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REPORT

Maine. Legislature

OF THE

Joint Special Committee

TO INVESTIGATE

THE CAUSE OF THE OUTBREAK OF DISEASE AMONG THE CATTLE AT THE STATE COLLEGE FARM,

The Loss and Disposal of Cattle Therefrom,

AND THE

DOINGS AND CORRESPONDENCE OF THE COMMISSIONERS ON CONTAGIOUS DISEASES AMONG CATTLE IN RELATION TO THE SAME,

1°
4335

TOGETHER WITH THE

Testimony Taken Before the Committee.

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1887.

STATE OF MAINE.

IN SENATE, February 12, 1887, P. M.

Ordered, That a Joint Special Committee, consisting of Senators Allen of Knox and Rich of Waldo, with Representatives Walton of Skowhegan, Libby of Burnham and Adams of Litchfield, are hereby instructed to investigate the cause or causes of the late outbreak of disease among the cattle at the State College farm, the loss of other cattle at said farm prior to that time, the disposal of cattle sold therefrom, and the doings and correspondence of the commissioners on contagious diseases among cattle in relation to the same. Said committee shall have power to employ a stenographer and to send for such persons and papers as may be necessary to accomplish the purpose of such investigation: their report to be made to this legislature as soon as practicable.

Read and passed.

C. W. TILDEN, *Secretary*.

IN HOUSE OF REPRESENTATIVES,
February 12th, 1887.

Passed in concurrence.

NICHOLAS FESSENDEN, *Clerk*.

SF 808
M22

REPORT.

The undersigned, a majority of the committee appointed by a joint order of the two Houses of the Legislature to investigate the cause or causes of the late outbreak of disease among the cattle at the State College farm, the loss of other cattle at said farm prior to that time, the disposal of the cattle therefrom, and the doings and correspondence of the Commissioners on Contagious Diseases Among Cattle and in relation to the same, have attended to that duty and after several hearings and an exhaustive examination of the facts, beg leave to report, that the disease from which the herd of cattle at the State College farm was suffering in March and April, 1886, was tuberculosis, a disease identical with consumption in the human family; that said disease, according to the evidence introduced before us, which is made a part of this report, is contagious, and readily communicated by reason of the constant intermingling of the different animals of a herd together, and is transmittible from either parent to its offspring.

The date and source of the first introduction of the disease into the College herd is unknown, but the evidence tends to disclose that it had existed there for some years, and that it had caused the death of several cattle on said farm before the slaughter of the herd in April, 1886.

The outbreak of said disease there in the winter and spring of 1886 was the most malignant on record, and seems to have been caused by the collecting and intermingling of so many cattle, some of which, at least, were diseased in close and well-finished stables and by the thorough impregnation of said stables with contagious virus from those and former diseased animals. Little out-door exercise and concentrated and stimulating food were also potent factors in the rapid extension and progress of the disease.

This herd, which appears to have been thoroughly inbred, which fact caused the disease to develop in an unusually severe form.

The disposal of the cattle from said farm for several years past is shown by the evidence introduced before us and is referred to.

The doings and correspondence of the Commissioners on contagious diseases among the cattle on said farm, are also herewith submitted in the evidence introduced. The facts seem to fully justify the destruction of the entire College herd.

In relation to those cattle sold from the College farm for several years past, if we are allowed by the terms of the order for investigation to make a recommendation, we must certainly recommend a most careful examination of those animals, and especially the bulls recently sold therefrom, by a competent board of cattle commissioners, to the end that every vestige of said disease, wherever found, may be stamped out and destroyed. As a committee of this Legislature, we take no part in any controversy arising out of this matter. Yet we cannot help coming to the conclusion that the Cattle Commissioners have not given such attention to this case as the exigency required, and we respectfully suggest that the existing condition of things may have grown out of the fact that one of the members of said Commission seems to have held several official positions, the duties of which were incompatible with each other.

We make the majority report of the Cattle Commission, signed by Dr. Bailey and Messrs. Bell and Ferguson, a part of the evidence in this investigation, and, as a consequence, a part of our report, and we respectfully call attention to the testimony given in said investigation by Dr. J. F. Winchester of Lawrence, Massachusetts, a member of the Cattle Commission of Massachusetts, and A. W. Cheever of Dedham, Massachusetts, also a member of said Board, and others.

