These qualities of these and other great men are illustrated by many stories. They teach the lesson that comes home to girls as well as boys, to women as well as men,—the atrocities of the milliner's trade menaces the gardens and the orchards of the country, as well as denudes vast acreas of "God's animated flowers." * * *

But the third reverence is the crowning grace of the present age. The concern for society rather than for one's individual well-being, the developement of commonwealth rather than wealth, the growth of the community feeling, the realization of the horrors of war, the growing passion for international peace. The lesson of the barnyard enforces the quest of the statesman; the thrifty farmer has learned to dehorn his herd that they may live at peace with one another, that they may make common cause against summer's heat and winter's sleet. The time is ready for the dehorning of the nations, so that rivalry and antagonism will give way to coöperation and the serving of mutual interests.

Thus, within the limits of an evening's lecture, I have tried to outline the better education which is so sorely needed, and which reaches from the little red schoolhouse on the corner to the university; begins with the kindergarten and does not end when life ends. This education glorifies things common, sanctifies things lowly, and makes beautiful the humblest life. This education is needed everywhere, nowhere more than on the farm and among farmers, for it is given to them to deal first-hand with the verities of life, the realities of nature, which are texts in God's great book of revelation.

Music.—High School Orchestra.

Adjourned to meet next day at 9 O'Clock, A. M. President Griswold in the chair.

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9 O'CLOCK, A. M THURSDAY, NOV. 16, 1911.

ADDRESS TO YOUNG MEN TAKING PART IN THE BOYS' JUDGING CONTEST.

E. H. SCRIBNER, ROSENDALE.

I am glad to see so many boys here this morning. We want to interest them particularly along the line of live stock breeding. Those of us who have been through the mill believe there is nothing more interesting, and that if you are going to follow farming the question of live stock must necessarily be of the greatest importance, and for that

reason we have called this meeting to see if we cannot interest you along the lines of live stock work and especially dairy work.

The dairy cow of to-day, is a much different proposition from what she was in her primitive condition. Her work was then simply to rear her young and furnish enough food material for a short period to grow this calf. Now she is asked to do this same work and to give milk throughout the year and for a successive number of years.

The cow's work is not only to produce food but to reproduce herself as well, and her value depends a great deal on how she can do this particular work. If she is a good producer and a regular breeder then she is a valuable cow. On the other hand, if she fails in either one of these respects, she is of little value.

To-day we want to look at her from the utility or business standpoint. We as farmers, are too apt to neglect the business part of farming; we do not keep any account, we just let the work go on as it happens to go. It is not that we have not worked long enough or hard enough, it is because we have not used more judgment, more business methods in our work. This morning we want to look at the dairy cow from a business standpoint.

Now, I would judge all dairy cows, from the same standpoint. You may think that a singular, perhaps an unwise thing to do, but all dairy cows have practically the same purpose in life; some cows may be better adapted to give milk and others to giving cream and butter fat, but their prime object is the same, whatever breed they are. We will consider four dairy breeds this morning, the Guernsey, the Holstein, the Jersey and the Ayrshire. They have been bred, handled, fed and cared for all these years to do just one thing, and that is to make milk and butter fat. Consequently their formation has changed a great deal from what it was in the old primitive cow.

We have to-day two distinctive types of cattle; the beef type and the dairy type, they are much different in conformation. I know that the beef type is very attractive. The large majority of people rather admire the looks of the beef type cow. And she is all right for the work that she has been made for, but she is not the cow for dairy work, and so we want to consider the cow this morning that is doing work along dairy lines, her conformation is so different from the beef, that we want to consider her very carefully. As I said she may not be so beautiful, but to me handsome is that handsome does, and in my estimation the handsome cow is the one that can make a lot of butter fat or a lot of milk.

There are two or three essential things I want to speak of this morning. First I will mention constitution.

Now, we boys, for we are all boys, wouldn't amount to very much

if we didn't have constitution. We must have health, that rugged thrift that enables us to do something and that is why we are placed here on this earth—to do something.

To be profitable to us, the dairy cow should work and work all the time. I don't mean by that giving milk three hundred and sixty-five days in the year. Of course she should have a short period of rest.

