—*Science Monthly*.

William B. Taylor, of Utica, N. Y., ex-State Engineer and Surveyor, is making experiments in silk-raising. He has set out three hundred mulberry trees, and proposes to make a thorough trial. The expense of silk-raising is very light, and is said to pay better, with light labor, than cotton, rice, sugar, tobacco, or hops, with heavy labor. It is estimated that one acre of land, with trees of sufficient age and bearing well, will net \$2,000 per year.

—*Ex.*

We are apt to think an inch of rain a small matter, but the thirsty ground will show another story. Let us calculate a little. An acre is equal to 6,272,640 square inches; an inch deep of water of this area will be as many cubic inches of water, which, at 277,274 to the gallon, 22.6225. This quantity weighs over 113 tons.—*Scientific American*.

In the storm on the 4th inst. there was a fall of 4.2 inches on the College grounds, in about two hours time.

# THE AURORA.

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THE AURORA, AMES, IOWA.

THIS number of the AURORA is under the editorial management of C. Vincent to whom we now take occasion to return thanks for the efficient aid rendered by the favor. In our next we shall probably take occasion to review the article in this number respecting the reunion of the secret fraternities in our College, and the questions which grew out of such a meeting.

WE are pleased to be able to tell our readers that the lumber is on the ground for the New Mechanical Hall. This building will be erected this fall, near the workshop, just west of Physical Laboratory. The building will be a brick structure, 55x30 feet, with mansard roof. It will be three stories above the basement. The following will give some idea of this hall. The basement will contain the engine room and experimental rooms.

On the first floor will be the Mechanical Laboratory 41x23, a store room 12x17 and entrance hall 13x9. On the second floor will be two recitation rooms 25x23 and 17x22, also an office in the tower, 10x13. The drafting-room, 29x30, and the Mechanical Museum, 17x22, for models used in this department will occupy the third story together with the tank room in the tower and an office, 10x13. This building has long been needed. The Mechanical and Civil Engineering rooms are crowding the Physical and Chemical into close quarters, but when the new Hall is completed all these departments will have room enough for a few moments. The college is growing so fast that before the "fathers" awake to the condition of things, all these several departments will be calling for more room in which to carry on work second to that done by no school in the west. The increased facilities given by this building will give a fresh impetus to the tide of popular favor setting toward our college, and will call for the finishing of the upper story of Kirkwood Hall and the addition of another story to Stanton Hall, that none may be sent away for lack of boarding accommodations.

MANY people wonder why reforms make such slow progress in our country. One reason is the unquestioning confidence of many in the leading periodicals of the day. The press is not always right on questions of public interest, but its opinions are followed as if it were infallible. A striking example of a paper often on the wrong side of economic questions, is the New York Weekly Witness, among our exchanges. In a late number, it attacks the Immigrant Commissioners on their action to prevent England unloading her paupers upon our country under the names of "assisted emigrants." In this attack it virtually places itself in favor of making America the sink into which England may drain her paupers, criminals and all the sewerage of her people.

The same number purports to give a report of a convention of importance but mentions only part of its proceedings leaving the reader, who depends upon the Witness for

his information of the world's work, to infer that the convention was silent not only on many points of interest but on some of vital importance. Students should frown on all such attempts on the part of papers or men to curtail the news of the day, and take notice what papers uphold the best interests of the nation, so that when our college life is ended we may know where and how to strike sturdy blows for our country.

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ONE of the most practical and important experiments prosecuted by Prof. Knapp is now subjected to the test, and if successful will prove of great advantage to the farming public. A silo has been built in one corner of the barn 16.66x11.8 feet, and about 20 feet deep. This was made with air tight sides, and on the 16th and 17th inst. was filled with clover and other grasses from the college lawns and farm. The grass was raked *as soon as cut* and hauled directly to the silo where it was spread and packed as thoroughly as possible. Twenty-one and one-fifth tons of grass was put in the pit and a loose floor of two inch plank fitted over it, a loose cross floor was put in and on this boxes of sand were placed to the amount of about five tons. The grass settled under this weight in twenty four hours from fifteen to ten feet, and the Professor expects it to settle five feet more, making "canned grass" with a weight of about 40 pounds per cubic foot.

