

The Spectrum

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The "Moo" Cow

DORSET lay dreamily on the soft grass of the meadow, which sloped gradually down to the edge of the little Pinch farm. Before her, in solemn quietness, lay the peaceful river, winding crookedly around the farm and partly secluding it from the public view. But Dorset was neither admiring the river or paying attention to her mother, grazing lacadazically beside her. She was chewing her cud just as if it took too much exertion to chew it vigorously, and yet was too good not to chew it at all.

Dorset was a good-natured and contented cow, with no more evil intentions in her than in her tail which she used for keeping off the flies. She had the protected goody-goody sensation of being watched by a mother so long that that independent spirit which other cows usually have at her age hadn't developed yet. Dorset was a red cow, with a white face and white feet. Her back was broad and fat, and she had a full chest. Her four legs seemed to have all they could do to hold up such a substantial, stout body.

Dorset descended from a registered Hereford breed in England. Her mother's mother (Dorset's grandmother) won first prize among the Herefords in one of the leading stock shows of several shires. And Dorset's own mother won the "silver cup" more than once. So it wasn't much wonder that when Dorset arrived on the Pinch establishment there was such excitement and delight. The children declared that the new calf wasn't going to be hungry if they knew it. Even Mrs. Pinch solemnly purposed in her heart that this animal, above all others, should not be neglected. Mr. Pinch (although he didn't like to boast) said with a merry chuckle, "I'll bet that calf will stand as good a show as any at the next fair." Neighbor Smerdon testified that " 'e 'adn't seen such an 'andsome hanimal since 'e left Hingland."

But Dorset didn't care if she was pretty or ugly, or whether she was a thoroughbred calf or not. As long as she had plenty of sleep and plenty to eat, and a dear old mother to be near once in a while, she was happy. So in this thriving and comfortable condition she was raised. The children had taught her several ways of drinking milk; she preferred cabbages to hay and she did relish the potatoes that Pedro gave her. It wasn't long before Dorset discovered where the barley field was. Once or twice when she was mischievous and not too lazy she got through the fence, and skipped over the soft field; but the warm feeling that Pedro's whip gave her remained in her memory too long for her to try it soon again. Dorset grew in knowledge each day as well as in body. Her mother would speak to her reprovingly in a

motherly "moo," when she needed it, but she soon was too old to be guided by a mother. It wasn't long before her horns had five rings around them. Dorset had had five summers of cowish experience.

One morning when Pedro went to the stable to do his morning's work, he noticed something red and white beside Dorset. There it was lying so happily and contented beside its mother, and the mother acknowledging her proud responsibility by a patient "moo." Dorset lived in a new realm now. She sniffed the air with a fresher feeling, the grass tasted sweeter, the water seemed different. She was entering into a new stage. She was milked every day, too, and this was an entirely new experience. But this change was soon blighted, and poor Dorset's grief was almost unbearable. One day the three generations were resting in the meadow, a group of men approached them; among them was the master himself. Dorset lifted her head to greet them, but, her ardor dampening by the unusual sight, she instinctively gave a sound of warning to her calf near by. The four men had come to see Dorset to try and make a bargain.

"Look at that fine chest and back," said Mr. Pinch, addressing an aristocratic stock man.

"I never saw a fatter bit of roast than this 'ere bit," said the Englishman, thinking of the dinner he could make of it. "I'd give a shilling for this bit right now."

"Yes," said the stockman, "she's a pretty little brute, but"—scrutinizing her again,—"I like lots of milk," and the stockman knew how much better he would like a piece of Club-House steak.

"But this is a beeper," said Mr. Pinch. "A beeper is not a Jersey and never will be, in spite of the cream."

Then Mr. Pinch went through once more the history and pedigree of this immortal cow. He knew the exact date when its great-great-grandmother won first prize at a certain show, and when its great-grandmother was imported and the registry of the whole line, down to the present generation. After a dispute on this quality and an agreement on that, and a lowering of price on something else, a bargain was made and Dorset was sold.

While the stockman was having Dorset tied to a wagon, a sorrowful-looking family stood around this "royal pet," wishing her a happy life and many prizes. Dorset didn't mind the starting out very badly, but when they passed the meadow, she thought of her calf. She halted with her feet firm in the ground and gave a wild and desperate bawl. She was pulled and thrashed to go on, but she reeled around, snorting out her anguish and savagely tossing her head and bawling in utter despair. Finally, after many sharp lashes with the whip, her sore body gave up and she followed steadily on. Poor Dorset, she walked by farm after farm, pasture after pasture, but she could see nothing in her mind but her own calf. She heard many sounds, many whistles, many other noises, but none were as big, as sacred and lovely, as the cry of her calf. Everything hung before her like a bad dream, an agonizing change. She had had a new and inexplicable life only a few weeks ago, now this was changed to a woeful and dreaded life of loneliness. On and on they went until late at night, when Dorset was installed in her new home. In the morning she felt as though she were in a foreign country, everything was so different from what she was accustomed to. She was in a large barn, among a large number of large cows. Everything was on a large scale. The spouts

