

The Spectrum.

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VOL. III.

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No. III.

Life's School.

(With Apologies to Edgar Allen Poe).

Once upon an evening dreary,
I was wrestling, weak and weary
With some geometric problems I had
never seen before,
Problems that all toil resisted,
Though I gropingly insisted,
And all mental powers enlisted as I
never had of yore;
But the problems all unravelled lay there
calmly as before.
Only this and nothing more!

Quite distinctly I remember.
It was in the chill November,
And I was a humble member of the
senior class of yore;
Eagerly I wished the morrow,
When I hoped that I might borrow
Demonstrations from a classmate, who
had helped me oft before;
Who had loaned me his assistance when
in swampy paths before;
"Yes," I whispered, "just once more!"

As I sat, some rule repeating,
All my brain in madness beating,
While my heart and throat were meet-
ing, and my wan eyes scanned the
floor;
While I wearily sat gaping,
Suddenly I heard a tapping,
And I knew some one was rapping,
rapping gently at the door;
"Oh!" I cried, "if some assistance brings
the stranger to my door,
He is welcome evermore!"

In he came on invitation;
"Here," I thought, "is my salvation;
He will have the demonstration as he al-
ways has in store."
For 'twas he whose kind assistance
Helped me often in the distance,

Though I half feared more resistance to
my plea than heretofore;
And I shrank from it on seeing what a
troubled brow he bore,
And the wearied eyes he wore.

But at last my soul grew stronger,
Hesitating then no longer;
"Friend," said I to him, "most truly
your forgiveness I implore.
But it is my one salvation
That I make this application;
So,—have you the demonstration?"—
here he bent his head and swore,
"No; I came to get assistance on those
problems, too!" he swore;
Only this, and nothing more.

Now that every plank was falling,
The tomorrow looked appalling,
And I sadly sat recalling how old vials
of wrath did pour;
Could I face an angry teacher,
With a calm and unmoved feature,
With those unsolved problems staring
in my face for evermore,
Staring wickedly and wildly in my face
for evermore.
In a manner I deplore.

Long I sat there, madly yearning,
All my soul within me burning,
Longing, thinking thoughts no student
ever dared to think before;
"Oh! be gone all demonstration;
How I wish my education
And the hour of my graduation were a
memory of yore;
How I long to look back thinking they
will bother me no more;
Free from care for evermore!"

But the years in their rotation,
Finished high school education,
And the longed-for graduation is a thing
to come no more;

But I find I now am vexing,
 Over problems as perplexing
 As the ones I on that evening fought
 of geometric lore;
 Trouble me for evermore.

Thus, when school-life is completed,
 When all lessons are repeated,
 And we are no longer seated in the
 class-room as before,

Still, life's school is just before us,
 And its rule is quickly o'er us,
 And we look for graduation, but 'tis not
 till life is o'er;
 And our spirit from its burden and its
 lessons, as of yore,
 Shall be lifted—nevermore.
 —Mrs. A. A. Putnam, in *The School*
 Moderator.

One of Nature's Laboratorie.

The day was hot, sultry and sunny. It was in the midst of haying but there had been a heavy shower the night before which had come up so suddenly that it had taken us unawares and thus had spoiled one day's work. The corn had been thoroughly cultivated but a few days before so there was nothing to do but be Jack-of-all-Trades around the house—or go a-fishing. I had churned, weeded the onions, and split some wood and was now lying under the great apple-tree in the yard vainly endeavoring to convince the flies and mosquitoes that I was not attractive and in the odd times, as a recreation, snatching a few bits from Carlyle's French Revolution.

The tree above me had a truly noble character. For many years it had stood there gaining in strength and beauty. It patiently withstood alike the merciless fury of the tempests and the silent and pitiless ravages of its minuter foes. It gave generously, each year, a portion of its substance to feed the rich and poor in the shape of rich and juicy rosy-checked apples, which popped open so lusciously when roasted at Thanksgiving time.

While ruminating on these things a leaf, an ordinary leaf, dropped upon the page which I had lately read. Ordinary as it first appeared, it seemed to possess a strange power over me, and I had looked at it but a short time until I felt myself growing smaller and smaller until I was scarcely any size. Indeed, I found it necessary to take four or five long steps

ere I was enabled to pass entirely over one of the dots of the "i's." After walking a long time I succeeded in reaching the leaf and after climbing upon it, I found great trouble in walking, for it was the under surface of the leaf, and its veins impeded my progress very much.