Ensilage has been in use in the east for several years and we think will be a success here, and if so, the Professor will "can" large quantities of corn and grass another year. We shall watch with interest the outcome of the experiment.

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#### MISS PHOEBE COUZINS.

The lecture committee succeeded in securing the above named lady to lecture here on the last Saturday evening of the term. Miss Couzins spoke about an hour and a half from the subject, "Some Mistakes about Eve." She presented the mistakes as two-fold, social and historical. The lecture would have been much more effective if it

had been more logical and less disconnected. Her evident distortions of history and strained conclusions won much criticism from one side of the house, and we think did not gain much endorsement from the other. Miss Couzins is a ready, easy and forcible speaker, but she brings too many legal phrases from her court practice to make the style as pleasing as it might be. After the applause had subsided at the close of the lecture the lecturer thanked the audience for their cordial reception of her, and sarcastically added that the applause seemed to come principally from the gentlemen's side of the house. On the whole we are inclined to the opinion that a radically different mode of treatment of the social questions would have accomplished more for the cause the lady espoused.

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#### EDITOR AURORA:

*Dear Sir*—I sent a post office order to you for \$1.10 for AURORA and College Journalism. Did you receive it? My May number finally arrived. Why don't you have more Alumni news? I like to know how all the "old folks" are enjoying life—who are married, who are dead, etc., etc. \*.\*

A certain lawyer when asked why his client had not put in appearance at court, replied that there were six reasons, the first was, that he was dead, and the second was—"Hold on," said the court, "that is sufficient."

Why don't we furnish more Alumni news? We might give six reasons, but one or two will be sufficient. We are not omnipresent nor omniscient, and unless the Alumni furnish the news to us we cannot furnish it to our readers. Again, the subscription list shows a painful absence of names of Alumni of more than two or three years' standing, and we cannot even tell our subscribers where the missing ones are. If the Alumni want news of the "old folks," each one must remember that he or she is one of the afore-said "old folks," and send in the subscription price with news of self and of any other graduate or former student, and then we shall be able to furnish interesting reading for this class of subscribers.

### "ALUMNI REUNION."

For nearly a week before the close of the last term our college halls resounded with happy salutations of the returned sons and daughters of our college, coming from afar to visit again the scenes of their youth, and drink once more the inspiration from the old familiar halls where they spent so many happy days and recount the adventures that mark the brightest period of all their lives. They came from every part of the state and union to show their loyalty to the school they love. And when they were assembled, happy and joyous with the friends of days gone by, Iowa and especially this college could only have been proud of the citizens she had given to our country, for it was an assemblage of "fair women and brave men." There is no happier sight than to see a reunion of friends long parted, friends bound together by the most sacred of ties for the friends of youth, the sharers of our toil and hardship, who share our rejoicing and our sorrowing, these are the friends that are always cherished—the truest and the best. It was a gathering of unusually large numbers owing to the peculiar interest of the business to come before this meeting. On Tuesday after dinner the alumni of the I. A. C. assembled in the Freshman room to transact the business of two years. Much interest had centered in this meeting because of events that transpired during the past winter. At 2 o'clock they were called to order by President Stalker, who stated some necessities and started the wheels of business. Miss Kate Curtis was made Secretary. After the adoption of several resolutions concerning offices, terms of offices &c., Mr. G. A. Garard introduced a series of resolutions in favor of protecting the present standing and curriculum of the college; to oppose the decreasing forces brought against the different courses of study and especially that of English Literature. They embodied the sentiments of every student and the unprejudiced thinking citizens of the state. The tenor of these resolutions were unanimously accepted but the wording drew out considerable discussion which displayed many different ideas as to the means of ac-

complishing the end in view. After thorough deliberation and discussion these resolutions were accepted as the sentiments of the association. The subject of supporting an alumnus for a position on the board of trustees was next taken up and considered. After discussion Mr. Jno. Stephens, of Ames, was decided as the choice of the alumni and they agreed to support this gentleman for the position, and surely the record of the Board of Trustees during the past winter shows the wisdom of this step.