were large and even the feed boxes and the feed. The stable boy looked large, and he gave large feeds out of large measures. Dorset hadn't been accustomed to wooden floors, and when the cattle came rumbling into their places, she wondered if the sky was falling. She wondered where the water came from, when it went into the trough. She had always drunk from a trough where someone pumped—here the rattling wheels, chains and levers did the pumping. Dorset always felt lost when the cattle were turned into the pasture. They went through so many sliding doors and catchy gates to get there, and they were in such a spacious affair when they did get there that she had to think where she was. There were plenty of cows to keep her company, but Dorset didn't feel like associating with them. She still cherished a vague but sore feeling for her calf—time and change had not removed that tender spot yet.

But in spite of these natural difficulties, Dorset never lost her appetite. She liked to eat; consequently she spent most of her time eating. Fair time was approaching very rapidly. Mr. Crackett, the stockman, was very desirous that Dorset should win the silver cup. So, of course, every attention and care was given her to make her fat. She didn't like the chore boy, but she did like the feed the chore boy gave her. Corn and new hay didn't last long when Dorset was near. Bran and potatoes went like hot cakes. No matter how high the cabbages and turnips were piled in her feed box, she always managed to demolish them. But the powders—the "condition powders"—put a finishing touch to every meal. She felt so lively after her powders.

By and by the eventful fair day came. Dorset had a bath that morning, and the stable boy spent an unreasonable length of time over her. Even her feet were washed and her horns were polished. Mr. Crackett was very proud of his contestant, and was almost certain of the silver cup.

The fair grounds were crowded with interested spectators from far and near. Rows and rows of cattle stood innocently before the observing public for criticism. Here was a bunch of stragglers guessing at the weight of one animal; there another party admiring the looks of another; and somewhere else a group judging the qualities of still another. Finally the prize awarding part of the fair began. One cow after another was led before the assembly to be examined and credited by the expert judges. In the midst of this contest an active Hereford was led before the crowd. This was Dorset—a perfect picture of beauty. Her gracefully curved horns pointed forward as if in defense of her perfect form. Her massive square body looked as if it would crush the little legs that bore it up.

"Isn't that a splendid creature?" said one. "Look at the broad back and full chest," said another. "She will surely win the honors of the day," put in a third. But just as the judges were drawing around her for examination, she heard a bawl—a bawl of a calf—that thrilled her with fire and terror. Like a flash, she jerked away from her attendant, bolted through the crowd, and was out upon the open country tearing madly down the road. A unanimous cheer arose from the gathering—"Hurrah for the beauty. Three cheers for Crackett's beefsteak." But Crackett was away down the road after her. Scattered men and boys were returning breathless from their useless chase.

On and on Dorset ran, heading straight for her old home. She was wild at that heart-wringing sound, and mad at the remembrance of imprisonment. Her heavy body was streaming with sweat and almost exhausted by the steady

tear. Not far behind, on horse, was her master almost sick with passion. Spurring his horse to a break-neck speed, he galloped along faster. He could see her a mile away, with her head high in the air and her tail flourishing wildly behind her. Would she drop dead, and all his plans be worthless? Would she plunge into the river and drown herself? "The brute, she's lost her prize now." And he spurred his horse again, getting nearer and nearer to the run down creature. As she was passing a farm, some cross dogs ran out barking at her, driving her into the yard. Around and around they went, one after her heels, another at her head. She turned upon them, with her horns, but the more she fought, the fiercer they grew. The master now thundering, calls hoarsely at the dogs to keep off, but the savage animals sprang upon her and tore her flesh with their jagged teeth. In painful terror she rushed bewilderedly into a stable, banged against a bar—slipped, and broke her leg.

There she was, poor Dorset, panting for breath and utterly exhausted. Her eyes glared doggedly at her master as he stood dejectedly over her. "This," he said, "is the last of my thoroughbred stock."

The fair went on and the prizes were given. But the judges had given the little Hereford the highest mark before she made her escape, so she not only won the day by her indifferent "spunk," but also received the "silver cup."

—P. H. H.

A Dakota Heathen

I AM an American, though not an Indian. I was born in this, the flickertail, state when I was a very small chap. In fact, I only weighed twelve pounds by my mother's butter scales.

My father was of Scotch and Irish descent, with a Norwegian name; my mother of Dutch and English with a Russian name. This makes me a thoroughly mixed American.