At last I reached the entrance of what seemed to be a large cave. Peering over into this I heard a squeaky voice pipe out, "Drop down if you wish to, the fall won't hurt you any." Hesitating but a moment, I let go of my support and rolled and tumbled to the bottom. Upon picking myself up and finding no bones broken, I noticed a door open at the right and through this I entered what seemed a lofty hall enclosed on all sides by translucent walls, through which the transmitted light appeared green, caused by numerous bodies within the cavity. To my intense surprise, these bodies seemed endowed with life, and what—was it possible? Were they conversing? Yes, such was the case, and though their language would sound strange to our ears, yet because of the peculiar medium in which I was situated, the words came to me translated. A courteous individual came forward and introduced himself as Mr. Chloro Plasted. It was with the greatest interest that I passed through the structure and viewed the many interesting features; the great number of individuals like my guide, silently working, the delicate protoplasmic threads connecting the various parts of the mass of life essence in which the different individuals or Plas-

tids were immersed, the small piles of manufactured material lying here and there, and especially that part which which seemed to be the life center of the social organization—to us known as the nucleus.

First we entered into a brief discussion of the mode of life from which it appeared that all of the individuals of this colony worked under certain fixed and inexorable laws, blindly, but to some fixed and definite end. I learned also that a colony like this in which Chloro lived was but one of many similar ones; each of which was a unit doing some particular work. Many of these units, or cells, having some particular work to do and having a common birth were grouped together, forming a tissue. Different tissues made up a system and the different systems the plant body.

"But what," I asked, "is the work you have to do?"

"What we have to do is to live, and grow, and reproduce ourselves. In order to do that we must eat and also make food for our children to eat."

"Now, please tell me," I said, "just how these things are made." "Oh, well," he replied, with a grin, "we have a few trade secrets, you know, and by the little that we see, we judge that that superior class called man would be glad to learn a few of them. But I will gladly show you all that I dare and, so please follow me. Now, you understand," said he, "that we start with two things, carbon dioxide and water; from these we make, by a secret process, an easily soluble sugar. Some of you wiseacres have said that it was done by putting together several parts of formic aldehyde, but when that is proven, we will talk about it."

"But how," asked I, "are you enabled to make this?"

"We cannot tell you, except that this medium in which we live, the protoplasm compels us by some mysterious force, to do it. I have heard my elders say that that power comes from the sun. At any rate, we worship that body, but a few of us of the new school have our doubts as to the truth of the origin of this power."

"Excuse me for my interrupting question," I remarked. "Please continue."

"Then," said Chloro, "we have this carbohydrate, as a starting point, and with the aid of this protoplasm, an innumerable number of compounds are built up. First, we have to provide for our own immediate growth by making

a quantity of protoplasm from whence we are derived, and second, we must see to the formation of new walls to hold us. The most important class of products formed by the protoplasm are the proteids. They are made up of a carbohydrate united with nitrogen and a small amount of sulphur. The nitrogen is obtained from ammonia and calcium nitrate. A different class of our society bring these, dissolved, to us. We make oxalic acid. The calcium unites with this forming calcium oxalate and the nitric acid is then reduced, similar in manner to the carbon dioxide.

The reduced nitrogen then unites with a hydrocarbon, forming leucin, tyrosin or some similar substance, and this, uniting with a carbohydrate, forms the proteid.

"But how about the sulphur?" I asked.

"Well, that is derived from calcium sulphate in much the same way that nitrogen is derived from nitric acid, but as to the manner in which it is used I can not tell you.

"Will these proteids dissolve in water?"

"Some of them. There are three principal proteids, albumin, casein and fibrin. Albumin is soluble in cell sap, casein in water and fibrin is insoluble. A proteid, legumin, found in the Pulse family, is dissolved in the presence of pepsin and a free acid, as malic acid."

By this time we had passed to the walls that bounded the colony and he, having apparently concluded his talk on proteids, I asked "and of what is this wall composed?"

"Mainly cellulose," he replied. "That is also derived from that first carbohydrate."

"But are your cell walls the same in all your systems?"

"Oh, no, where water is to be kept out, it is transformed to lignin, suberin or cuticin. In some members of the Rose family it is changed into cerasin, which may be observed oozing out on the bark of the cherry and which you people have been seen to chew. He looked at me maliciously, and I replied rather hotly that I guessed no one but children ever were seen chewing it, and then they picked out the flies first."

"What are those minute things with concentric layers which I notice that all of you carry about with you?" I ventured to inquire.

"That," Chloro replied, pulling one out of his pocket and wiping off the dust, "is a starch grain. They are made by simply mixing cellulose and a substance called granulose together."

"But why is there so much of this made. You seem to have no particular use for it."

"Oh, that is reserve material and when a famine looms up in the future, all we need to do is to dissolve some of it by means of diastase and thus we have food."

"Now, beside these two principal groups of products, the proteids and the celluloses," he continued, "we have many other products which are quite necessary in many ways. In the first place, we are expert makers of dyes and the different colors are not adopted for beauty, as you might think, but for use. Our own color, green, for example, handsome as it may be, serves three purposes. When sunlight passes through us, blue and violet, which hinder organic formation, are taken out; second we change the short waves of the sun's rays to those of longer length, which are better suited for the formation of sugar, and third, these waves of longer length give out more heat."