The above report is signed by I. C. Libby, who differs from the other members of the Committee in the recommendation of the examination at the State's expense of any apparently well animals and also any reflection on any member of the Cattle Commission.

Samuel H. Allen, } *Committee on the part*
Alfred W. Rich, } *of the Senate.*

S. J. Walton, }
Enoch Adams, } *Committee on the part of the House.*
I. C. Libby, }

TESTIMONY.

WEDNESDAY, Feb. 23d, 1887.

LESLIE C. CORNISH, Esq., of Augusta, addressed the committee:

If you will pardon the intrusion, I will state that Mr. Hall C. Burleigh has asked me to be present at this investigation. The matter under consideration is one in which he is deeply interested, as it affects the cattle interests of the State. I do not desire to intrude at all, or to interfere with the course of the investigation. I presume that the committee will get at all the material facts, but if, after your examination is completed, any further points may suggest themselves to me, I should like the privilege of inquiring in regard to them. This privilege I hope the committee will accord me.

CHAIRMAN WALTON: I have no doubt, Mr. Cornish, that you can have that privilege.

TESTIMONY OF J. F. WINCHESTER.

I reside in Lawrence, Mass., and am a veterinary surgeon and one of the Board of Cattle Commissioners of Massachusetts. I have had a little experience with the disease pleuro-pneumonia and considerable experience with the disease called tuberculosis. Pleuro-pneumonia is highly contagious, characterized by lesions of the lung and pleura. It is confined entirely to bovines and has an indefinite period of incubation, varying from two to three weeks to ninety days, but has been known to break out after that period. The first noticeable symptom of

the disease is an elevation in the temperature and a cough, then the symptoms of ordinary lung trouble and pleurisy combined. Those two are associated. It differs from ordinary pneumonia from the fact that a subject of that disease ordinarily gets well or dies inside of a fortnight, while in contagious pleuro-pneumonia it will be sometimes as long as eight or ten weeks from the time it begins before resolution takes place, that is, if they get well. A good many die, because it resists most any form of treatment or cure. It has been and is a disease which we fear very much, from the fact that it is so highly contagious and so hard to control, except by the most stringent laws. I do not think they die off so quick with this disease as with simple acute pneumonia. I think this disease a little more important than tuberculosis. The characteristic appearance of a lung after death from this disease is a marbled appearance, due to thickening of the cellular tissue between the lobes of each lung, making it have the appearance of marble, not unlike some beef that you see where the fat and the meat are pretty well distributed. I am not so sure that it is not transmitted from the parent to progeny. My experience with the disease is limited. They may have a chronic condition of the disease that will last for years, so that it becomes encysted; then, under favorable circumstances, the cyst breaks and the virus is set free and acts as a source of contagion again.

I have had considerable experience with tuberculosis in the last ten years. My experience and learning tell me that it is both hereditary and contagious. Some authors upon it claim that the contagiousness of it is a sight worse than its danger of being hereditary. I think we are justified in accepting that to be the case. It is a chronic disease; that is to say, it is slow in its development. It may exist in an animal her natural life and not be detected, except when dying from some other cause. It may affect the brain, the lungs, the pleura, the peritoneum, the intestines, the joints, the genitive organs, in fact any organ of the body. There is no question that it