Constitution is indicated in a good many ways. The general appearance of a cow goes a good ways. The head is a strong indication of constitution. I want a wide muzzle on a cow as it shows strength of constitution and strength in feeding qualities as well. I want to see open nostrils, because the usefulness of the animal is dependent in a large measure upon the air she breathes. If she has a little, restricted nose with a small opening, the amount of air she breathes is limited. There is nothing which purifies the blood except the oxygen from the air, and many times our cows are handicapped because they are kept in badly ventilated barns.

To me, the eye is an indication of constitution. When I see an eye that is dull and languid and sunken into the head, it is a sign of not much strength of constitution.

The heart has a great deal of hard work to do, so I want to see an animal have plenty of room in her heart girth. The other day at Milwaukee it was my privilege to judge certain classes of cows, and in one class particularly,—young heifers,—I found one animal that had immense capacity of barrel, but just forward of the barrel her heart girth was very small around, and that to me was a serious fault, an indication of lack of constitution. We want the particular place where the heart and lungs are situated to be strong, to have plenty of room. The heart and lungs have been proven to be larger in the dairy animal than in the beef animal, and that is indicated not only in the depth but in the width as well. When you boys are going to judge cows look at that particularly; see that the cow has plenty of constitution as shown in the heart girth, in the open nostrils and in the bright eye.

Constitution is perhaps indicated by the hair, if her coat is standing, her hair pointing toward her head, it is an indication that something is wrong.

When I step into the show-ring to judge cattle, the first general appearance of the cow is a pretty strong point with me. Many times I see judges go over a cow in careful detail, over and over again until they get confused and really don't know where they are at. When I go to judge a cow, I don't want to take her all in at one glance, I want to look at her head, at her clean-cut neck, at her withers over the shoulders. I don't want those withers real sharp because that is a

sign she hasn't quite enough strength in constitution, but I do want the shoulder bone to show it is there, sticking up a little through the shoulder. And I want it to be well sprung, I want it to come down in a wedge shape. The cow is wedge-shaped in three ways. She is wedge-shaped over the shoulders, looking down; from front, looking back sideways; also from a side view looking from front to rear. I have spent some time talking about the constitution.

Now, the working capacity of a cow is something to be considered very carefully. This wide, strong muzzle indicates a good feeder. Whenever I go into a barn to look at a newly born calf, I look first at the calf's head, and if it has a little, small, narrow nose, I say "There is a calf that never will have a good constitution or be a good feeder." If a calf is going to make a good cow, she has to be a good feeder.

It was my privilege a while ago to be in Denver, Colorado. I saw there a herd of 150 cows. The owner said to me, "Will you please pick out the best cow in the barn." Well, I looked at their beautiful udders and their great big capacity of stomach, and then I went round in front and looked at their heads, and I came across a cow that had a very wide mouth, and I said "I think I have got her right here. I I think when that cow goes through your field of grass she will mow a swath like a mower." He says, "Yes, that is the best cow I have in the barn."

So I like to see a cow with a good nose, a good wide mouth and right behind her mouth I want a good strong muscular jaw. Now, why do we want that kind of a jaw?

For this reason. A good proportion of our feeds we want to grow on our own farms—that is the roughage feeds, because they are the economical feeds that form the foundation of all our balanced rations, and it takes a strong, muscular jaw to masticate this coarse roughage. Sometimes with this wide, deep, muscular jaw, goes a meaty neck, and we don't want that; we want a thin, clear-cut neck, rather a long neck because where we have a short neck we have a short meaty body back of it. The dairy cow is not a meat producing animal. So we want to see this cleanness of the neck, clean-cut in the throat, and clean over the shoulder. When I find a cow that is broad over the shoulders like a beef animal, I am sure that cow was not intended for dairy work.

In the beef animal, the circulation of blood is heavier where the greatest amount of work is done, and that is on the top line, above this horizontal line, drawn through the body of the cow. That cow's work is to lay on flesh and this broad back is made for that identical purpose.