"Again, we manufacture quantities of what you term sugar. This is used for a number of purposes, such as the formation of an easily soluble food, the formation of nectar, etc. In the ergot of rye, the mycelium secretes a sweet substance. Now, the ants are attracted by this and upon leaving are sure to take away some of the spores of the fungus and thus distribute the species."

"Fats are also an important series of compounds, made up by the union of a fatty acid with glycerine as the base. Another condition under which the fats may be seen is the coating which you have often observed upon plums. If you should take the trouble to examine it carefully you would find that it consisted of little rods, scales or grains which melt and unite in minute drops, if put into water of the proper temperature."

"In the alkaloids and glucosides we have substances which we make for our immediate protection. Alkaloids, as you might imagine from their name, are bitter in taste to nearly all animals. Glucosides, though they will yield sugar, when boiled with an acid, often yield at the same time, a very poisonous substance, e. g., amygdalin yields glucose and prussic acid."

"We make, of course, nearly all organic acids, and nearly all are for home consumption, but some as formic acid in the stinging hairs of the nettle, are

freely given away to whoever may come in contact with them.

"There is another important but, by you, little understood class which I am free to discourse upon. They are the" — "Dinner is ready," suddenly brought me to my senses, lying upon the ground with an open book before me and an upturned apple leaf upon one of its pages. but, look as I might, I could see no octagonal hall with its peculiar looking inhabitants and could only guess of what he intended to discourse upon next.

L. R. W.

From Manila.

Manila, P. I., Sept. 15, 1898.

To the Members of the Athenian Literary Society of the N. D. A. C.

Fellow Members: I believe that in my last letter I gave an account of our life at Frisco, so this time I shall begin with the condition of affairs a few miles out from the Golden Gate, through which we passed on the evening of the 28th of June, as merry a set of boys as you need wish to see.

We had left the locks amid flying flags and the cheers of enthusiastic Americans, while from every part of the city and bay hundreds of whistles shrieked forth their joy at our departure.

* * *

At Honolulu we visited the Ohaa College and had a drink of—chem-hum—mineral water with the matron. She also treated us to cookies and doughnuts and as we ate, some young ladies came in, and—well, we left. We then visited the grounds of the queen, but did not make our stay very long as we wished to see all there was of interest in the city. After seeing many more of the principal "sights," we returned to the boat and then marched to the public garden for dinner. We enjoyed ourselves immensely and are glad that the islands are annexed and assure you that we have gained by the acquisition.

As for our sail from Honolulu to Manila, it remains a blank—at least the first twenty days. During the last two or three days we had a little diversity, as we ran out of water, and it was fun to see the boys scramble to get a drink.

Orders were given for us to run ahead and get water. We opened all draughts, and away we went.

In a short time we lost sight of the other boats, and were living in the hopes of soon drinking to our hearts' content, but, owing to some unknown cause, we got lost at sea and ran past the harbor. Luckily, the rain poured down that night, and we rolled out and filled our canteens. In the morning we turned around and soon ran across the right road. We noticed that the sign-boards were rather scarce, but after paddling about for some time, the other boats were seen waiting at the mouth of the harbor for us. We joined them and together we entered the harbor. This was Sunday noon, I know, as we had plum duff for dinner.

The mouth of the harbor is very narrow and its banks are high. As we sailed into the bay great frowning cannon looked upon us, four to our left and seven to our right. But what cause had we for fear?

We passed the place in safety. Cavite loomed up in the distance, while all about the harbor ships danced in the foaming waters of Manila Bay, which, just three months before had witnessed one of the greatest naval exploits in the annals of the world's history. Here had Dewey made possible the capture of the city of Manila, which lies in all its majesty just to the north of us. It is a beautiful city, as seen from the deck of our steamer. Hundreds of electric lights twinkle in the darkness along the edge of the bay, for the city lies right up to the water's edge. But only for a short time do they remain lighted, for word has reached the city of the arrival of fresh troops. The third night after we entered the bay the city was in darkness, and as we sat on the deck of the *Valencia* we could see the flash of guns as the pickets of the armies exchanged shots. Orders were received that lights must be put out on board the ships at eight o'clock; after that hour all was darkness, with the exception of the search lights which played about on the

water. They were on the boats of Dewey's fleet.

We were all anxious to get on shore and take part in the fun, and, on the 5th of August, we landed at Cavite. We remained here, however, only a few days and then crossed the bay to Camp Dewey which is about three miles from Manila.

The natives are a little behind the times and resemble very closely the monkey family, to which, I think, they must be first cousins. They seem afraid of them, however, of the monkeys, I mean, but I think that if the question were investigated sufficiently the "missing link" might be found here, which would complete the chain and prove the theory of evolution. I am not anxious to stay and search for it, however, as I have been here quite long enough already.