is a disease that is transmitted by propagation. It is not contagious unless the tubercles or tubercular deposit is attached to a mucous membrane, and by atmospheric influence it is developed so that it starts the virus and that is taken into the system by some other animal, either by breathing or by digestion. It is due to a specific germ which has been propagated and inoculated and the tuberculosis produced. It is identical to the disease in man, tuberculosis. It may be carried from man to a bovine, and, I think there is evidence now to show, from bovine to man. That is a pretty hard thing to prove, because there have been no experiments to that effect. I said it was contagious when it affected the mucous membrane, because all mucous membranes are exposed to the atmosphere. The serous membrane is one that is not exposed, and therefore if the disease affects that there is no danger of its escaping to any other animal. It may affect the milk of a cow. It is not invariably transmitted from parent to progeny. There are instances on record where a tubercular animal has delivered healthy offspring, and they remained healthy through their life. Whether those animals transmitted it to the second generation, I do not know, but it has been known to skip one generation and be reproduced in the next. The probabilities are that the offspring will be affected. I have found that to be the case a number of times. I have had three generations on the same farm, mother, daughter and grand-daughter. Think there was a herd of ten on that farm and two cases of the disease on that one farm; but the mother of those two had been sold. There were three out of the ten affected. That is a very recent occurrence. Some eight or nine years ago I was called to a farm and found a cow with tuberculosis among a herd of forty or fifty. I had her killed and I have not been called there since. I had a case of the disease in an imported cow which had been on the farm a week before she was taken sick and died. I inquired about the offspring of this cow and could not get any instances or indications of the disease. The breaking down of the tissue had not occurred in her case, and

that is probably the reason why none were affected. She was three or four years old. She could not have given the disease to the other animals while in that condition. You must have the germ, the virus, set free to get the tubercles. That does not occur until the breaking down of the tissue holding it. A consumptive cow may throw a healthy calf, and it may not. I think the largest per cent of tubercular animals are past five years. It is a chronic disease in the beginning and does not develop rapidly. If a cow is diseased and the udder is not affected I do not think you would have any trouble about using the milk. The udder is at times specially affected. It is generally accepted that until there is a breaking down of this membrane, unless the lymphatics are highly diseased, the beef is a fair quality, kind of second quality beef; that is, if there is not too much disease of the lymphatic glands. Officially we have never done anything in regard to the isolation and quarantining of tuberculosis in Massachusetts, because we have never been called to but one case since I have been on the Board, a year ago last October.

Q. Whether you find it often at the slaughter-houses in Massachusetts where they are slaughtering cattle for beef.

A. I saw a letter written by a gentleman who had been at a hearing at the State House on this subject, and he made a strong statement,—that of these old cows, "skates" I believe he called them, there was hardly one that did not have some evidences of the disease. He was not a professional man, and I do not know what right he had to make that statement. He said he did not think there was a herd of twenty cows in all Massachusetts but what had it. But I do not believe that. I do not consider it a prevailing disease. Every animal I have condemned I have seen opened. The general appearance of the animals was some fat and some lean. The condition of the flesh depends a good deal upon what tissues are involved. The lungs of one animal, particularly, when we took off the muscles on the bottom of the caul, the peritoneum, we found lots of little seeds, called tubercles, completely

covering that, and the intestines themselves were filled with the tubercles, also the lymphatic gland filled with them,—all in different stages of life. You will often find these deposits in the liver, the lungs, in the joints, sometimes in the brain, in the spinal cord. These tubercles have the appearance of little gray beans, like seed, and hitch on to the serous membrane of the lungs, and sometimes the pleura; they then grow together and become a large mass. When they first start they are little meaty substances like warts. In the first stages you get a thickening of your tissues, which is grayish in color, and then it grows, not very large, about the size of a millet seed; then they grow together and become soft in appearance. After a while they get hard, so that they grit the knife in cutting; and then again they suppurate and break down. Usually this is very slow in its development. If the lung is affected the creature usually has a cough. The creature must have some deposit in her bronchial tubes caused by this tubercular growth before the cough comes on. A cow could have a cough for a great many years from some cause and live. I should not expect to find ordinarily some disease in the lung of every creature affected with tuberculosis. You would find some cases where the lungs would be entirely free. The disease causes lameness of the joints sometimes. This outbreak in Orono was the most rank of any that I ever knew or read of. What I know of this is gained by reading. It is the most virulent case I have ever known. So far as the milk is concerned, I do not think there is any doubt that the milk contained the germ of tuberculosis if the udders were diseased.

Q. Suppose the udder was not diseased?

A. That is a question I would not answer in but one way. I think the probabilities are that the disease, as it existed there, affected the milk itself in the last stages.

Q. Tell us if, in the first four or five years of this disease, when the animal's udder was in good shape, all right and

healthy-looking in appearance, the milk would be good or not?

A. I would not recommend its use. I do not think the milk is healthy in tubercular animals in the last stages. If you start in with a good deal of disease I do not think the milk would be desirable.

