The Spectrum

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Searching for a Subject

I CANNOT write a theme in rhyme
No matter if it's almost crime
To shirk one's duty in that way
And leave it till some other day.
But then—I sometimes wonder why,
If others do—then why can't I?

It isn't very hard they say
If gone about the proper way;
So I shall simply cast about
For subject matter. There's no doubt
That many things may come to light—
In writing themes—on which to write.

Now let me see, how to begin,
For I shall surely laurels win,
If fitting subject I can find.
Oh! gracious Muse, to me be kind.
Behold a supliant to thy name
And let me not be put to shame.

I will not write of grass and trees,
Of singing birds or humming bees,
Of winding rivers, running brooks,
Or things we see in picture books,
Or saw in life when we were young—
All these the poets well have sung.

I'd write of love, if I knew when
It would be wise to check my pen.
But I should write with utmost dread,
And rush where angels fear to tread.
And then, you know—you heed not frown—
It all is told in "Cap and Gown."

The flowers bright I just adore.
The ones that dot our campus o'er
Like yellow stars amid the green—

So that in springtime can be seen
Our College colors spread to view—
I've half a mind to praise. Would you?

I've counted off all I've been told,
And now the subjects manifold
I ever heard extolled in verse
Come up before me and are worse
To choose from than I ever thought
The thing would be for which I sought.

To give up when I've just begun!
No! No! My poem must be done.
And if I can but write a line
I'll make it sound so well—in time—
You'll wonder why I always say
I'll do it—but—some other day.

M. M.

The Path Finders of the West

ORATION

A HUNDRED years ago the territory which has since been known as the Louisiana Purchase was a vaguely known domain with imaginary boundaries. It was the home of the buffalo and Indian. Aside from the unreliable reports of the trapper and adventurer, nothing was actually known of its extent or resources. Imagination had it pictured as a wilderness unfit for the home of the white man. That emigration should be forced into it was never seriously considered, consequently but little curiosity was felt regarding this vast unknown.

When Thomas Jefferson came to office, one of the difficulties with which he had to cope was the adjustment of the strained conditions of the South and West which were exasperated because their path to the sea—the Mississippi River—was blocked by Spaniards. When it became known that Louisiana had been retroceded by Spain to France, the spark of excitement increased and burst into flame. The air was full of war. A plan to seize the mouth of the Mississippi before the French could establish themselves there was even considered.

Jefferson loved France and could not believe in its ill will to America. That confidence and his love for peace caused him to seek another means of escape than by force of arms. Livingston, U. S. minister to France, had been sent to Paris to arrange for an amiable settlement of difficulties, and now as tumult increased James Monroe was sent, $2,000,000 in hand, to treat for the purchase of New Orleans and the Floridas. Of the great stretch of territory west of the river there was no thought.

Suddenly Jefferson's two negotiators—Livingston and Monroe—found themselves confronted by an astounding proposition. The First Council demanded that they buy, not simply New Orleans and the river mouth, but the entire vast Louisiana; furthermore, that the purchase money should be not $2,000,000, but $15,000,000; and that the bargain should be signed and sealed without delay.

How the envoys dared to assume the tremendous responsibility, one can scarely comprehend. Take it, however, they did, thus yielding to the most imperious of human wills.

When news reached Jefferson of what had been done, he believed that what had been bought was worse than valueless. He felt convinced that emigration passing beyond the river into the new country would be a positive detriment. In the words of Madison, it would "dilute the population" and probably lead to a dissolution of the Union. But as time went on confusion settled. People began to realize that the price paid had been none too great. The transaction came to be regarded for what it is—the greatest piece of good fortune that befell the country between the dates of the adoption of the Constitution and the saving of the Union.

Louisiana was gained: what lay concealed within its vast area it became imperative to know. Realizing the importance of the task, Jefferson looked for one duly qualified for the undertaking. In Meriwether Lewis, his young secretary, he recognized one with the qualities most desired.

Virginia, who points with pride at the large number of illustrious sons on our national rostrum, claims Lewis as one of her own. At the age of thirteen years he was put in the Latin School of his native town of Charlottesville. After five years, he returned to his mother and assumed the cares of the farm. His talent of observation, which had lead him to a knowledge of plants and animals, would have distinguished him as a farmer, but yielding to the ardour of youth and a passion for more dazzling exploits, at the age of twenty he engaged as volunteer in a body of militia. From this he was removed to the regular army where he rose rapidly from lieutenant, captain, and paymaster of his regiment, to private secretary of President Jefferson. In this capacity he proved himself trustworthy, energetic and resourceful.