But I must close. Hoping that this finds you all well, with the work of the society progressing rapidly, and that I may soon listen to another of your programmes, I remain your friend and fellow member.

Frank J. Newman,
Co. B., 1st. N. D. V.

Perpetual Motion.

Perhaps nothing has caused more thought or the expenditure of more time without the desired result than the desire to discover perpetual motion. From the time of Archimedes we have records of the philosophers and scientists of the different ages striving for some means by which power might be obtained without a mechanical loss. Even at the present day, with our knowledge of the laws of heat, the discovery of the law of conservation of energy and the laws governing the transmission of power; with the results obtained from the researches of Joule, Maxwell or Tyndall, there are men spending time and money in search of this something which has been proven to be just as impossible as many other scientific truths which have been proven possible and which were immediately accepted.

While certain ingenious mechanical

contrivances have been constructed which seem almost to have the power of continual motion, that impassable barrier, friction, steps in and will finally produce rest. The nearest approach to success has been to reduce it to a minimum, but its absolute elimination has baffled all efforts. Suppose the friction were overcome, the result would be of no value unless there were new power produced over that required to operate the mechanism which produced it—a condition which would be producing something out of nothing—a discovery which would destroy all the theories we have of the laws of the universe.

If we look for the origin of mechanical power we find it to be heat; so the purpose of all motors is to transform heat into work. The steam engine is a good example. The wheels are caused to revolve by extracting the heat from the coal producing steam. The steam is merely an instrument of heat to cause motion by its property to expand. Other examples are the gas engine, water and wind wheels. The gas engine derives its power from the heat stored up in the gas which is in nearly the same form as coal. The power that drives the water wheel is caused by water moving from one position to another that is lower. It is raised to do this by the heat from the sun causing evaporation, then precipitation upon some relatively higher place. It is from the moving from this higher to a lower plane that power is derived. The wind wheel is caused to move by the heat of the sun producing an unequal pressure in the atmosphere and the rushing in of the denser, colder air to take the place of the lighter, warmer air.

The trend of inventions of machines for producing motive power is to derive power at the least cost per unit. This is being done by reducing friction—applying the power in as direct a manner as possible and combining substances in such a form as to produce heat at the least cost. The advances made in the last few years for reducing friction can be seen by a comparison of the ponder-

ous engines of twenty years ago with those of today, furnishing the same amount of power. Good examples are the Corliss engine exhibited at the Philadelphia exposition in 1876 and the one at the World's Fair, Chicago. The difference in the methods of extracting the heat from the different fuels can be seen in the methods of boiler building fifty years ago as compared with the water tube boilers that are found in modern boiler rooms. With the old style but half the amount of heat from a given amount of fuel was changed into power as compared with those of today.

But because engines at the present time work with less friction and because more heat can be utilized from a given amount of fuel than formerly, it is no indication that inventors are approaching perpetual motion; it is simply a better application of the laws of mechanics and physics. A person can travel a greater distance with less fatigue on a bicycle than he can on foot not because he makes new power by pedaling but because the power is applied to better advantage. While perpetual motion will never be a reality—if as rapid advances are made in the future as in the past forty years in producing cheaper power—the limit will probably be the discovery of methods of forming the non-combustible combinations of common gases, as oxygen, hydrogen and nitrogen, into combustible combinations at little cost, thus narrowing the chasm between power and perpetual motion.

T. H. H., '00.

A new stereopticon has been added to the physical apparatus. It is a decided improvement over the old one, as it is fitted so that either the arc light or the calcium light may be used. It also has a vertical projection attachment.

Mr. J. A. Davis has returned after a month's absence, and is as busy as ever looking after the repair department.

The juniors in mechanics are making a prony brake for the twelve-horse power engine.

Exchanges.

Nothing gives us greater pleasure in connection with our editorial work than looking over the various exchanges which come to us from the many colleges throughout the land. We greet them from the frozen north and from the sunny south; from the cultured east and the hustling west, and their perusal affords much pleasure, for through them we catch glimpses of life as it is in other institutions, and from them we may receive, if we will, many valuable hints and ideas which we can apply to our own school work. In criticizing the different papers which come to our exchange table, we mean to express our opinions freely, but without any spirit of bitterness or of captious criticism, realizing that we, too, are but human, and thus liable to err; trusting, also, that wherein we may fail of reaching our ideal, the faults may be attributed to the imperfect expression of our thoughts rather than to any unfriendly desire of the heart.

While some of our exchanges come to us edited by a member of the faculty, assisted by the students, we do not notice any marked improvement over those in which the management is entirely in the hands of the students. An institution destitute of students capable of publishing a creditable journal had, in our minds, better add a few brains to the personnel of the institution before entering the field of journalism.