I began my life in a ten-by-twelve claim shanty on a rock beridden, treeless claim. I was the fourth born. Besides my two brothers and a sister, there were thirteen of my mother's old maid sisters making their home there. You can imagine from this what a strenuous life I must have led. I was "it," the cute little thing, the darling, the "'ittle tootsey wootsey," the central ring of the circus, and the star of every performance. I was hauled and pulled, petted and kissed. I couldn't escape. I was the fly in the tanglefoot.

The first word that I learned to say was "tata," short for potato, although my relatives tried to make papa or mamma out of it.

The great event of my early life was when the time came to give me a name. From the names that my relatives tried to tack to me, you'd have thought me an Indian chief. My father finally named me one day when my aunts were all away. He went away himself then and stayed a couple of months until the danger for his life had passed.

I spent the first three years of my life in getting dirty and being washed. My mother's only pleasure at that time was to wash me and my clothes. I tried my best to make her enjoy life. I went so far one day as to try to help her by soaking myself in the rain barrel. When she found me, she was

greatly excited, owing to the fact that I was wrong side up. I hadn't intended to get in head first, but mistakes will occur.

When I was about three years old, the stork brought me another brother. He was a dandy. I named him Strawberry the first time I saw him. When he was old enough to crawl around I taught him a few tricks. One day I requested him to eat some condensed lye. He being young and innocent, did as requested. I played alone for several days, but he came out all right. He was a tough one and would eat anything I gave him, from poison flies to shingle nails. He is living yet, too.

About this time of my life the desire for adventure came. My mother tried to discourage this with a barrel stave, but to no avail. I set sail on the lake one day in a wooden bucket. The bucket, of course, tipped over as soon as I got into deep water and I went down, down, down. The bottom fell out of the lake to let me pass. I don't remember the coming up part, but I got back to earth some way. I trained a calf to pull me around in a little wagon and killed a pig for my father by driving a nail in its back.

Those years went fast and I was soon old enough to go to school. I was nicknamed "Fatty" on the first day. I took offense at this and made quite a record as a nose smasher, but the name only stuck the tighter. I acquired quite a knack for trading pencils and such things; but made a great mistake by telling my father of one of my deals. He showed me a smarting good use for razor straps, and, worst of all, made me trade back. I didn't take him in on any more of my deals.

School days were in my life, as in most lives, the happiest time and passed the quickest. From freeze-up in the fall to the breaking up of spring, I attended school in the little red-roofed country school house. The rest of the year I plodded away on the farm, having my share of the fun and the trouble and doing my share of the work, which grew from year to year. We had quit the old claim shanty and lived in a respectable little house surrounded by young trees. My aunts had all been married off and I had attended all the weddings. Prairie fires had burnt us out once or twice, but were now things of the past, as the country was broken and settled. I was a young man old enough to court my neighbor's daughter and raise a mustache. She is married now, while I still plod away at school, trying to get something solid for the "rats in the belfry" to chew.

—S. V. A.

Ah me, how frequently I pant
 To be a stately elephant,
 With skin so thick and strength so
 great
 He scorns the puny pricks of fate.

The while his shoulders well may bear
 A really untold weight of care,
 Ah, were I he, I will aver,
 I'd be a model "Householder."

—From *Harper's Magazine* of October.

Convocation Exercises

ON Thursday, Sept. 21st, the students then enrolled gathered in the chapel for a few minutes and listened to some fatherly advice given by President Worst on how the students should conduct themselves at school and what would be expected of them. Though President Worst would not smile while administering the lecture, every student felt that he was glad to have them back again for another school year.

The first regular convocation of the college year was held Monday morning, Sept. 25th. Dr. Dickinson, of Fargo, addressed the student body on the subject, "The Educated Man." This was Dr. Dickinson's last opportunity to address the students, since he is about to leave Fargo, but his message will long be remembered. His appeal was for the man of the higher education—the man of the gentler heart, the broader mind, the co-operative will. "The educated man," said Dr. Dickinson, "looks upon life as a whole. His principles are as great as the universe. He, with others, is working out the work of the universe, and, since he sees this, life is to him no longer a drudgery." Dr. Dickinson was greatly appreciated by the student body.

The next chapel period, Prof. Shepperd, of the Agricultural Department, gave a very interesting talk on "Sunshine." He spoke of it from a scientific rather than an allegorical standpoint and made the assertion, which he afterward proved, that sunshine is the source of all energy, all power, and all work in the universe. It is sunshine that makes Niagara Falls; it is sunshine that makes the train go; it is sunshine that gives us coal; it is sunshine which gives us horse-power—in fact, above and around about, wherever we look, we shall find sunshine inextricably bound up with all forms of work and life.