When selecting Lewis as head of the famous expedition, Jefferson gave the following estimate: "Of courage undaunted; possessing a firmness and perserverance of purpose which nothing but impossibility could divert from its direction; careful as a father of those under his charge, yet steady in the maintenance of order and discipline; intimate with the Indian character, customs and principles; habituated to a hunting life; honest, disinterested liberal, of sound understanding and a scrupulous fidelity to truth: with all these qualities as if selected and implanted by nature for this express purpose, I could have no hesitation in confiding the enterprise to him." All he lacked was greater familiarity with the technical language of the natural sciences and the readiness in astronomical observations necessary for the geography of his route. To acquire these he repaired to Philadelphia and entered upon his studies.

Early in his preparations he determined, with Jefferson's consent, to secure a companion who would share his honors and responsibilities. William Clark, an old friend, was chosen and given the commission of captain. The success of the expedition was in part due to the perfect accord and friendship which existed between the two leaders.

Twenty-five thousand dollars were appropriated for the exploration of a country, the wealth of which is now beyond estimate. This small sum proved sufficient for the perilous three years' undertaking, commanded as it was by hard working, energetic men. The instructions of Jefferson to Lewis briefly were as follows: a systematic account was to be kept of all that might be learned of the country, its rivers, mountains, climate, soil, production, extent

of domain, character and amount of trade. Directing particular attention to observations of latitude and longitude. To guard against accidental loss, copies of each day's proceedings were to be made at leisure and put in care of the most trustworthy attendants.

In May, 1804, Lewis with his party of forty-three soldiers and frontiersmen started on that journey, the import of which the members could not fully apprehend. Following the Mississippi, which now at flood tide was turbid with crumbling clay banks, they entered the Missouri, which for the first time resounded to Fourth of July guns. On they pushed, encountering Indians who were for the most part friendly. October found them 1600 miles north of St. Louis, at the point where Bismarck and Mandan now stand. Up to this time the real hardships had not begun. The weather had been favorable, the magnificent forests proved to be the Hunters Paradise. Since it was impracticable to penetrate the unknown regions in winter, a fort was constructed and on Christmas morning the stars and stripes was hoisted above Mandan. The journal of Lewis gives a vivid description of this locality and of the pleasant exploits of the winter. The Indians of the Mandan tribe were friendly and assisted the white men in various ways. The savage and the explorer joined in the great buffalo hunt. During the temporary residence in our state, supplies were laid by which guarded the expedition against starvation later on. The explorers joined in the social life of the Mandans, attended their medicine dances and smoked the pipe of peace. Lewis learned much of the history of the principal tribes from them.

It was here also that Lewis secured the Northwestern guide and his Indian wife, Sacajawea the Bird. This noble woman became the chief guide and counselor of Lewis and Clark over a route of 2000 miles. She knew the fords, passes and springs, and when supplies were scarce, she went alone to Indian villages and secured food. When hope sank in the hearts of the men, she cheered them forward. The course became more difficult as time went on. The snowy Rockies were reached and here were found Sacajawa's people from whom she had been taken captive years before. From the Chief, her brother, horses were secured. As the weary travelers pursued their way, game became more scarce and at times the party was reduced to the verge of starvation. The mountain paths were treacherous, and suffering from mosquitoes and thistle was intense. But under the silent guidance of the Bird Woman the last divide was crossed, the last portage of the Columbia was made and the broad Pacific burst upon view.

Fort Clatsop was built and a miserable winter passed owing to inclement weather and illness. The return was full of misery and want. The poverty of the party aroused the contempt of the Indians. Necessity, the mother of invention, prompted the men to cut the brass buttons from their coats and as a last resort to sacrifice the medicine chest to gratify the demands of the red men. The home journey was marked by a thrilling escape from death in an enounter with the Minnitarie, and the sad farewell of Sacajawea, the faithful guide.

September 23, 1806, thirty bronzed and ragged men drew quietly up to the river front at St. Louis. The Path Finders had returned from a new world as large as one-half of Europe. They had traveled 9000 miles through a wilderness with the loss of only a single man. Not a plan had miscarried during these three long years: not a day's work was bungled. This does not mark spectacular heroism, but rather the level headed sort typical of what consti-

tutes American progress. These men had given to the United States the only territory acquired by discovery. Their enterprise secured us a country extending from the Atlantic to the Pacific. It was the successful fulfillment by Lewis and Clark of the task set by Jefferson that gave our Government her chief claim to the Oregon country. Someone has said that there is no heroic period in American history similar to that of the Robber Barons and Sea Viking of older lands; that in America there is only the history of the beaver. That is in a measure true, but is not the story of the beaver heroic? Was it not the beaver that lured the French west to the Rockies, the sable that led the Russian across Siberia to the Pacific; the sea otter that brought the Spanish, English and Russian to the Western coast of America? Russia wanted furs; England, land; Spain, gold; but on the West coast, the United States came to a heritage of all three through Lewis the captain of industry.