We congratulate the staff of The Howard Collegian for the neat appearance of their paper, as well as the high grade productions which it contains. In the article entitled "Reach for the Top," the writer tries to impress on the reader's mind that earnest efforts should never cease till the highest possible goal is reached.

The Purdue Exponent publishes a special electrical number. It is profusely illustrated, and presents the work of that department in a very able manner.

The Erskinian is one of our best exchanges this month. The articles are varied and praiseworthy.

We acknowledge The Blue and Gold from Fargo College. It is a very neat paper, and is well gotten up.

The November Battalion from College Station, Texas, contains an excellent article on "The Bible as an Educator."

The Industrial Collegian contains a good article urging students to make more use of the libraries of their institutions. The intelligent use of a good library is an important factor of a liberal education.

"A Book of Dakota Rhymes" in the November Yankton Student should be of special interest to all Dakotans. If any section of our country can suggest thoughts for ballads and quaint rhymes, certainly "Dacotah," with her Indian legends and traditions, is that land!

We cannot restrain from applauding the exchange editor of The Mount St. Joseph Collegian for his forcible remarks concerning the college papers whose exchange columns are filled with nothing but "nonsensical jokes" instead of original criticism.

An old colored inhabitant of the rural districts, being asked if he were not anxious about the welfare of his son, who had enlisted in the army, replied:

"No, suh—not me! Dey ain't make de powder an' shot yit dat kin kill dat boy! In his short time er life dat boy has outrun two lynchin' committees, one sheriff, jumped out er two co'thouse winders, en broke three ropes dat wuz made speshully fer him! No, suh; it'll take mo' dan war ter kill dat boy!"—Atlantic Constitution.

What is the difference between an apple and a girl?

You have to squeeze an apple to get cider, and you have to get cider (side her) to squeeze a girl.—Ex.

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We wish to remind you that the time for the declamation and oratorical contests is not far distant. Have you your parts prepared? If not now is the time to begin your preparation. If each contestant enters upon his work with the determination of winning or of doing his very best, there will be no lack of enthusiasm or proper spirit.

We publish a letter this month which was crowded out of last month's issue, and though it is somewhat tardy in its appearance, we think it will be of special interest to SPECTRUM readers, because

written by one of our former students. The small space given to locals in the last number was not because of negligence on the part of the local editors, but on account of a super-abundance of other material.

After glancing at the number of students present during chapel every morning we can almost ask ourselves what we are to do next term, provided the attendance increases as much as it usually has in the past, and as we have every reason to believe that it will. If our College still insists on growing from year to year it will soon become our painful (?) duty to petition the state for funds with which to enlarge our present accommodations, or to erect a new Chapel Hall.

During chapel exercises for the past few days the students have enjoyed listening to the reading of an article entitled, "Shall We Forget?" written by the president of Leland Stanford University, one of the most eminent men of today. It dwells upon the attitude of the United States toward other nations, and upon the important questions soon to be settled by Congress, namely, does the United States wish to step into line with other powers in their possession of far away lands, and if so, how is she to govern them?

One of the fundamental principles of our present government is the right of each state to govern her own affairs, and the problem resolves itself into the question, can our nation, if she acquires possession of the remote territories now under consideration, extend to them this right of individual statehood? Certainly the answer and the issues arising from it are of vital importance to the future prosperity of our Union. If, as many of our wisest statesmen believe, this is an act amounting almost to an absurdity, the only tangible course remaining is to violate the inherent doctrine of our commonwealth, and adopt the method of our mother country in

organizing and maintaining colonies. Does the progress of our nation, as one of the leading powers of the present time, demand the extension of its boundaries into other continents, or will the benefits derived from so doing be great enough to compensate for the departure from the firmly established customs of the past? These are certainly questions to be settled only with much deliberation, not merely of a few great men, but of a whole nation of educated, intelligent and progressive people, and the result of the decision is not only watched for with eagerness by our own people, but is one of international importance.

May the wisdom which seemed always to guide the founders of our great republic be still the inspiration of those in whose hands rests the final settlement of these questions!

"Two years ago the state of Colorado passed a law making life imprisonment, instead of death, the penalty of murder. It has been found by experiment that murders began to increase as soon as the law abolishing the death penalty was passed. There is now a popular agitation for its repeal, and there will be an effort to restore the death penalty for murder in the first degree.

"No legislative action is more absurd than that which attempts to punish a murderer by simply guaranteeing him his board and clothing, and life in an equable temperature, with the high probability that if dissatisfied with it he can escape, or secure a pardon, especially if he has a political pull or the pardoning power passes under the control of a sentimentalist.

"The United States today leads the civilized world in number of homicides, in the number of unpunished murderers, and in the number of lynchings; and the last is the natural consequence of the first and second."