Q. If you were called in a case and condemned a cow which unmistakably had this disease, would you recommend to the people of Maine to follow out the progeny of that cow clear down to the second or third generation, whether apparently well or not?

A. That has been my practice in individual cases. Of course, officially we do not do it. That is, we have not done it.

Q. Do you take them well, and kill them?

A. No, sir. I should kill the first one, and if I got stuck on that I would be a little careful with the next one. I should consider the milk in such attacks as at Orono dangerous to use.

Q. In so much as these germs are destroyed by heat, and milk is more often taken without being heated than any other part of the creature, in so much greater degree would the danger be?

A. Yes, sir. By digestion this identical disease could be thus transmitted to a human being. The disease can be produced in man by feeding it to consumptive people. I do not understand that feeding has anything to do with this disease. I understand that poorly fed animals would be in as great danger from it as highly fed animals. You have to have the germ. If, as in the case under consideration, some ten or fifteen animals had a case of tuberculosis, they would be more likely to have it in close quarters, because the closer the quarters the more chance to breathe the expired air. Each might have the disease, and if kept in an airy place would live a long life to old age. The disease is transmitted to man by the germ, the bacilli, getting into the system either through

the digestive organs or the respiratory organs, or abrasions of the skin,—any way that will cause the virus to be absorbed into the blood of the individual. One way is by drinking the milk of such animals. I cannot tell you whether an animal sometimes has the disease without affecting the milk at all. I would not recommend the drinking of milk from an animal having the disease. If the disease of the lymphatics had not advanced far enough, or there were not in that body any well-developed tubercles, I do not think the beef would be dangerous. That you cannot tell until after the animal is killed.

Q. And it was on that basis that you made this recommendation in your last report to the Massachusetts Legislature: "The milk and beef of any animals in any stage of this disease should be proscribed, as it is transmittible to man." And those are your sentiments?

A. Yes sir. The largest percentage of these diseased animals are found above five years.

Q. What are the symptoms of disease before that time—from two to four years?

A. You would have a cough,—that is usually the first symptom; you might have a staring look, an unhealthy appearance of the skin, a lameness, or from very careful observation you would find some of the lymphatic glands on the outside enlarged. A cough is not a necessary part of the disease. The disease can exist in other parts of the body without the cough. I deem it wise to crush the disease out as fast as it can be located. I think it a dangerous disease among cattle, and, more or less, the human race. I have heard considerable about the case at Orono and have kept run of it.

Q. There was a herd of 51 animals, and 40 were found to have this disease in one stage or another. Would you have deemed it prudent to scatter those animals or any of them among the farmers of this State for use?

A. On general principles I would not; but if there was a contract entered into to supply them it might be a different

matter. On general principles I do not think it would be a wise thing to do. It is a pretty hard question to answer whether the action of the Commissioners was wise or not in causing the cattle at Orono to be killed as they were. If I had found a herd at our State College in the same condition I should have made the same recommendation.

Q. Supposing you had a mother of a bull calf killed, and it was found to be in this condition,—lungs loaded with deposits of virus, large abscesses in cavities, bronchial glands greatly enlarged, age eight years. Is that, or not, an advanced stage?

A. It is. I would expect a calf dropped by that cow to have the same tendency. There is a pre-disposition to it, hereditarily. I would not deem it advisable to use that calf for breeding purposes. With my individual clients I have recommended that such calves be killed. The disease can be transmitted from the bull just the same.

Q. If you found that in a herd of 49, 47 were found to have this disease, and you learned that 11 bull calves had been sold to various people about the State, coming from this herd, would you, or not, recommend the killing of those bull calves?

A. I think I should. I should deem that a wise and prudent thing, necessary for the safety of the herds of the State.

Q. In regard to this College herd: if they had been situated up there at Lawrence, and some fellow would come there and give the College $1,500 for them and put them on an island, would you not have advised them to be sold?

A. I have been in the same position and told them to kill the cattle. I should consider it great danger to have those cattle shipped from one part of the State to another. I have been in just that position, and it was my strong recommendation not to let those cattle go. I have seen the man in the barn with the money in his hand to pay for them, and still would not let the cattle go.