On his return Meriwether Lewis had been elected Governor of Louisana. Owing to his many duties, it was impossibhle for him to attend to the publishing of what was up to that time the most complete, detailed and accurate account of any expedition. It was not till he was thirty-five years of age that he left his beloved West for Washington to confer with the President.

On the 11th of October, 1809, he arranged to spend the night at the tavern of Robert Grinder, in the mountains of Tennessee. Accomodations were crude and Lewis, wrapping himself in his buffalo robe, slept on the floor.

During the night an awful storm raged, but above the howling of the wind was heard a piercing shot. The next morning was found the lifeless body of Lewis with a pistol beside it. Grinder circulated the report that it was a case of suicide, so the great explorer was buried beside the road without ceremony. The American people in general believed Grinder's story, but settlers of that vicinity firmly entertained the opinion that Grinder had committed the murder for his victim's money. Unfortunately the fame of Lewis has been marred by the story that he took his own life. For forty years his grave remained unmarked, when the Tennessee Legislature appropriated $500 for a monument. An irregular county having the grave as its appropriate center is named Lewis and a few acres around the monument were set aside for a park.

To-day this park shows the neglect of more than half a century. The broken column stands as it was placed beside the forsaken road. But this does not indicate the world's true appreciation of the man's great achievement. Last year universal attention was called by the Lewis and Clark Centennial to three correlated facts: the story of the heroic exploration of one hundred years ago; the chronicle and epitome of development of a recently explored land that gave to the United States its Western coast; and the story of extension of American trade with the Orient along the pathway blazed by Lewis and Clark.

The vast unknown of 1803 has since the days of Lewis revealed its unlimited wealth. The Indian and buffalo have given place to the American settler. Railroad and telegraph have made the West the neighbor of the East. That which was once deemed a waste is now the bread basket of the world, the treasure house of the universe. Owing to natural resources and physical conditions the West is destined to be the home of the most vigorous race the world has ever known. And yet, the development has just begun. One hundred years have given to Lewis this monument. What centuries to come may do is beyond the flights of boundless imagination. T. F.

Science Department

EAST, to be valuable for bread making, should have a fairly vigorous action so the bread will rise before any harmful bacterial growth has time to take place. It should also impart a pleasant flavor and give a fine even texture to the bread.

Therefore yeast should be selected with as much care as possible if one expects good bread.

Yeasts are plants and very simple in their structure. One whole plant is composed of a tiny cell. This cell may be round, oval, or elongated in form and is so small that it would require 4000 of the larger sized, placed side by side, to measure an inch.

To describe the cell:—It consists of a transparent, elastic sac which contains a jelly-like mass called protoplasm. This is the living part in which is sometimes found a tiny spot called a vacuole. The vacuole is simply an oily drop and no particular use has as yet been found for it.

Yeast reproduces by a process called budding. This takes place when the plant is growing rapidly. The rapid growth bulges out part of the cell wall and the protoplasm goes into this also and forms what is called a bud. Then the same process goes on in the bud and thus they multiply.

The rapidity of growth depends, of course, upon the temperature and the food supplied. When used for bread making the food supplied contains sugar and the proper amount of moisture, (about one part moisture to three of flour) and is, or should be, kept at a temperature of 70° to 90° F. The yeast mixed with this grows rapidly and buds soon form. Before long little bubbles may be seen escaping from the surface which takes on a frothy appearance. Now what causes this is the yeast feeding upon sugar and baking it up into alcohol and carbon-di-oxide. The carbon-di-oxide being very light forces its way up through the particles of dough and causes it to rise. The bread should be mixed thoroughly to distribute the yeast evenly through the dough.

The alcohol goes off while the bread is being baked.

Now this is all very well, but while the yeasts are growing so vigorously, something else may be growing which will greatly change the effect of the yeast's growth. These are bacteria and there are many different kinds of them. Bacteria are also plants of very simple structure and more minute than yeasts. The two which are particularly troublesome in bread are those which sour it and those which make it slimy.

The bacteria which cause the slimy bread grow while the bread is rising and are not killed by the heat in cooking. After the bread is cooked they go on growing rapidly and cause what is known as slimy bread. So, though the bread may appear to be all right when cooked, a few hours after it may be found in this condition.

The bread is no less nutritious or wholesome on account of this sliminess, but it looks bad. If the bread is cooled rapidly after it is taken from the oven, it is not so liable to become slimy. The only way, however, to be perfectly sure of doing away with sliminess, is to change the flour and yeast and to sterilize all utensils used in baking the bread.