The above clipping from the *Christian Advocate of New York* expresses our views so much better than we could express them ourselves that we give it space in our columns. The warden of our own state prison stated two years ago that the average time served by

prisoners sentenced for life was at that time but three years, because granted pardons by the various governors in whose hands the pardoning power up to this time has rested. A movement is on foot so to amend the constitution of our state that instead of the governor's retaining this power it will be vested in a Board of Pardons.

To one taking only a cursory interest in the Dreyfus case, notorious because of its brutality, the injustice and treachery of the whole proceedings are very apparent. The facts brought to light since his banishment reveal the corruptness and dishonesty of the entire French judiciary, and show that the prosecution was in reality a controversy between the military and the civil powers, in which Dreyfus is made the scape-goat of those possessing greater wealth and influence. Whether guilty or not, he was undoubtedly condemned by illegal means, which seem still more barbarous when contrasted with the procedure in American courts, where even the worst criminal is acquainted with all the evidence presented, and is allowed to vindicate his own cause. This right Dreyfus certainly did not have, as he did not even know upon what grounds he was convicted and banished, not to the customary place, but to an island whose climate was expected to prove fatal. Nor did the cruelty stop here, for all communication with his friends or relatives was forbidden, and when a revision was finally ordered he was not notified for some time of the favorable turn of affairs. The great wonder is that he was not driven to suicide or insanity.

Students who fail to read *THE SPECTRUM* exchanges do not know what they are missing. You will find them very interesting, and will be able to form a better idea of what is being done by students in other colleges. They will be found in the case in the reading room, and readers are requested to return them to their proper pigeon-holes.

The Reception.

Friday evening, Dec. 9th, will long be remembered by those students who attended the social at Francis Hall. The tending the social gathering at Francis Hall. The evening was extremely favorable, being very clear, the air just crisp enough to cause rosy cheeks and sparkling eyes. By half past eight the brilliantly lighted hall was filled with happy hearted students who kept things lively and entered with interest into the many games which had been provided. Later in the evening Miss Mabel Spencer gave one of her well rendered selections on the piano. She was heartily encored and responded with another solo as much enjoyed as the first. Miss Elita Olsen captured her audience with a violin solo. This is the first time that the entire college have had the opportunity of hearing Miss Olsen and all were delighted. Prof. McArdle's vocal solos are always enjoyed and when he made his appearance the audience were sure of hearing something good and were not disappointed. The newly organized double quartette gave a grand medly and when it was shown in the usual way that their reappearance was wanted, it was announced that something better would be given them and refreshments were served to prove it. After more amusements and a good social time the students left for their respective homes and boarding places, feeling that the evening's enjoyment was one well worth remembering.

THE SPECTRUM for November comes out bright, clean and spicy. The Agricultural College may well be proud of their organ.—*Fargo Forum.*

Teacher—Define locus.

Bright Pupil—A smothered oath.—*Ex.*

"Professor," said a weeping graduate, "I'm indebted to you for all I know."

"Pray do not mention such a trifle," was the reply.—*Ex.*

Basket Ball.

The prospect for a winning basketball team this winter is quite promising, much more so than last year for the reason that our boys, though comparatively new to the game, have profited much by the experience gained in the league games of last winter. Although but one member of the old team is back this year, there are good men in the second team to take their places who will, without doubt, put up a stronger game.

The first game for this season, which was played with the Y. M. C. A. team, shortly after our team was organized, resulted in a score of 16 to 18, their favor. Considering the fact that their team consisted of old players, our boys made a very good showing.

But the boys are not the only ones who can play basket-ball. Our girls demonstrated by their victories of last winter that if but given a chance will win a greater percentage of games than the boys.

This year there is a better showing for a good team, as more of the young ladies seem to be interested in the game. Each noon two full teams meet in the gymnasium to practice, while an enthusiastic and interested audience watches their graceful (?) movements from the gallery.

The Prof. gave one long, heart-felt sigh

And sadly shook his head,

As o'er the problem on the board

The young man's name he read.

"You never should have been called Blank,

But rather Hill, instead;

Your nature doesn't suit your name,

For you're a 'bluff,'" he said.

—The Illini.

We don't want to buy your dry goods,
We don't like you any more,

You'll be sorry when you see us
Going to some other store.

You can't sell us any sweaters,
Four-in-hand, or other fad,

We don't want to trade at your store
If you don't give us your ad.—*Ex.*

Social Happenings.

Snow!

Snow balls!!

Sleigh bells!!!

Jingle bells!!!!

"Locked out"—who was it?

Junior and senior orations.

Miss Nettie Erickson, a former student, is very ill.

Arnold Hughes—"My, but six years is a long time to wait.

Even so small a thing as buying eggs can be done by algebra.

There is some talk of organizing an orchestra—let the good work go on.