Y. M. C. A.

President Worst spoke at the first Y. M. C. A. meeting held this year. He dealt with his subject, "Good Citizenship," in his usual inimitable way, and it is much to be regretted that all the students did not have the opportunity to hear him. He spoke of the enormous amount of time and money it took to make and support the laws, which are needed for the restraint of only a small fraction of a per cent of the American population. He emphasized the fact that it was the duty of every college man to strive to raise the citizenship of the United States to such a level that there would be no need of a judiciary department. The president concluded his address by calling attention to the share the Young Men's Christian Association ought to take in making men better, urged the old members to renewed energy, and advised the new students to join the association.

The address given by the president is the first in a series of lectures offered by the Y. M. C. A. of this college. The lectures will all be on practical subjects and be delivered by the best speakers of the city, together with members of our own faculty. These addresses are free to all men of the institution and none can afford to miss them.

Department

RUM the Department of Chemistry has been
to our readers and of much benefit to our friends
throughout the state.

Bulletin No. 66, a recent bulletin by Prof. Ladd, entitled "Waters of North Dakota," is of especial worth. The question of water for domestic purposes is one of great importance in a state of such varying conditions as in ours. This bulletin treats very definitely and instructively upon the conditions as they are and as they should be for good waters. The very large number of samples from all parts of the state that have come under Prof. Ladd's examination render this bulletin especially valuable and it can well be considered an authoritative guide regarding our state waters. It meets a need that has long been felt and will assist in improving conditions.

In order to keep the work in the pharmaceutical subjects up-to-date and make them interesting and practical, Prof. Kimberby is preparing a series of lectures for his student work. They embrace full discussions of the more and rapidly growing methods of medical treatment, such as the use of antitoxins, vaccines, serums, etc. He has obtained from the large manufacturers extensive samples of all these preparations and will, by use of them, demonstrate to the classes their exact value. Prof. Kimberby received much assistance in his work by the acquaintances he made during his vacation trip, by visits to a number of the large drug houses of the northwest and central states.

In the September number of the *Journal of the American Chemical Society* is a joint article by Prof. Holley and Mr. J. T. Weaver on Liquid Mixtures of Minimum Boiling Point. In this article the writers present some of the very interesting results they have obtained in working with organic liquids. At present Prof. Holley and Mr. Weaver are making some extensive investigations on the valuation of illuminating oils by the distillation test.

One of the most valuable pieces of apparatus which Prof. Ladd has recently procured for the Department of Chemistry and Pharmacy is the Reflectoscope. This ingenious apparatus, which has but recently been perfected, will project upon the screen such opaque materials as photographs, drawings, cuts, etc., directly and in the exact natural colors. With this instrument illustrations and reading matter may be instantly projected from books and magazines by simply holding them in the reflecting beam, and thus permit the lecturer to treat his subject in a much more thorough and interesting manner than he could by the use of the regulation lantern slides alone.

At the last convention of the State Pharmaceutical Association Prof. Kimberby was reappointed Chairman of the Committee on Drug Adulteration. He is especially well fitted to hold this place on the committee because of his extended knowledge of drug adulteration. The work which is being done continually carried on under Prof. Ladd and also in his pharmaceutical laboratory is constantly increasing his knowledge in this line and the committee's report at the next meeting will no doubt be of much interest to the druggists of the state.

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With this issue the new editorial staff of THE SPECTRUM introduces itself with fear to the public. The dying words of appeal and hope offered by the old staff before they bade farewell, were that a better and more loyal support be given the new staff in their efforts to produce a student paper worthy of the Agricultural College. No one but the much-abused editor and his assistants knows of the hard work and of the many sleepless nights that are necessary to secure advertisers, subscribers, and material. Many are willing to criticize, but few are willing to help raise the standard. We heartily welcome assistance from all toward producing a larger paper and a higher grade of work. We also solicit your subscription. Our success depends upon the students' support, and we beg of you to stand by us.

We are proud of the fact that once more an American has been immortal-

A. W.

R. A. F.

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ized. By proposing and securing peace between two warring nations, President Roosevelt has made humanity his debtor. Though he may have a few political enemies at home, yet the whole world has nothing but praise for his untiring efforts to bring to an end the destructive war between Russia and Japan.

Prof. Alfred Parrott, registrar of the college, unexpectedly tendered his resignation at the beginning of the school year. He has accepted a more lucrative position with the New York Life Insurance Company. While being connected with the college Prof. Parrott formed many friends who are sorry to have him leave, but wishing him success in his new enterprise.

Owing to a new combine by the printers of Fargo the price of printing has been increased fifty per cent over last year. If the support by the students is not any better than last year, it will be but a short time before THE SPECTRUM will be forced to bankruptcy. Please give us a "handout." We are thankful for small favors.

The football team is hard at work every afternoon preparing for the severe games that must be played this season. Undoubtedly some of the boys enjoy playing and there may be some individual glory for each player, but that would not be enough to repay them for the hard knocks, rough usage and constant self-sacrifice were it not coupled with loyalty to the school and a desire to keep up the standard and prosperity of athletics at the college. If the boys are willing to take the drubbing, is it too much to ask of the students not playing to give the football players their hearty support by attending the games and cheering them on to victory? Let us then get out to the games and show that we appreciate their efforts to break through the opposing team and add one more laurel to our long list.