Some one is needed as a check upon prejudice, some one who holds the welfare of the college above political designs, one who knows the needs and workings of the institution, and such a person, more needed now than ever before, is certainly an alumnus, and Mr. Stephens will not only receive the support of the alumni but of every student of the college and unprejudiced citizen of the state. One member from each class was selected as a working committee to carry out the will of the association. After the election of Mr. O. P. McCray as President and Prof. E. W. Stanton as Secretary for the next two years, the Second Biennial Reunion of the alumni of the I. A. C. adjourned, feeling that its work had been well and harmoniously accomplished. In the evening the association met in the college chapel to carry out a literary programme that proved to be highly entertaining and very creditable. The chapel had been beautifully decorated by the Senior Class. Over the north window was displayed a beautiful motto in evergreens—"Welcome Alumni." An unusually large audience had gathered at an early hour and the programme was followed with great interest throughout the entire evening. The following is the

#### PROGRAMME.

Music—Song.

Devotional Exercises.

Music.

Oration—"The Future of Democracy in America," J. K. Macomber.

Music.

Poem—G. A. Garard.

History—Carrie C. Lane.

Music.

Memorial—Emma McHenry.

Music.

The programme throughout was one that honored the Alumni whom the college is

proud of. The oration by Prof. Macomber was a masterly effort and won much praise from the audience. After the exercises had closed the association adjourned to the dining room to indulge in "a feast of reason and a flow of soul." The traits of former years still clung with tenacity to each one, and they displayed a capacity which equalled if not surpassed the average "sub fresh." Several toasts were given and neatly responded to. Prof. Stanton responded to the toast Class of '72. He spoke feelingly of the first class the college had graduated, of the members who were gone and paid them a tribute in every way worthy of a class that has been so illustrious as the class of '72. Mr. Booth gave a very interesting talk on the methods of instruction in deaf and dumb institution which was very entertaining and well received. W. H. McHenry Jr. responded to "Industrial Education." He thought that entirely too much time was wasted by the schools of the country in turning out polished paupers. More attention should be given to some reliable industrial branch that would forever wipe out these expensive luxuries and useless ornaments. Thus closed the "Second Biennial Reunion of the Alumni of the I. A. C." It was in every way a pleasant success and each member as he returned again to the toils and cares of active life, carried with him the recollection of this meeting of former students and friends, that shall be a bright spot in his memory as long as life remains.

## ALUMNI.

The following alumni were present at the biennial meeting. For lack of room we cannot give to each more space:

'72. E. W. Stanton, J. K. Macomber and wife.

'73. D. A. Kent, M. Stalker and J. S. Lee

'74. C. D. Boardman, E. A. Pyne, J. R. Whitaker and O. P. McCray.

'75. Millah Cherrie Whiting and C. H. Lee.

'76. A. P. Barker, G. A. Garard and A. B. Shaw.

'77. F. W. Booth, C. C. Colclo, Kate S. Curtis and R. F. Jordan.

'78. A. E. Griffith, J. C. Hainer, Emma McHenry, J. N. Muncy, E. G. Tyler and T. F. Lee.

'79. F. H. Friend, Jennie McElyea Byers, H. Osborn, J. D. Shearer, F. Turner, W. Whited and Alice Whited.

'80. Carrie C. Lane, C. H. McGrew, R. M. Nicholson, J. L. Simcoke, C. D. Taylor and W. B. Welch.