Sour bread is also caused by bacterial growth. These bacteria may also

be found in flour, yeast and utensils used. Although not harmful to the system, they produce an unpleasant flavor due to formation of acid, (lactic, putric or acetic, it is not definitely known which,) and are to be done away with if possible. To do this the same precautions must be taken as for slimy bread. By this it will be seen that great care should be taken in the selection of yeast as far as purity and cleanliness are concerned and also as to the age because the older it is the fewer live yeast plants does it contain. L. M.

CANNING as a means of preserving foods has been known only in the last century, but in the last eight or ten years this method has become the one most commonly used. By canning is meant simply the use of some device for keeping the bacteria away from the food. If this can be done the food will keep indefinitely, and that it can be done is proven by the great variety of canned goods, including home-made preserves, found in use today.

But in order to protect the food from bacteria by canning, two facts must be observed:—first, all bacteria present in the food must be completely destroyed; and, second, the access of other bacteria must be prevented.

The destructiveness of the bacteria present is accomplished by the action of heat as in boiling. The foods to be canned should be put into water and boiled briskly for five to ten minutes. This amount of heat is usually sufficient to kill all bacteria, but if, as in the case of tomatoes, corn, and beans, a spore-forming bacterium, which resists an even higher heat, is present, some other means must be employed. Heating under pressure and also heating over a bath of $Ca\ Cl_2$, which raises the temperature to 260°F, are the methods used in factories, but are almost impossible in the home, so their boiling a longer time is usually sufficient, as even spores are thus finally destroyed. Now while one is boiling the food material to be canned, the cans into which it is to be put, the covers, etc., must not be forgotten. All these utensils should be sterilized and kept so until filled with the food and sealed.

Preventing bacteria from coming in contact with the food after it is put in cans is not so difficult. The boiling material should be put into the sterilized cans and sealed tightly at once. In the home where the glass fruit jars with screw tops and rubbers are used, the sealing is a simple matter; in factories where the cans are used, the food is often put into the cans without cooking; the covers soldered, leaving only a small opening in the middle, and then the can and contents are thoroughly sterilized and sealed with solder while hot.

These factory goods, while in some cases better than home prepared are not usually so wholesome or of so good a flavor, but neither retain the same flavor as the fresh foods; but whether prepared at home or at a factory, the same method of preserving foods by canning is one that has done much toward supplying foods for the human race. Much material which would otherwise go to waste, may be saved, and the fruits and vegetables of the summer may be kept for use in the winter months. E. M.

A NEW fossil mammal, allied to our modern antelope, was discovered a few months ago by the Geological Department of the Univeristy of Nebraska, in Sioux County, Nebraska. The skull of the fossil has four horns, two frontal and two maxillary ones. The frontal horns curve inward, while the maxillary ones, rising from a common trunk, curve outward. There is also a great difference in the arrangement and size of the teeth.

Athletics

THE last month has been a busy one for the basket ball contingent. Several hard games have been played In some we have come out the victors, in others, the conquered. A review of the basket ball situation of the season, however, will clearly indicate that we still are in the race for the state championship honors. Our boys have not been defeated by any team within the state, and are undisputed champions. Our girls, however, have recently suffered a defeat from the Valley City Normals whom they so handily defeated in the early part of the season The comparative scores of the two teams, however, show the great superiority of the Aggies.

Although basket ball is in the upgrade, and is a very suitable sport it is questioned—is it right to sacrifice every other form of indoor gymnastics for it? The Physical Director is criticised for his slowness in not instituting other forms of Athletics. We have good material for several lines of work. Why not, then, throw off the lethargy and build up a more varied line of indoor athletics? It would be welcomed by the student body and all sport loving people.

A. C. vs. St. John's Aniversity

Two games have been played between the North Dakota Aggies and the young priests of St. John's. The first game played in their armory, went to the Saints by a score of 14 to 22. The St. John's athletes live in an atmosphere of fast basket ball, and practice twice daily. They are not as strong as the Red Men on defense, but are superior in their offensive work, especially at shooting baskets. The St. John's are royal entertainers as well as true sportsmen. Our boys are loud in singing their praise.

The second game played in the A. C. armory, February 10th, resulted in a victory to the A. C. by a score of 29 to 22. The first half ended with the score standing 20 to 6 in favor of the Aggies. In the second half the visitors strengthened their offense by changing the positions of two of the players. This change proved so effective that they made 16 points to our 9 in this half.

A great attraction of the evening was the wrestling match arranged between Bert Haskins of the A. C. and Mr. Myers, instructor of wrestling at St. John's Univeristy. In the two five-minute bouts, Haskins was the favorite, doing most of the offensive work. The St. John's athlete was strong but lacked condition. The referee declared the match a draw.