—
Another school year is at hand. It has brought many changes on the campus by the addition of new buildings and the destruction of old ones. Prof. Kimberby, of the Pharmacy Department, has already moved into his spacious laboratory in the new chemical building, thus allowing the Agricultural Department to have full use of their Soil Physic Laboratory in Francis Hall. In a few days Prof. Ladd will bid farewell to the crowded quarters in the old chemical building and move into the new quarters that he so carefully planned. Though the Carnegie Library is nearing completion, the Librarian does not expect to move into it until the holidays. Prof. Halland will then take possession of the rooms vacated for his work. The new green house of the Biological Department is enclosed but little progress has been made towards completing the inside fixtures. This practically means that Prof. Bolley will not be able to do the large amount of botanical work that he had anticipated.

Several new assistants have been secured to replace vacancies caused by the resignation of Prof. L. R. Waldron and Prof. A. Parrott and the leave of absence of Prof. Hult, now in Europe. Dr. J. M. Telleen, of Rock Island, Ill., who will have charge of Prof. Hult's classes, took an A. M. degree at Yale, a Doctor's degree at Paris, France, and during the past year held a professorship at Simminos College, Alboline, Texas. Prof. P. B. Burnett, who will take Prof. Parrott's place as registrar, is a graduate of Indiana University. He held a professorship at Butler College, the University of Nebraska, and for the past two years at Iowa College, Iowa. Prof. Burnett is the author of several books in French and Spanish. Prof. W. B. Bell, of the Biology Department, is a graduate of the Iowa State Normal and of the University of Iowa. He has also taken the degree of Ph. D. at the same University. Prof. Bell has been principal of high schools of Iowa and worked in the Marine Biological Laboratory at Naples, Italy. Mr. Robert Emmet Stallings, recently elected as assistant professor of chemistry and assistant chemist in the Experiment Station, graduated in 1898 from Wake Forest College, North Carolina, receiving the degrees of Bachelor of Arts and Bachelor of Laws. In 1901, he graduated from the University of Virginia with the degree of Master of Arts, having specialized in chemistry. In July of the same year he went to the Philippines, where he spent two years in public school work. In 1903, on his return from the Philippines, he accepted a position in the Pennsylvania Experiment Station, State College, Pennsylvania, where he served for one year as assistant chemist and was then promoted as special assistant of animal nutrition, which place he held when he received his appointment in North Dakota.

Science Department

DURING the past eight or ten years, much time has been spent in research and experiment along surgical lines. Many of the most noted specialists have devoted years to this work. Perhaps the most important step was taken some nine years ago when the president of the British Association brought forth the idea of the antiseptic treatment of wounds and attempted to explain the action. Since that time no one has made such great progress as Professor Metchnikoff, whose recent works are described in a late issue of McClure's.

This article gives explanation of the fact that, in ninety-six cases out of a hundred, the antiseptic treatment alone of wounds proved successful. It states that the chief reason is the presence in the human and animal body of millions of free-moving white corpuscles or leucocytes, called by scientists phagocytes.

It is not the mere presence of these minute moving forms that rouses the interest, but rather the important work they do while passing to and fro. The simplest example of their work is to be found in describing their movements in the human body when some portion has been scratched or pricked with a pin. As soon as the skin is broken many phagocytes from the surrounding blood and lymph vessels move at once to the injured tissues and begin the first work of repairing the damage. They cluster around any foreign substance that may have entered the wound and finally absorb it into themselves. They also pack together in the injured place and thus help in forming the tissue to replace that which was destroyed. In this way they become, as the writer of the article said, "at once workman and material." In case any putrefaction bacteria should have entered the wound, the phagocytes immediately seize upon and devour them.

In man and the higher animals, Professor Metchnikoff has shown that there are two separate classes of phagocytes, each having a separate work to perform. The two classes are the macrophages and microphages. The former absorb the torn tissues of a wound and devour the bacteria of chronic diseases; the latter make way with the germs of acute diseases. Often times both classes are not found in the same body.

These facts afford an answer to the question why the bacteria of some diseases affect animals and not others. For example: Cholera never attacks a frog; goose fever, a guinea pig; or diphtheria, a rat. In man similar cases could be given. And it is also, as we learn, the presence of these phagocytes in the animal body that makes the antiseptic treatment of wounds sufficient. The leading physicians of Japan recommended this treatment almost entirely during the late war.

What an advantage this recent knowledge has given surgeons and physicians of the present time over their predecessors. Is it now such a wonder that the hospital corps of the Japanese army have such remarkable reports to give of the number of wounded saved through their care?