'81. W. A. Armstrong, Nellie M. Bell, Chas. M. Coe, A. M. Beresford, Thomas Burke, F. E. Colby, J. S. Dewell, E. C. Fortner, M. J. Furry, Julia M. Hanford, R. J. Hopkins, J. S. McGavern, W. H. McHenry, W. O. McElroy, Fannie J. Perrett, Alice Sayles Osborn and T. W. Shearer.

'82. Etta M. Budd, G. W. Catt, H. J. Gable, J. B. Marsh, J. R. McKim, O. C. Peterson and C. F. Saylor.

'74. Married, at Boone, July 5th, J. R. Whittaker and Lizzie B. Tallman. The happy couple are spending their honeymoon at Spirit Lake.

'72 and '73. "The *Intelligencer* desires to congratulate Mr. and Mrs. J. L. Stevens upon the generous hospitality extended by them to a recent newcomer to their pleasant home." — *Ames Intelligencer*, July 21.

'82. Married, at Clarence, Iowa, July 19th, Charles I. Lorbeer and M. Helen Coe. It pleases us to send our earnest wishes for the future prosperity of the first two members of class '82, who have ever been known to hold the same opinion upon any subject. May their future field of labor be among peaceful fellow-laborers, although their past four years was not.

'81. W. H. McHENRY delivered the oration at What Cheer on the 4th inst. The *Reporter* pronounces it a splendid effort.

'77. H. M. White of Washington, Cal., spent four weeks of June and July in visiting friends at Salt Lake City, Utah; also in viewing the national scenery at Yosemite Valley, and the big trees in the Sierra Mountains of Eastern California. He speaks in the highest terms of the beauties of the

Mormon City; of the grandeur of the valley with its granite walls three thousand to five thousand feet high, and its waterfalls four hundred to sixteen hundred feet high; of the giant trees, from fifty to one hundred feet in circumference, through one of which a four horse stage load of people passes almost daily; also of the pleasures of surf bathing on the beach at Santa Cruz. He could write you a small book on his "seeing," and all of it he has enjoyed hugely and is still at it.

## PERSONAL.

Geo. Grace is at the College taking a course in Veterinary.

Miss Lura Philips, a senior of Cornell, recently spent a few days at the College with her friend and former schoolmate, Hattie Porter.

Mr. Wattles shook hands with his friends here during the last few days of last term.

Miss Abbie Frater is back to the College to take study for a recreation during her summer vacation. It will only last until September.

Misses Carpenter and French, a couple of senior ladies from Cornell, paid the College a short visit recently.

Miss Lizzie Keigley "is enjoying" such very poor health that she will not return this year. The Junior class and the Clios regret her absence very much.

Guy Burnham's father is still in a critical condition, and it will probably be some time before we will see Guy in his accustomed place in the College.

Adolphus Allen has been quite sick during vacation, but is now better, and expects to return to the College soon.

Professor Bessey's family have returned from their extended visit at Martha's Vineyard.

Professor G. W. Jones, a former instructor in mathematics at this College, has been spending a few days with College friends. He is now a Professor at Cornell College, N. Y.

Married, June twenty-seventh, at Sigourney, Will O. Howard and Phe. A. Brackin. Phe's many College friends extend their hearty congratulations.

Dr. Fairchild and wife have returned from their visit to Spirit Lake.

President Welch's brother, from Connecticut, is here, with his wife and daughter, visiting the President.

Professor McBride, the Professor of Botany at the State University, is here visiting the College.

Miss Ione Weatherby has decided not to return this year. It is rumored that she has been caught in the treacherous quicksand of a Marsh. We sincerely hope this is not true.

G. W. Wormley is back with his class again this fall. He has recovered from the sickness which required his departure last term.

Superintendent McGrew has issued his Normal circulars and anticipates a successful institute. He is working earnestly to that end. Of his Normal Instructors he says:

"Much care has been taken to secure the services of a very excellent corps of institute instructors. It is believed the corps has but few equals in the State.