A preliminary practice game between the A. C. Second and the Fargo College team, was played as curtain raises for the big contest. The game, although not of a varsity style, had some interesting features, and resulted in a score of 19 to 7 in favor of the Farmers. Haskins for the A. C. made the best showing.

The Domestic Economy department tendered a reception and banquet to the visitors and the A. C. basket ball contingent. Everybody was happy and best of feelings prevailed.

A. C. Girls, 14; Minnesota, 15

The Gophers and the Flickertails have contested for the girls' championship honors of the Middle West, and the result is a victory for the Gophers. Fresh from their overwhelming victory of 6 to 11 at Valley City Normal the visitors looked good to win by a handsome margin. But such was not the case; the first half ended with a tie score 7 to 7. At the beginning of the second half the visitors shot three baskets in rapid succession. The locals braced and retaliated by shooting two baskets, but were unable to gain a vantage. The Gophers made two more points and the Flickertails followed with three. As the whistle blew, Miss Fields, center for the A. C. threw for a foul, but failed and the championship went to the Gophers by the small margin of one point. Much credit is due to our girls for their splendid showing against this veteran team which has not met with defeat for two years. Our girls were handicapped by playing under the intercollegiate rules; otherwise the result might have been different.

A minor game was played between the A. C. Preps and Moorhead High. The little fellows proved themselves to be wonders. Their ability to shoot baskets at all angles was marvelous. In the two 15 and 10 minute halves they piled a score of 37 to 3 against their larger opponents.

Games Abroad

It is hard to write about defeats, but such is our fate. Our boys, ever covetous, went down to the Twin Cities to reap honors, but instead met with defeat. It is said to our credit, however, that the North Dakota Aggies presented the most aggressive play that the Gophers have encountered this season. The game, played under the intercollegiate rules, resulted in the score of 15 to 26 in favor of Minnesota.

Our boys feel confident that they can turn the tables on the Gopher aggregation, but that body is not willing to jeopardize their inflated championship title by coming to the Flickertail state.

The second game abroad was with Company K. of Stillwater. The military men were too much for our tired and battle sacred warriors and scored almost at will.

On account of injury to his left eye, Slingsby, our veteran forward was forced to retire in favor of Hewitt who showed up well.

The boys are well pleased with the treatment accorded at Stillwater, and have nothing but praise for the Military boys. The score: A. C. 23, Co. K. 41.

Aggies vs. Fargo High School

Conclusions with the Fargo High School resulted in a double victory for the Farmers. The girl's game resulted in a score of 35 to 1, and the boys' 85 to 22. On account of slippery floor, fast playing was impossible. The features of the game were the basket shooting of I. Slingsby for the High, and Wambem and Birch for the A. C., the former making 20 and the later 12 baskets.

Miss Fields showed an improved form and played a strong game for the girls.

Agricultural Notes

THE Agricultural Club held its annual banquet for the members March 9 in Francis Hall. The ladies of the Domestic Science department of the college consented to act as caterers. All the agricultural faculty were invited and the event was one of unusual success. Ever since its inception the club has never been so strong as now, and this banquet will be a fitting climax to a good season's work.

The present activity of the Agricultual Club is worthy of note. The high standard of excellence in every program, which has been maintained during the winter, attracted more than the usual number of students and a large membership was secured. Room 9 is being taxed to its fullest seating capacity and the idea of securing the chapel for a permanent meeting place should receive serious consideration. Its occupation by the two literary societies on the only available nights of the week has prevented the club from using the largest hall on the campus. With the removal of the societies to their new quarters there will be more room for still further expansion of the club's interests.

The scope of the field of work done by the club is wide and of a varied character. Live topics, dealing with crop rotation, the proper cultivation of the soil, the planting of trees and hedges, the various phases of the live stock industry, in fact almost every problem which will confront the agricultural student when he returns to the farm, is taken up and discussed. The purpose of the debates has been to bring out both sides of disputed questions for the edification of the members of the club and to give practice in off hand speaking. The parliamentary practice so necessary to the efficiency of all organizations of this nature, has been decidedly educative in its results. How well the Agricultural Club is accomplishing these ends the increasing interest taken in every program attests.

As a factor in more fully rounding out a student's education while in college such organizations as the Agricultural Club have had no small part. The short-course man, as a result, does not care to affiliate himself with one of the literary societies and here is where the Agricultural Club is filling a long felt want in our college life. Associated with men who are discussing subjects with which he is more or less acquainted, and being continually in an atmosphere of cordiality and good fellowship, the most diffident members will in time not hesitate to give voice to his opinions when opportunity presents itself. The ability to phrase and manufacture ideas while facing an audience should be an accomplishment which every student should endeavor to possess. As an adjunct to the knowledge gained in the class-room the training to be derived from participation in the activities of the club should not be lightly disregarded.