The dairy cow does all her work below this line and therefore the blood circulation of that cow is largely below that line. So we have to look to all these things if we are going to have a successful dairy machine.

The next indication is perhaps the backbone. I like to follow that line with my hand. On some cows it is all covered with meat or fat. We want it free from meatiness, so that you can put your finger down in the processes between the bones; that is what we call an open conformation.

We want a cow that has plenty of room below, a deep, strong barrel. Occasionally a cow may be found with a narrow barrel like a race horse or a grey-hound; good ones are sometimes found that are like that, but for steady, everyday work we like a cow with great capacity, plenty of room for storage, which is indicative of large digestive capacity.

There are some things we don't like in dairy cows. Some of our cows are sloping in the rump,—some of the best, perhaps, but we want to work toward a perfect ideal and that calls for a straight top line coming out square and nice. A very good indication of the length of an udder may be had by noticing the length between these two points. When a cow is fresh and her udder is full, it will extend as far forward as her hip, and as far backward as the pin-bone.

Now from the hip bone to the bone just at the end of the tail, which we call the pin-bone—we like to see a cow long between these two points because a good cow must have a good udder, and a good place for it, if she is going to be a good worker. I want an udder to occupy a lot of room on the body. If you are observing, you have noticed a great many different kinds of udders. We don't like the long, slim, narrow, pendant udder for with such an udder, a cow cannot walk easily; it gets soiled in wet weather and when she lies down it comes in contact with the cold, damp ground, and that causes trouble. We want an udder tied up well under the cow and attached strongly to the body. Why do I want that? Because if she is a heavy milking cow it is liable to break loose. I have seen many of them break loose from the body, and they are not a desirable type. There is another reason for having the udder occupy a large space on the body and that is because the milk is made from the blood, and if you will look on the under side of the cow, you will see great tortuous veins there; some of them are immense, as large as my wrist, and if this udder occupies a large space on the body it comes more in direct touch with the large veins coming down through the body, and gives more chance for the small arteries to run through the different cavities of the udder and deposit material for the manufacture of milk. When I am judging cattle, I always go round behind a cow and see how far in the rear this udder comes

out, and how far in front it extends. We want an udder that comes out almost in a semicircle, and a good teat on each corner. The placing of the teats means a good deal. They want to be of good size because they are more convenient to milk. The quality of the udder means a great deal. I think many judges make a great mistake not to see the cows milked out, because there is such a chance for deception. We don't want a fleshy udder. When you find a thick, meaty udder, you usually have a short period milker. It is harder work to get all the milk out of an udder that is thick and heavy. A number of years ago, Professor Woll came to our place and wanted to make an experiment. He said he wanted to milk our cows after we were through milking. We thought we were pretty careful about our milking, but he put a man to milk them after we got through, and from some he got little or none and from others he actually got three pounds. I found every cow that gave three pounds of milk had a meaty udder. If a cow has a meaty udder you are very likely to leave in a lot of milk every day and the cow will commence to shrink and dwindle in her flow. An udder that you can take up like a wet dishrag and squeeze together, you can empty perfectly. Now, the dairy cow must have a place for the udder. I have seen many beef cows that really had no place for an udder. If she is going to support a big udder, she must have a place for it. When a cow's hams are so close together that there is no room for an udder she is not a persistent milker.

We have come now to another very important point, and that is the milk veins of a cow. The blood is made by the feed the cow eats, and the blood carries material to the udder for making milk. If the milk veins are large they indicate that the udder is well supplied with blood. We used to think that the cow made milk right along from morning till night and from night till morning, but this is not the case. Experimenters have taken a cow at night with an udder well filled and killed her and cut open the udder and found very little milk in it. Simply the material is there to make milk of, and when we sit down to milk, or when a calf gets his dinner, the elaboration takes place. The milk is carried to the udder by arteries and then passes into the body again through the milk veins. You will notice on the under side of the body some large ridges which are improperly called milk veins. We used to think the milk itself flowed through them but we know now that nothing but blood flows through them and we find them very crooked and tortuous in a good dairy cow. Those milk veins must have a place to enter the body, and there you will find openings which we call milk wells. Sometimes you can almost stick two fingers into them. You will find these veins on either side

of the body; every cow has two milk veins. Sometimes one opening is not sufficient to let the blood pass into the body and back to the heart and there is found two and sometimes three or even four on a single side. I never saw a good cow without these indications and I never saw a real poor cow, with them. So, when you are judging cows, pass your hand on the under side and see how soft and pliable these veins are and follow them up to where they enter the body. You will find they vary very much. Some are quite short; some are long. You will also find little extension veins running nearly to the leg and into the body.