Miss Carrie Lane, City Superintendent of Mason City, has proven herself to be a scholar and teacher with but few superiors. Her many friends here will gladly welcome her back again.

Mr. Thomas Burke completed his course of study in Science and Literature at the Iowa Agricultural College. As a student and teacher Mr. Burke ranks high. He is especially fitted for the work he has to do."

Mr. McGrew is wanting in neither energy, nor in an appreciation of what the schools of Keokuk county should be. The Institute will begin on July 30th, and continue four weeks."

—Ex.

Those seniors who were back the first day of the term enjoyed a very pleasant sociable at Prof. Osborn's Tuesday evening. We hear that they had a splendid time.

## LOCALS.

—Hot !

—Whew !

—Good-bye !

—Don't cry.

—We'll all be back "bime by."

—Three cheers for the red, white and blue.

—Who had the hottest Fourth of July ?

—One more term of the College course is past, and no one regrets it.

—It is not best to plan too much work for vacation, for you are sure to do no more than half of it.

—Hoora ! Final examinations all over and three weeks of vacation ahead. Look out for fun !

—Don't eat too much.

—"What did you get?" "I got a 'zip' on one of those questions." "Say, how did you figure out that fifth?"

—The Junior Ex. decorations were wonderfully and musically constructed. The trills, the rests, the tones and semi-tones that were visible in those decorations can easily be explained by any one who roomed in the building where the committee held its nightly and forenoonly vigils.

—Students should all patronize those who advertise in the AURORA, for those who help us by their advertisements are thus helping the societies and through them the students, so it is to the interest of every student to patronize those who patronize us. We no longer have the advertisement of

in the AURORA. As they cannot pay for the printing we have done, we warn our readers that they can not be very reliable tradesmen.

—July is almost gone, August will soon come, and perhaps be gone before your eyes will rest on these tragical columns, gentle reader. August will soon be here, right here among us. August, that best of all months, so bright, so warm, so sunny, so sweaty and breezy, so delicious and roasting, so lazy and lolly and headachy, yes, it is a nice month, awful nice "to read about."

—Three weeks of rest will be very invigorating to those students whose lives are spared until another term, that is, those who do not kill themselves eating during vacation.

—Ice cream is getting soft and mellow; the later varieties are better now than the earlier.

The old deserted College

Still stands 'neath the burning sun,  
The subs overcome with knowledge  
Have gone for a taste of fun.

The bright, young Freshies free from *algebra*  
Are the gayest children out.  
Out on a "bum" with "old Nick to pay"  
They can only howl and shout.

The Soph's most wisely talk of science,  
Rare flowers and dangerous snakes.  
The Juniors in their moonshiny rambles,  
Study stars and think of cream cakes.

The Seniors so wise and dejected,  
Are writing their theses in dreams,  
And hoping to be one elected  
To read with the cream of the creams.

And yet yonder stands the old bird-cage,  
The College so gray and forlorn,  
The gay birds are out on a rampage,  
We hear not one lone, tooting horn.

Now nothing but phantom footfalls,  
Are heard on those iron stairs.  
While the bed-bug's glowing eyeballs  
Show that famine at him glares

And the hot, hot sulphurous perfumes,  
That bring frowns to that innocent brow,  
Speaks of a redhot, eternal torment,  
A future untasted till now.

Now only old dead ghosts of echoes,  
Of echoes fat, hearty and tall.  
Are mimicing gaunt, by-gone bellows,  
From the battered echo-worn wall.

This scene will soon change and these soundlets,  
No longer ghost-like and forlorn,  
Will assume most mammoth proportions,  
For then a new term will be born.

A grand *finale* for this blank verse,  
A "wind-up" most wild and unique,  
To write we had long intended  
But labor has made us too weak.

So we stop abruptly short-off  
To scribble some other thing,  
But we'll put in that grand *finale*,  
Whenever again we sing.