Q. Now, in regard to this bull calf: you say you would recommend that animal should not be used for breeding purposes?

A. Yes, sir.

Q. If that animal was the father of 100 calves, part heifers and part bulls, would you recommend that those 100 calves be used for breeding purposes?

A. I have never seen it traced down that far; but I should like to know how it would work. I think the tendency would be that it would propagate itself.

Q. Would you recommend that these 100 calves should be picked up all over the State and slaughtered,—the bull in apparent good health?

A. If the mothers of these 100 calves were rugged cows, I would take my chances of their overcoming the tendency to propagate the disease from the bull, on account of the distance it had gone from the bull's mother,—if the mothers of the calves were in no way related to the mother of the bull. If the bull was killed and found to be troubled with that disease I should recommend the destroying of the whole of the 100 calves. I think you would find the disease in some of the calves; but by the time you killed 50 and did not find it you would want to go slower. If the bull is apparently well and strong, that does not argue that he has not the disease. If this bull is apparently well now, it develops after that age. If this bull was killed and found healthy, then I would let the progeny take their chances, and let them live; but if I found him diseased, then I should expect to find his progeny diseased. I have killed apparently well animals and found them diseased. An animal has never been known to recover from the disease. The milk heated to a boiling point will kill these germs.

Q. Have you heard any complaint, or of any trouble, either from doctors or anybody else, as to milk from these diseased cows being poisonous or hurtful?

A. I think I know of one case, where a man who had long been troubled with, and family died of, phthisis. I know I was called to see his cow, and she had a tuberculous udder. He was living on milk altogether, but he had plenty of money and had kept himself going by special treatment, and luxuries, &c. He ultimately went under. I don't know but what it may have been a coincidence; but I should attribute it to the milk of the cow. Tuberculosis had developed in the udder of the cow. That is not infrequent. You often say a cow has the garget, and it may be really an enlargement of the lymphatic glands from tubercular development. Sometimes it is hard to dissipate those swellings, and then suspicion is aroused, because an ordinary case of garget runs away quite soon. I think an ordinary gargetty inflammation of the udder is often mistaken for tuberculosis, and in a good many cases where it is thought to be garget the inflammation is due to tuberculosis. I think there are more cases than we are aware of on that account.

Q. What is the difference in the milk where the cow has the tuberculosis and where she has the garget?

A. The appearance of the milk depends a great deal. If the tuberculosis is in the first stages, before the breaking down of the tissue, you would not notice any physical difference in the milk, ordinarily, without microscopical examination, while in a case of garget, as you well know, there is a marked physical difference in the character of the milk. After the tubercles had broken down, the milk would be similar in general appearance to ordinary gargetty milk. In such cases it is highly poisonous.

Q. How about the milk previous to the breaking down of the tissue?

A. It is poisonous at that time.

Q. Is it in the incipient stages of the disease?

A. If the udder is affected in the beginning I do not see why the milk should not be. I think they could have the

disease in certain portions of the body, without the milk being affected at all.

Q. There is no danger from taking the disease from a cough until the tubercles in the lungs break down, is there?

A. Well, I don't know. If the cough is due to some irritation of the bronchial tubes, and the irritation of the bronchial tubes is due to an exudation that throws the germ off, you can just as well get it then as to wait for the tubercles. Generally there is little danger until the tubercles break down. By coughing the animal might throw out some of the virus.

Q. Now if the tubercles in the udder have not commenced to break down, or up to the time of the breaking down, there is not much danger from the milk?

A. I should think there was, because the milk is a natural secretion from the blood, and the blood contains more or less of that trouble.

Q. If four bulls were brought here of the first generation of the cattle that were killed, ranging from two to four years old, and they are slaughtered and no signs of tuberculosis are found in them, does that argue necessarily that the others are not affected?

A. No, sir, it does not.

Q. Well, notwithstanding the fact that it shows itself sometimes in the second generation, you would not take the chances of killing the descendants of those bulls, if you found them in a healthy condition?

A. No, sir.

Q. We understand you that it is not always hereditary?

A. No, sir; there are exceptions.

Q. My point is that, being at the age they are, they might not, if killed now, show symptoms of the disease; and at a later period in life these same animals might exhibit signs of the disease?