AN essential part of every fertile soil is a good humus content. Humus is that part of the organic matter of the soil which is slowly undergoing a process of decomposition or decay. It is readily distinguishable in the soils

of the Red River Valley by means of the characteristic black color which it imparts to the earth. In certain localities oxides of iron may give a reddish tinge to the soil particles as seen in ordinary red clay, yet plenty of humus may be present. Ordinarily humus is found only in the first foot of soil which varies in weight per cubic foot according to the quantity of organic matter it contains. The larger the amount of humus the lighter is the soil. A greater porosity would then naturally be expected in the latter case, together with a corresponding readiness of the soil to yield to methods of tillage and cultivation. In other words a farm supplied with sufficient humus in its soil will entail good returns to the farmer at a minimum outlay of time and expense.

This increased porosity of the humus soils evidently effects its water holding capacity. Humus has such powerful absorption properties that one writer on this subject has likened humus to a sponge. Professor Snyder of the Minnesota Station found that newly culitvated land in one of his experiments possessed the power to hold 365 tons of water per acre to the depth of one foot, while old worn out land, deficient in humus, could hold only 180 tons with the same amount of soil. Especially in sandy soils is this retentive power a valuable one. Paradoxical as it may seem, the opposite effect is true on wet heavy clay soils where better drainage is always secured by an increase in the amount of humus.

The removal of surplus water from any soil means a higher temperature for that soil. In fact the addition of humus preserves a more even temperature in any type of soil. Sudden extremes are impossible. In sandy land the tendency is for the silicon, which predominates, to become heated during a hot day to such an extent as to be detrimental to plant growth. A rapid cooling of the soil particles would then take place at night. A wet loggy soil would be too cold for proper development of plant life. Thus we see that the addition or retention of humus will tend to equalize climatic and soil conditions.

Although it is doubtful whether humus acts directly as a plant food, no denial is made to the fact that it performs a very important office in the building of plant tissue. As a means of making the mineral food constitutents of the soil which otherwise would be unavailable, soluble for the plant humus plays an important part. Aside from the nutrients stored in the organic matter of the soil, the organic acids which decomposing matter forms renders available nitrates, potassium, phosphoric acid, etc., all essential to normal plant growth. In North Dakota we are more interested in the nitrogen content of the soil than possibly any one other constituent. To show the effect of humus in its relation to plant growth Grignon of France planted beets in an ordinary humus soil. In a similar soil he extracted all of the nitates and humus and supplied the plants sown in the latter soil with a known amount of nitrogen fertilizers sufficient for their use. Both sets of plants developed to maturity, but the plants in the humus soil attained a dry weight four times the geater, showing that in some manner the presence of humus has a marked beneficial effect.

THE plant breeding department is constantly being importuned for pedigreed seed. Just recently the Prince Edward Island Experiment Station asked for samples of two station bred varieties of corn; North Dakota No. 100 and a variety of the Golden Dent. Seed flax, carefully bred for a period of five years, is being distributed to the farmers of North Dakota.

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EDITORIAL

As this is the last time that The Spectrum will have an opportunity of saying a few words to the students of the short course before they depart for their homes on the 23rd of March, we will take advantage of it. We hope that the work accomplished during the winter has been of such a nature that it will be of a direct benefit, in aplying it on the farm. Of course in such a large body of students the work offered must needs be somewhat general, consequently some of it may not have been what you wanted. Do not condemn the school on that score, however, by taking such a narrow view of its purpose, as it is well known, that what is sour grapes to one is honey to another. Instead, take the broader view, that the school is for the many and not for the few, that it is the endeavor of the faculty to directly benefit as many as possible. By this we do not mean, that if there is just cause for complaint, to be silent; far from it. Justice is due to all, and you are more the man if you stand up for what is right. But register the complaint to the proper authority and do it in a gentlemanly way. We know the faculty will think the better of you for so doing, and more than willing to rectify the mistake if possible. In other words, if you are not satisfied make your complaint known to the faculty, instead of condemning the school to every outsider, from a selfish motive. We trust that next winter will find you back again, to resume work with new vigor and determination to get the most out of school in the shortest time.