Recently much has been done throughout the country in the way of improving country highways. In some states laws have been enacted which provide for the building of macadamized roads and, while this is not general

in the country, many cities are building in this manner their suburban streets which bear heavy traffic. In undertaking this work many methods have been offered, but none seem more satisfactory than that of the Scotch surveyor, John Loudon McAdam, who is known as the inventor of the modern macadamized road. It was he who advocated raising the road above the surrounding level to give drainage; the use of small angular fragments of stone, and a soft foundation instead of rock for the road bed; in fact, he introduced the method of building good roads cheaply. Yet, much as he has done, there is little mention made of him in the scientific world and, even in the congressional library, there is no biography of John Loudon McAdam.

The Arctic steamer, "Terra Nova," which went to the relief of the Ziegler polar expedition, has rescued Capt. Fiala and all others connected with the expedition. Mr. W. J. Peters, of the United States Geological Survey, who, on the nomination of the National Geographic Society, was placed in charge of the scientific work of the expedition, reports that a considerable amount of scientific work has been accomplished.—*Ex.*

Mr. John M. Cobb, in an article on the commercial fisheries of the Hawaiian Islands, describes the fish ponds to be found there. He says they are on an immense scale and were built as much as two hundred and fifty years ago. Some of the interior ponds are in old volcanic craters. The fish in the ponds are allowed to run in from the outside or are caught in the open sea and taken to them. But in spite of such immense enclosures, fish culture is almost neglected on the islands.

King Edward I, of England, died July 7, 1307, and 400 years later the English Society of Antiquarians opened his tomb in order to find out if he really had been buried in wax as the legend ran. The chronicles of the time remarks, "To their great astonishment, they found the royal corpse to appear as represented by the historian." Although "the skull appeared bare, the face and hands seemed perfectly entire." The King was found to be six feet two inches in height, thus fully justifying his nickname of Long Shanks.—*Ex.*

Someone in New England has recently invented a new method of condensing milk, which, if it proves successful, will greatly reduce the price of making condensed milk. At present the industry demands very complicated and expensive machinery. The new method is to pass the milk over cylinders heated by steam to 230° F. The heat evaporates the water while the solid substance remains on the cylinders until removed by knives. It is then dried and powdered.

The committee of the National Educational Association expresses the thought with reference to common schools. "Ambitious schemes to erect fine buildings may result in poorer education because there is not enough money left to employ good teachers or to enable good teachers to do good work."

Athletics

IT IS with great hope and expectation that we enter upon the athletic season of 1905. At present the outlook for a winning football team is quite promising. We are fortunate enough in having Coach Marshall, a former Wisconsin player, with us again. With a coach acquainted with the football conditions, with several of the older players back in the line and with the addition of a few men of considerable football ability, we hope to build up a team that shall not only be a credit to the institution it represents, but to the city and state as well.

As yet only a little can be said of the team. In fact, it is not yet settled who the members of the first squad will be. No place is "cinched." Coach Marshall emphatically has said, "The best man gets the place, even though he should weigh only ninety pounds." With this spirit shown by the coach, a squad of about twenty-five men are on their mettle, scrapping for a position on the team.

Fred Birch, Orchard and Murphy are trying for ends and are making a fine showing. Albert Birch, Sattre, Corbett, Hill and Grant are alternating at halves, while Dynes and L. Nelson are competing for the fullback position. Captain Oshwald and Wambern are booked for tackles, while Dolve and Otten are scrapping to get their places. The center trio will probably be Swenson, Gratiot and McDonell. The latter is a new man, green at the game, but he has plenty of beef to offset some of this drawback. The quarterback position is still a puzzle. Allen, Corbet and Clark are trying for the position. Allen lacks consistency and is rather slow in getting off the plays. Corbet shows good form, but he is wanted at half, while Clark is a heady player, but almost too light for that position on the first team.

William Spelliscy, a former star halfback, has renewed his work at the college. He will assist Marshall in coaching the backs and ends. He has also been given full charge of the second team. "Spelly" is a hustler and with his knowledge of football science will round out a team of the scrubs that will make the first team go some.

The first practice game, which was also the first real scrimmage of the season, was played with Fargo High at the Athletic Park Wednesday afternoon, Oct. 4th. In a short game of fifteen and ten minute halves, none of the teams were able to score. The features of the game were numerous fumbles and the slowness of the Farmers in getting off their plays. This being the first scrimmage work of the season, no one was much disappointed over the poor showing made by the Farmers.

A tackling dummy and a bucking machine are the new features on the athletic grounds this season. Every player is compelled to tackle "Henry L." until he shows proficiency in the art; while no one can escape bucking up against "Willie." These monsters are fed every afternoon, except Sundays, at 3:30.