Allie Power visited the Institution last month, and subscribed for THE SPECTRUM.

Meineche is back. Every one is glad to once more welcome his "Fa'derland" countenance.

"A combustible substance is a burnable substance, in other words, a substance that will burn."

The Athenian Literary Society is planning a mock trial to be given some time next term.

Rev. Morris of Wheatland visited us during chapel hour, Nov. 30, and gave a pleasant talk to the students.

Even the preps contemplate organizing a club for the enjoyment of the writings of our American poets.

Freshman take notice—When the captain gives the command, "Officers fall out," he does not mean the corporals.

Wanted—A young lady 5 feet 5 inches in height, weighing 130 pounds. A personal interview preferred. Apply to H. McGuigan.

The chemical reagents required by the class in quantitative work next term are on hand, and everything is in readiness in the laboratory.

Prof. Brosche attended chapel exercises on Dec. 5. He would like to organize a music class in piano, violin or mandolin lessons.

Some of the dormitory boys, but not all of them, are wondering why they had to go a whole week without apple pie.

It is wondered why two of the freshman girls spent the hour in wandering about the halls instead of attending their rhetoric class.

Mrs. McVeety is making steady progress in classifying the books in the library according to the "Dewey" system, which is most complete.

The beautifully decorated sword which Prof. Kaufman is now wearing on drill days was presented to him by Lilley & Co., Columbus, Ohio.

We suppose that Miss Clark will not need to take special work in domestic science, as the phrenologist said she would make a good housekeeper.

The Blue and Gold, published by students of Fargo College, has been added to our list of "exchanges." It is a credit to the students of sister college.

President Carhart of Mayville Normal passed through the buildings on a tour of inspection, and exchanged greetings with the members of the faculty.

The juniors are coming up manfully with their orations. The chapel echoes with strains of oratory preparatory to the final appearance before the student body at chapel time.

The meteorological department has obtained a photographic sunshine recorder, manufactured by Friez & Son, Chicago, upon which even the faintest ray must leave a trace.

The freshman class has organized a Shakespearean Club, and will meet monthly. They desire a more extended acquaintance with old English than the prescribed course gives.

The classes in German and French have so increased in number and attendance as to require all the time of one teacher, consequently Mrs. Boyles does not work in the English department this term.

The sewing class is learning the "back and "half-back" stitch.

"Old Glory" makes a very appropriate drapery for the front of the chapel.

Suppressed emotion causes heart disease, hence the audible smiles of the college girls.

The following literary journals may be found in the English department: The Bookman, The Literature, The Dial and Book Reviews.

The department of geology has received from the Northern Pacific Railroad Company two fine pictures entitled "The Teton Mountains" and "Pyramid Park."

About twenty-eight or nine young ladies patronize the bus mornings and have decided that they can now afford to buy the driver a fifteen cent horn to announce his arrival at the different stations.

When Mr. Field was in Minneapolis he "took in" the "U.," and reports it a great institution. There are over 3,000 students in attendance. The medical department is being pushed to the front, so that it will soon rank with the first in the land.

The growing favor which the language studies enjoy is a happy index of the intellectual progress of the students. It shows also an awakening to a realization of the fact that no education which neglects the cultivating and refining influence of these and kindred studies can satisfy the requirements of modern civilization.

Cannot some regulation be made in regard to the heating of the class rooms? With closed windows and steaming radiators the temperature of the rooms is run up to a heat scarcely less than tropic during the night, and the next forenoon the instructors complain of the dullness of their students, and well they might. A thermometer should be hung in every class room and the temperature kept within living limits as regards both heat and cold.

The freshman class in domestic science have finished Emergency Notes, and are going to continue indoor decoration.

The Sophomores have formed a literary club for the purpose of continuing the study of recent writers, that they began in class last year. The club will meet once a month.

Prof. Morris, the phrenologist, had his time well taken up reading the bumps of the college students. It is an open secret that those who paid him the highest fee, have the most "bumps of ability."

A series of investigations have been begun by Mr. Field to ascertain, if possible, any relation which may exist in the ordinary sore throats, infectious epidemic sore throats, tonsillitis and diphtheria. There is reason to believe that many cases of sore throat are extremely mild types of diphtheria.

The "Philos" gave the following programme at the residence of President Worst, on Dec. 2:

Roll Call	Quotations
President's Address	R. N. Olsen
Violin Solo	Elita Olsen
Paper—Sioux Indians.....	C. K. Stark
Piano Solo	Miss Spencer
"Movement"	H. McGuigan
Current Events	O. A. Thompson
Vocal Solo	Elita Olsen

After the programme Miss Worst entertained the society, and several musical selections were rendered by Misses Spencer and Olsen.