Not a great while ago, I saw a man loading a well bred cow into a car. She was a little stubborn about going, and what do you suppose this man did? Well, I expect some of you think he kicked her, and that is just what he did; he kicked her under the abdomen where all that wonderful network of blood veins is and in less than fifteen minutes it was swelled up there as big as my two hands, showing it injured a part of the cow's machinery.

If I should take out my watch and throw it down on the floor and step on it you would think I was a very foolish man, but the machinery of that cow is just as delicate as that in my watch and when that man kicked that cow, he was kicking some of the most delicate machinery to be found in nature. I think the dairy cow is the most sensitive animal we have, because of her nervous disposition. I don't mean nervous in the sense of fidgety, lacking nerve, or anything of that kind, but the making of milk is a nerve process and so we must handle dairy cows with a great deal of care and kindness. I tell you boys, we can catch more flies with molasses than we can with vinegar. We can do more by treating our animals kindly than by abusing them, and there is no animal that responds better to good care than the dairy cow. Be kind to her; don't even swear at her, any more than you would at your best girl.

I think the ability of the cow is measured a good deal by her skin and hair. You say what has the skin and hair to do with such a piece of machinery? The outward appearance is merely an indication of the inner machinery. If a cow's digestion is wrong, out of order, her outward appearance shows it; her hair will be rough and her hide hard and tight to her body. Perhaps you have noticed how tight the skin will be no an old horse. That is always an indication that the horse is out of condition, and it is the same with a cow. If she is out of condition you will find her hide getting tight and hard. Now, when a cow looks glossy and neat, her hair stays down nicely and the skin is soft; it shows she is in a healthy condition, that the inside machinery is working perfectly.

The business of a dairy cow is a great deal more than most of us think of; her work is tremendous; she not only works in the daytime, but at night. She works every day in the week. She is working 365 days in the year and from ten to fifteen years of her life, so we are asking a great deal of a dairy cow, more than any other animal on the farm, and she must be well taken care of. In our northern country, where we have long severe winters, we must keep her comfortable. As I go through the country, it seems as though men delighted in making it impossible for their cows to do real, honest work for them because of the conditions surrounding them. They don't furnish water sufficient or of the right temperature; they don't furnish barns having the necessary sunlight, warmth and ventilation. When we have plenty of good air in the cow barn, it makes our cows feel good; it makes them enjoy their meals. All living things enjoy God's pure air. When you boys go back to the farms see that the old barns are made happy homes for the cows, because they can't do honest work unless they have happy homes.

Pretty soon you boys will judge cattle.

(Instructions were then given in scoring and marking of papers.)

At 10 o'clock the main meeting convened.

President Griswold in the chair.

AMERICAN COW REGISTRY.

By Hon. Charles D. Rosa, Beloit.

We have met here as an Association of Dairymen of a great state to discuss the problems of our business and to speak the word that shall be mutually helpful. There is no need in a body such as this one to make the statement that the dairy cow is one of our nation's greatest assets. It is one of the truisms of our business. Neither is it necessary to prove that Wisconsin is a great dairy state, for it is well known that in Wisconsin alone there are nearly one and one-half millions of dairy cows. On the back of the pamphlet that contains our program, it is stated that the value of the dairy products of Wisconsin is now annually eighty millions of dollars. If this be true, and I have no doubt of the substantial accuracy of the statement, then those million and a half of dairy cows must annually have turned nearly their own value in grass and grain and roughage into some of the bset articles of human food.

I take it that this body can discuss no more important subject than whether this transforming of the rough produce of our farms into