A heavy schedule has been arranged for the season. Patrons and enthusiasts will be given plenty of opportunity to see some big gridiron contests. The schedule, as nearly as can be made out at the present time, will be as follows:

Oct. 7—Breckenridge Athletic Club, at Fargo.

Oct. 11—Open date.

Oct. 14—Minn. Freshmen, at Minneapolis.

Oct. 21—U. N. D. first game, at Grand Forks.

Oct. 28—Park Region Luther College, at Fargo.

Oct. 30—Lawrence University, at Fargo.

Nov. 4—St. Thomas, at Fargo.

Nov. 11—St. Cloud Normal, at Fargo.

Nov. 18—Second game U. N. D., at Fargo.

Besides the regular schedule there will be numerous midweek games with lighter teams. Thus the lovers of this royal sport will be amply gratified as far as the number and the quality of the games are concerned. The second team has also made arrangements to play several High School teams at the local Athletic Park. Besides, they are assured a few trips to neighboring institutions. Season tickets good for all the games played on the local Athletic Park have been placed on sale at \$3.00 each. These tickets may be secured from Profs. Halland and Richards.

Now a word or two especially to the boys. In previous years there has been a noticeable lack of enthusiasm shown among the boys at the games. They have been contented to stand, idly, listening to the girls who cheer and root for the team at the top of their voices. Boys, this should not be. You are all endowed with a pair of lungs even stronger than those of the feminine sex. Out with your voices then, and show that you are made of flesh and blood!

A. C. 52, BRECKENRIDGE 0

On Oct. 7th the fans were given the first opportunity to see the line-up of the A. C. when they met on the local gridiron for a contest with the Breckenridge Athletic Club. When the smoke of the battle had cleared away it showed that the Farmers had taken the Athletes into custody to the tune of 52 to 0. This overwhelming victory, however, does not show the strength of the team, as the visitors were not formidable opponents, since they have had no coaching this season. On the other hand the game showed several defects in our offensive as well as defensive plays. The men in the line played too high and were repeatedly pushed back by their lighter opponents. The backs were slow in starting and in getting their formations. Poor tackling was also in evidence, most of it being done girl-fashion, "around the neck." Despite these defects the Farmers played a persistent game and were only held for downs once during the entire game. Fred Birch and Orchard both proved their versatility by picking up a fumble for a touchdown. After the beginning of the second half Coach Marshall began to put in substitutes from the second team, until the end of the game found the second team pushing the visitors all over the field. McDonell was the only man not replaced by a substitute. (Perhaps he needed the practice). The officials were: Grogan, referee; Art Fowler, umpire. The time: two 20 minute halves.

Local Happenings

Miss Elenore Olson has joined the pill mixers.

Prof. Householder thinks his days are numbered.

Reward—\$100 reward offered by Prof. Bolley for a new college yell.

Rufus Lee has notified the boys that he cannot come back this year.

Prof. Reid is the proud owner of a new ring. Who's next?

Miss May looks rather forsaken. Wonder why?

About thirty high school students have enrolled at the A. C. this term.

How degrading for the Seniors to attend a Junior prep class.

Wanted—Some girls to yell like H—l at the football games.

Miss Ruth Ash has accepted a position as Assistant Librarian.

Prof. Bolley has rented the baseball park this fall for the football games.

Query—Why is it that contracts for state work are always slow in being completed?

The College Book Store handles all the necessary text books and stationery. Call and see them.

Prof and Mrs. Shepperd recently moved into their new home on Seventh street north.

For photographic views of the campus and buildings, go to Profs. Holly and Kimberby, chemical laboratory.

Prof. Richards has a new horse and buggy and has promised a few of the young ladies a chance to test the tenacity of the buggy springs.

Prof. H. McQuigan, of Chicago University, formerly of the A. C., has been visiting in Fargo for a month renewing old acquaintances.

Mr. Dolve has returned to take charge of the work in Farm Mechanism in the Agricultural Department.

Mr. Birch, the cartoonist, is busy with his pen and brush producing a new football freak for the bulletin board every day.

Dr. Telleen and Prof. Minard are putting in a strenuous hour's work every afternoon on the tennis field. They have a voracious appetite, so Mrs. Lincoln says.

Mr. Carl Hulburg, one of the graduates of '05, has been spending a few weeks at the A. C. previous to his beginning work with the General Electric Co. at Schenectady, N. Y.

The Rural School Agriculture, edited by Professors Shepperd and McDowell, is out. It is full of facts and figures and has many nobby illustrations. It will be used by teachers and pupils.

Miss Smith, asking for a book in German: Has Maria Stuart come?

Mr. Weaver: Maria Stuart! Who the dickens is she?

Heard in chapel: Miss—just dotes on Charley.

Laura: So do I.