It has just leaked out that a young lady not a hundred miles from Devils Lake received a letter from a mutual friend in Co. D, now stationed at Manila. Telling a friend of the good news, she said "X was getting along splendidly, and had been assigned to the guard house for five days, which place he said was very hot, but he was always full of courage, you know, and he did not shirk the duty. Ma and Pa were awfully delighted to hear of his promotion."—D. L. Free Press.

J. A. Power, '95, called at the college recently.

The Freshman class expect to have a flag soon.

Prof. in Logic: What is a genus?

Pupil: A genus is a person who—well—ah—

A special class, composed of eight or nine Fargo young ladies are receiving instruction in Domestic Science, under Miss Senn, several afternoons a week.

The Chemical department is now engaged in analyzing sugar beets from the south part of the state. The sugar content is very good, ranging in most cases from 13 to 16 per cent.

The enrollment for military drill this term numbers over one hundred students. They have been divided into two companies, and the following appointments of officers made:

The Agricultural Department is engaged in preparing a bulletin on soil culture and roots. Mr. Ten Eyck has several fine specimens of roots showing the entire root system of oats, corn, wheat and flax.

The classes in the English department are large and promising. The advanced English grammar class in particular has a larger per cent of critical students than ever before; not that they are older than former students of this branch, but that they have had good instruction before enrolling here.

Arthur D. South of Casselton, with '95, paid the Institution a visit on the 7th instant, and expressed great surprise at the changes and improvements which he noticed on every side. He spent the summer in Washington and other western states but was called home by the

The literary works of English and American authors, belonging to the College, are kept in the class room of the English department and are free to all students who desire to do general reading. The department is glad to assist any student in determining what to read and to furnish any help necessary to such reading.

Would it not be a nice idea for the students to wear a photo button of the college building?

Prof.: What order is man?

Pupil: (promptly but absent-mindedly) Coelenterata.

More than the usual interest seems about to be taken in the annual declamation contest. Even some junior preps are talking of entering. This is sensible.

Mr. Ten Eyck, assistant in the Agricultural Department, is working on the composition of soil at different depths. Samples are taken of each foot to a depth of four feet and chemically and mechanically analyzed.

Prof. Waldron attended the annual meeting of the State Horticultural Society of Minnesota. Among the features was a stereopticon lecture illustrating the year's work in horticulture at the State Experiment Station.

In studying the football scores this year it is surprising to find how many of the games are all on one side. Probably never in the history of the game have so many 0's been recorded, while the winning teams have had so large a score.

The football boys next year expect to classify as follows:

First Hour—Signal practice.

Second Hour—Tackling.

Third Hour—Bucking the line.

Fourth Hour—Rest.

Afternoon Work—General practice.

Since Mr. Hall gave his interesting talk in chapel about "stars," quite an interest in astronomy has been awakened among the students. This may account for the lateness of some of the couples in arriving at the social Friday night, as the stars were exceptionally bright.

You can see the sophomore caps a mile off! The colors are rather startling but then—so are the sophomores.

A certain young lady was heard to remark that she wanted "the Worst of it." Wonder what she meant?

"Tis better to have studied hard and flunken,
Than to feel that from a duty you have
shrunken. Ex.

The driver of the College bus must be very much afraid of the girls as we hear that on Dec. 8th the bus was "held up" by two young ladies and "Harry" was compelled to stop.

Monday, Dec. 5th, Chester Piatt, of Cooperstown, a former student of the N. D. A. C. and Mrs. Evelyn Pratt, of Fargo, were united in marriage by Rev. John Orchard. The Spectrum extends congratulations.

The Chemical Department has received considerable new apparatus during the summer, among the more important being a Berkermanns' boiling-point apparatus, an oil tester, Thompson's Calorimeter, a Bausch and Lomb micro-photographic outfit and considerable new apparatus for gas analyses.

By the time this issue is published the ceremony will have been performed uniting in marriage Olaf Nordby, of Harwood and Mrs. Inger Ostby, of the same place. Mr. Nordby, having been both student and instructor at this institution, is well known and his many friends here extend congratulations. ingness to do the work.

One of our exchanges says that the "cold weather has congealed the spirit of basket-ball in the veins" of the girls. It seems to have had an opposite effect on "our fair ones" as they are practicing at least twice a week and when studies permit more than that.

The following volumes have recently been added to the library: A Desert Drama, The Beth Book, Hon. Peter Sterling, In Kedar's Tents, Daniel, A Singular Life, Caleb West, Paris, 2 vols., The Girl at Cobhurst, The Standard Bearer, The Pride of Jennico, The Gadfly, Head of the Family, The Story of Ab, Halbeck of Bannisdale, 2 vols., The King's Jackal, Kronstadt, Auld Lang Syne, Ghosts I Have Met, Forest Lovers, The Terror, Rupert of Reritzan, The Prisoner of Zenda, The Celebrity.

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