—Now is the time to plant turnips.

—Linen dusters and lawn dresses are ripe and delicious.

—But few new students have entered this last term of the year, only three girls, just one apiece for all the societies except the Bachelors. My! What a rest the old practical "log rollers" will have!

—Will we never get this number of the AURORA out? How many more times will we hear from the Editor-in-Chief these dismal and heart-sinking words, "More manuscript wanted; how soon can you hand it in?" Oh! This is a world of woe. These locals were begun before the close of last term, and they have lingered and lingered and lingered and are still lingerin' and probably will linger. Why is it that we can never accomplish anything when we have more than enough time? Oh! For the head of a philosopher to explain these strange hypotheses. Yes, "this is a curious world, *very*, and *holler*—holler as a drum." But there is one consoling reflection, it can't last long, not more than a few centuries or more at least; life is short, and this local writing must end sometime.

—The Alumni reunion was not as well attended as we had expected, yet a great number of old faces were seen at the College. Their evening programme was a very interesting one. It consisted of an oration by Prof. Macomber, a poem by G. A. Garard, an history by Carrie Lane, and a memorial by Emma McHenry. They also had excellent music. After these exercises the Alumni had a banquet—students were not urged to participate in this interesting part of the programme. We were not even allowed to go to take notes, consequently we can only give our conjectures as to the quality of the eatibles. From the fact that they all looked happy and could eat no breakfast the next morning, although we had a most tempting meal, we are convinced and will give it as our honest opinion that they had heavily loaded tables and did ample justice to them.

—Although the Sophomores had boasted there would be no mock programmes at the Junior exhibition this year, yet as expected,

the mocks appeared in their usual abundance. They were what they always are, only a little more so, perhaps. Each year these programmes become more vulgar than they were the year before; each year they contain less wit and more filth. In fact for several years they have been devoid of anything witty or ludicrous. It would be a good plan for some enterprising person who wishes to win fame in a small way, to make a new departure in mocks. He could make them funny and readable. He could get up something entirely different from the mocks of preceeding years. He could have them exhibit less shallow-brained attempts at humor and grand bankruptcies in that line. Thus a great blessing would be conferred upon the Institution. Now this is a great chance for some one, a short and clear path to fame. Consider it well.

—The following item is one which should be read at midnight, by the light of a dark lantern, when all is deep, black, inky darkness; when no innocent star beams from the heavens to peep over your shoulder and tell this mystical, mysterious story to her sister stars, and twinkle in childlike glee over her own cunning. No, not even the moon should shine, the pure, guileless moon, whose placid face would frown upon deceit. The reader must wait until he is alone, entirely alone; until not even the friendly chirrup of a neighboring cricket can be heard. (Crickets may tell tales.) Now, gentle reader, if you have followed these directions, and if this matter lies solely between you and the AURORA, and if you will promise that it shall go no farther, I will tell a great secret that has been a secret for some time. Of course you will be very much surprised, but take this news coolly, don't jump, drop your dark lantern and utter an exclamation of astonishment, that may wake up some curious, prying musquito, who will tattle the whole story. As I have said, be careful, calm and self-possessed, and let your eye follow these lines as they would if you were reading an ordinary piece of news. Now hold your breath—The Iconoclastic Caucus or the Independent Candidates, or the I. C's as they are called for

short, together with the Deltas had a joint meeting, which is the *newest* thing out, for, as everyone knows, those two societies are entirely separate and very uncongenial, in fact, are usually at "swords points." This reunion was on Junior Ex. day, in the Crescent room, in the afternoon. ("You'd orter been thar!") It was a great success, the programme was very interesting, and the beneficial effect of secret societies settled in the minds of all the audience forever. A good part of our students were prevented, by ill health, from attending this—ahem!