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THE following article was written by one of the students as a theme in English. Since drilling seems to be such a drudgery among the boys, the proposition is well worthy of a trial. "Would it not be expedient for the students, who wish to see a stronger military department in the college, to form an organization, the object of which would be to create more interest in the department? To

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ATHENIAN LITERARY SOCIETY

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form such an organization would, of course, be difficult and require some effort on the part of those who attempted such a thing and also, the strong support of the faculty. But now let us consider why such a society be formed. In the first place there is little or no interest taken in drill. Some students attend regularly, but only because it is required; others attend when they cannot manufacture a credible excuse for staying away, while others do not attend at all. Furthermore, of the boys drilling, very few have the ambition to do their best. I think that most of you will agree that it should be the earnest endeavor of every student to raise the standard of the institution where they are receiving their education. One person could do little towards this, two might do more, but the cooperation of twenty-four would certainly do a great deal. If an association of some kind could be formed and the members pledge themselves to do their best and get the other fellows to do the same, it would not be long before our company would have the distinction of being one of the best, if not the best company in the state. The association could induce interest by giving prizes to the best drilled men. This would give all something to work for and there would be fewer saying, 'There is nothing in drill.' Social affairs might be given occasionally, also. Such things would arouse the students of the college to the fact, that there was such a thing as a company worth being a member of, not as being drafted but as a volunteer.'' L. T.

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IT SEEMS to be a prevalent idea among certain people, (old farmers, especially) that an agricultural education for a farmer boy is a luxury; that the time spent is fooled away with impractical experiments of all kinds and descriptions. Those who have read the article written by A. D. Wilson, Assistant Agriculturist, must concede, that, at least, there are some things done which are practical for every farmer The article referred to was a description of a plowing contest held last fall at the Minnesota School of Agriculture by three of the members of each class. Equal strips of land were staked out, and each contestant had to plow a strip with a good old fashioned walking plow. The conditions taken into consideration in the contest were straightness of plowing, uniformity of depth, evenness of top and the covering of weeds. The student, who did the poorest plowing, had a better looking field than is usually seen on the ordinary farm. It undoubtedly would put to shame the work done by many of the very same men, who are loudest in their assertion that an agricultural education is an impractical and unnecessary accomplishment to the boy who intends to make the farm his home. In North Dakota very little of the plowing is done with the walking plow. It would be interesting as well as instructive if our own College would introduce something of the kind, where the student's own skill and ingenuity in handling horses and machinery would be put to a test. It certainly would be a better and more lasting examination than could be offered out of any text book.

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IN respect to the author of the poem ''The A. C. Girls vs. the Normal Girls'' issued in the last number of The Spectrum, the editor wishes to correct the error made in the signature. The initials should have read J. M. instead of W. H. M. Accidentally the poem was not signed when handed in, consequently the error. It is to be hoped that more such short snappy verses may be written by students on topics of interest to the school.

Local Happenings

Miss Lofthouse, who has had a severe attack of the quinsy, is at school again.

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Glomset to Mr. S. :—"Do you ever think of anything else than girls and dances?"

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Mr. Weaver is quite a student of Zoology he knows all about the *Buffalo.*

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Two members of the Junior Faculty made quite a hit at the Grand Opera Saturday.

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Mr. Dolve has installed an incubator in his class room, presumably to hatch ideas.

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The mumps are going the rounds; if you haven't had 'em, you'll have 'em by and by.

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Any girl looking for a fellow should apply to the Seniors. Come early and avoid the rush.

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Walter Aylen has contracted the typhoid fever and has gone home to his parents at Sheldon.

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The "Mascot" made quite a hit at Valley City, but she worried the life out of the chaperone.

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Prof. L. R. Waldron returned to the Dickinson Sub-experiment Station the latter part of February.

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Miss R. :—"That big heavy thing hit Oscar right on the head. It must have fractured his brain."

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The manuscript of the new catalogue has been placed in the hands of the printer and it is expected that it will be ready for distribution during the early part of the spring term.

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Owing to the illness of her mother, Miss May was unable to take part in the basket ball game at Valley City.

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Professor Minard was one of the judges on thought and composition at the Fargo College Oratorical Contest.

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It is hoped that the moon will return to its usual place instead of hiding under John Swenson's derby.

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Schollander (in physiology) :—"The only way I know of breaking up a cold is to take half a pint of whiskey and go to bed."

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The Colonial Ball was evidently a success for some of the fair maidens actually mistook Mr. Westy . . . d for George Washington.

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Mr. P . . . ts during his absence raised quite a mustache, but evidently the A. C. girls did not like it as he soon had it amputated.

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Two girls in his arms and a punch on his nose during a basket ball game is the record that Professor Richards challenges any one to beat.

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There are rumors of war amongst the basket ball girls; but nobody seems to know what causes the friction. May we suggest a man?

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Mr. O'Connor of the State University and Secretary of the Inter-State Association took in the Oratorical Contest at the College last Friday evening.

Prof. Bell—"The nerves of touch in the fingers and lips are developed more than the others because they are used so much." This sounds rather suspicious.

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Prof. :—"When one catches cold it always goes to the part of the body that is the weakest."

Student:—"Is that why so many people have colds in their heads?

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A red-headed waitress at Valley City accidently poured half a glass of water down Hewitt's neck with the remark, in a voice as icy as the water was, that she would give him a bath for a change.