Our genial Mr. Guinness thought his work caring for the trade in the book store was enough and so resigned as business manager of THE SPECTRUM. Mr. Fred Birch was elected to take his place.

Dr. Van 'Ess is installed in his new laboratory in Francis Hall for his work in veterinary science. It was badly needed, as his cats, dogs, rabbits, guinea pigs and dead horse flesh were getting rather numerous and disagreeable in the building.

The Girls' Athletic Association has taken in a number of new members this fall and the work in physical training is progressing well. The association intends to get new suits and shoes for those girls who are trying for the first and second basket ball teams. This will do away with the problem of suits; consequently more girls are expected out to practice this year than ever before.

The Edith Hill Girls' Club held its first meeting at Francis Hall Sept. 25. There were a large number of girls present and several new members were enrolled. The meeting was simply for business and officers for the fall term were elected as follows: President, Genevieve Holkesvig; Vice President, Bessie Smyth; Secretary, Laura Morrison; Treasurer, Karla VanHorn; Executive Committee, Annie Benedict and Elisabeth Rice.

Prof. Holley spent several weeks this summer visiting the manufacturing industries of Chicago, Detroit, New York and Boston and is preparing a large number of photographs and lantern slides illustrating the various

phases of manufacturing as applied to industrial chemistry.

In French Class—Dr. B.: Où est Marie? (Where is Marie?)

Miss Thompson: Marie est sur la table. (Marie is on the table.)

Dr. B.: There must have been a mouse in the room.

Despite the rainy weather, the reception given by the "Girls' Club" Saturday afternoon, Sept. 30, was a great success. The reception rooms at Francis Hall were prettily decorated with asparagus, fern, and wood-bine leaves. About thirty girls were present and they all joined in the "Grand March" and "Virginia Reel." Several musical selections were given by various club members, and Miss McIntyre, of Fargo, sang several solos. Ice cream and cakes were served and all declared the reception a successful affair when they at last started for home.

Robert Dolve, '05, is now instructor in farm mechanics. All the old students are well pleased to have Bob back with us again, especially the boys on the gridiron.

It is seldom that returning students are permitted to see the campus covered with the green verdure, leafy trees, and blooming flowers as it has been this autumn. It certainly is an object lesson in what can be done in the way of horticulture and landscape gardening to view our beautiful campus clothed in the verdure of summer when we consider it was raw prairie but fourteen years ago. Such scenery cannot fail to inspire many of the students to make their farm homes more beautiful and attractive when they return to them. And if some of the beauty of our campus be reproduced in the farm homes of our state, the

great Frost King has indeed conferred a blessing upon us by tarrying so long in the icy fields of the far north.

The first target practice of the season was held on the college range Friday, Oct. 6, by Co. A. The scores made were very good, although a very strong wind was blowing. Private Mercer made the highest score, 21 points at 100 yards and 19 points at 200 yards out of a possible 25 in each case. Dur-

ing this year, when the weather permits, target practice will be held on the first and third Fridays and second and fourth Saturdays in each month.

Chances were never better for a winning football team than they are now. All the old players are back and there is some very promising new material which Coach Marshall, assisted by Profs. Prichard and Holley, is rapidly rounding into form.

Our Exchange Table

With this issue, the present exchange editors begin a new and, they hope, a successful year. They wish to extend to all other exchanges their best wishes for the future and to welcome them to their tables. As yet not many papers have found their way here, but we hope that not only our old friends, but many new ones as well, will soon arrive. So—best wishes to all and "Please exchange."

We have received many of last spring's commencement numbers, and many of them are surely a great credit to their schools. The *Jamestown High School Magazine* had a novelty in the form of poems written by members of all four classes. They were all good, that of the Freshman especially having a firm ring and swing.

One of the best exchanges last spring was *The Clemson College Chronicle*. "A Purpose at College" is a good, thoughtful article and shows no lack of real college enthusiasm. "Over the Hill From the Poor House" is a very interesting story and is so written as to hold one's attention to the last. "Did You Say Snakes?" is surely a sketch of real life.

Foreigner: What is the significance of the eagle on the American dollar?

U. S. Citizen: It is the emblem of swift flight.—*Ex.*

The Carletonia from Northfield, Minn., was the first of the exchanges to appear. It is an enterprising as well as interesting paper, with attractive cover and creditable contents. It has introduced a somewhat new feature in giving a complete list of all new students. This is interesting, no doubt, to their own students.

Solid Geometry—*To prove that your girl loves you:—*

Proof: "All the world loves a lover."—Shakespeare.

You are a lover.—Hyp.

Your girl is all the world to you.

Therefore, your girl loves you.—*Ex.*

A country church without sheds to protect the horses indicate that although its people may be long on religion, they are short on humanity.—*Ex.*

The Teacher: John, can you tell me how iron was discovered?

John: I heard father say they smelt it.—*Ex.*