—Wimmin have at last got their rights in this institution. They are no longer beholden to that mighty animal man. No longer are they under his dominion. No more waiting around the corner to catch the janitor is necessary, when a young lady wants her carpet shaken, or her trunks removed to the storeroom. No, such a course is a legend of the past. To-day we see the energetic young lady with her bangs tied under a hair-pin and her sleeves rolled up, dragging her trunk along the hall and tossing it into the storeroom, or slinging her carpet out of the window and tripping down stairs to shake it and carry it to her room again, or down on her knees with a paper of tacks, a sledge hammer and one corner of the carpet between her teeth while she stretches, holds it and puts the tack in place with one hand and slings the wardrobe out of the way with the other; or again we see her when the busy hum of the threshing machine is heard in the land, tripping toward the straw stack with a straw tick under the arm of her sky-blue dress, and after this majestic march to the music of the threshing machine we see her wrapping her arms around a "jag" of straw and diving with it down into the dim and unexplored recesses of the straw-tick, and when it is filled she views the job with a wink of satisfaction, gives it a kick with her slipper-capped toe, and with arms akimbo she sends it foot-ball fashion back to the College, picks it up, throws it over her head, and marches to her room with it. No use of a broom-brigade at the College now; the people who are supposed to assist the young ladies in their termly house-

cleaning have provided more practical, profitable and lady-like means of securing good strong muscles. They lounge their healthy bodies against some friendly door post and watch the young ladies in their sport, and think what fine fun it is to be a man of authority in this nineteenth century of the world. I wish to say to all woman-kind, if you want to reach the Eldorado of your hopes, a place where woman's rights shall stand unquestioned, a place where you are allowed to "hoe your own row," and to plow it up ready for hoeing, come to the Cabbage College, and let your tired and worn-out eyes rest on our sweet-tempered jan—no, we will not be personal.

—We hereby tender our thanks to the *Intelligencer* corps for their patience and courtesy while we have been engaged on this number of the AURORA. They realize that vacation spoils plans of students as well as of other people, and they have done their best under the circumstances. We hope to be out on time next month, and then continue in the same line the rest of the year.

—A street corner loafer accosted us the other day with the following: "Why are those shaved heads like Heaven?"

Of course we gave it up, as it was not in our line. He then answered as he whittled another shaving off his peg: "Because there will be *no more parting* there."—[*College News Boy*.]

—"The wild beasts of Italy have their caves to retire to; but the brave men who spill their blood in her cause have nothing left but air and light. Without houses, without any settled habitation, they wander from place to place with their wives and children. The private soldiers fight and die to advance the wealth and luxury of the great and they are called masters of the world, while they have not a foot of ground in their possession."—Horatius Gracchus

—Young men are now having lawn-mowers for the summer. Notice them a little, say "How funny you look!" and admire the shape of their heads, and keep talking about the matter two or three hours. If you dont, it will break their hearts.

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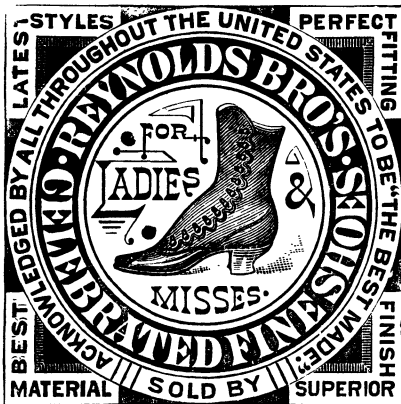
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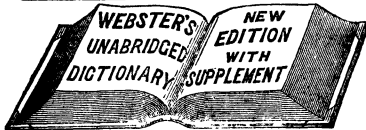
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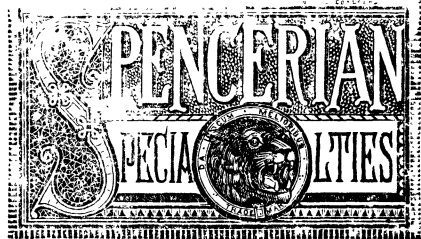
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