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The Declamation Contest was held in Chapel Friday evening, February 16th. There were seven speakers, all of whom acquitted themselves creditably, but only two could win the prizes. The gold medal was won by Miss Jaredine Thompson and the silver medal by Miss Bessie Rice.

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State Superintendent Stockwell has increased the prize from $10.00 to $15.00 for the annual debate which will take place on April 27th. The Stockwell debate this year ought to be the best in the history of the institution as there is keen rivalry as to who will get on the teams to compete for the above prizes so generously offered by Mr. Stockwell.

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The Senior Preps have organized. But since no class will amount to anything until they have bled and fought together, we would suggest that some College class take them into custody, and initiate them into the mysteries of College life. They are bright looking youngsters and may prove themselves valuable adjuncts to the College, if given a right start. Freshmen it is up to you to do your duty.

Attorney Smith Stimmel, who was a member of President Lincoln's body guard during the greater part of the Civil War, gave one of the most interesting and instrcutive talks we have had in Chapel this year. He told of many of his personal experiences with the President which gave us a clear insight into the character of Lincoln as he was in the White House in those days that tried men's souls. After such a talk from one who knew Lincoln so well we seemed to be much closer to the great Emancipator than we had ever been before.

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On Friday evening March 2nd the tenth annual Oratorical Contest was held. Although a blizzard was raging the Chapel was nearly filled. As in the Declamation Contest of two weeks before there were seven contestants. Oliver Dynes who spoke on "The Significance of the Russo-Japanese War" was awarded first place. Miss Emily May on 'The Liberator of Switzerland" was awarded second place. The winners will represent the College in the State Contest to be held in Fargo on April 13th. The Oratorical Contest this year was one of the best in the history of the College.

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The Literary Society rooms in the new library building are now completed and they will be turned over to the societies by President Worst on March 9th. These rooms have tile flooring, quarter sawed oak trimmings and oak chairs. The west room which will be used by the Athenians has a cream colored ceiling and green colored walls. The east room which will be occupied by the Philomathians, has a cream colored ceiling and walls which have a shade of pink. The Literary Societies are very fortunate in having such elegant quarters where they will bedisturbed by no one.

Our Exchange Table

"THE Cynosure" was strictly a girls' number, the feminine touch being noticeable throughout. The best selection, perhaps, was the poem entitled, "The Athletic Girl." The exchanges, however, seem to be a "joke."

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"THE Manitou Messenger," from Northfield, Minn., as a whole is very interesting and contains many readable articles. The essay entitled Joan of Arc gives in a most interesting manner the degenerate condition of France during the beginning of the fifteenth century and tells how the English invaded the country with a huge army winning victory after victory until France seemed to be falling into almost inseparable ruin. It is at this time that Joan of Arc appears and proves the savior of her country. The essay gives a facsinating account of her life from this time until her cruel death.

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THE "Exponent" is a good magazine coming from Bozeman, Montana. The students there certainly are "budding poets" and we appreciate their efforts. While, of course, we cannot compare with Longfellow or Tennyson, still "all things have a small beginning" and more may come by effort. So keep at it, Exponent. "Ligh Smith on Industrialism" is a characterisitc story and sustains the dialect and rude humor throughout. We thank you, Exponent, for you kindly mention of us.

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THE familiar green cover of "College Chips" is a welcome sight to the editors. This paper is always good and contains several valuable articles this month, among them one on "How to Reap the Proper Benefit from the Library and Reading Room." This is a good paper, well worthy of attention from all for it applies not only to Luther College students but to students at any Institution who wish to gain the most from their educational opportunities. The "Historical Department" is well-handled and instructive.

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PHRENO-COSMIAN, Mitchell, S. D.—The February number of this magazine contains two creditable literary articles.—"Two Views of Life" and "The Missouri." The first presents a study of those two opposite personalities, the Optimist and the Pessimist, as characterized in Milton's "Comus." The other, even a better paper, perhaps, because the subject is a more tangible one, gives an interesting description of the "Big Muddy." This river which flows through our state, also, is certainly a marvel among its kind for although it seems composed of sand, mud and gravel, it obeys all the laws of hydrostatics and, when a keg of it was tested at the Paris Exposition, it was found to be the purest water in the world. Linked with this description, is the half-told story of the writer's affection for an old Indian brave—a specimen of rugged, untamed manhood once so common in the Dakotas, now almost a memory.

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HE who knows and knows that he knows is a Senior—follow him.

He who knows and doesn't know that he knows is a Junior—trust him.

He who doesn't know and knows that he doesn't know is a Sophomore—honor him.

He who doesn't know and doesn't know that he doesn't know is a Freshman—pity him.—Ex.