A. That is it exactly.

Q. Would there be as much danger to breed from animals that do not show any signs now of disease as it would be later on after the disease is developed?

A. I don't think there would be so much danger.

Q. Do you think it would be wise to breed from them?

A. No, sir; I should not, on general principles, as I said at the start.

Q. It is impossible to say which one of these bulls will show, and which will not, without a post-mortem examination, indications of the disease?

A. You might have some physical examination, but it would be safer to have a post-mortem one.

Q. Could you tell by a physical examination in a mild case?

A. No, sir.

Q. We understand from what you say that these bulls are not necessarily diseased?

A. Yes, sir.

Q. Now, when can you determine whether an animal has got the tuberculosis; in what stage has it got to be before you can determine?

A. You have got to have disease of the lymphatic glands; they are external.

Q. Suppose the lungs are diseased?

A. In that case you cannot always tell.

Q. How far must it be advanced?

A. You must have enough so that it interferes with the respiration. There might be one or two tubercles on the lungs that it would take an acute ear to discover by any change in the respiration.

Q. How about percussion?

A. You do not get much change by percussion.

Q. Would you suppose that those animals or any portion of them take this trouble by contagion?

A. It is natural to infer that they do.

Q. Would the fact that some of these cows were found to have tuberculosis at the time they were killed argue that

they must have the disease at the time they dropped calves, three or four years before?

A. It does not necessarily follow.

Q. Would you think tubercles might develop in one year?

A. I should think so; ordinarily three or four months.

Q. Notwithstanding these eleven bulls came out of those diseased cows that were killed two or three years later, they might have been well when the calves were dropped?

A. Yes, sir.

Q. I suppose that would depend a good deal on the stage of the disease at the time those cows were killed. I judge there is no rule to tell how long the disease was in existence?

A. That is it. You have got to have very slow developing tubercles in the lung before you can tell anything in the respiration; and you must have a good many and quite largely developed.

Q. Didn't you state that the probabilities were largely in favor of their having the disease, from the fact of their coming from these diseased animals, whether those animals apparently or not had the disease when they were dropped?

A. I don't know.

Q. And we understand you to say that the cows were not necessarily diseased from two to four years previous to the outbreak of the disease?

A. Not necessarily.

Q. This condition of things, I think you have said, could come inside of two years?

A. It is a slow thing ordinarily, but once in a while takes a quick turn.

Q. Can you tell us the reason why it takes that quick turn?

A. I suppose the natural condition of the animal has a great deal to do with it; some are more susceptible to the action of the virus than others. You can get this virus in the animal and it will not develop the disease, because he has a constitution to throw it off; but if he is weak and predisposed

that way, it will run its course. An animal of strong constitution might take the virus and not take the disease.

Q. Have you read the report and become acquainted substantially with the facts, so as to give your opinion as to how many years tuberculosis has existed at the State College?

A. No, sir.

Q. How long has it existed in Massachusetts?

A. Well, Mr. Cheever has told you that it was at Amherst 12 years ago. I do not know. My idea is it has existed for about 13 years.

Q. Now, here is a linthole in the barn, with four places of ventilation on one side,—that ventilator runs up the sides of the barn to the eaves, where it goes out under the eaves,—would there be any danger from the snow melting on that roof and running into the cistern, and the cattle drinking that water?

A. That is to say, the contamination from the animals would go up and become absorbed in the snow and then come down again in water. No, sir, I don't think it would.

Q. I would like your opinion on that.

A. It would really depend a good deal on how much draft you had there. If there was a good deal of draft, I do not believe it would have any effect at all. In fact, I don't believe it would any way.

Q. There are lots of citizens in this State who would like to know whether cotton-seed meal fed to the stock would have anything to do with this disease?

A. Hot climates are good for tuberculosis, but I don't believe it grows in the cotton-field, and therefore I don't think cotton-seed meal has anything to do with it.

Q. How would you account for the rapid spread of the trouble in that particular herd?

A. I think, from what I know of it, that the lung tissues were so broken down, and so much virus escaped from each animal, it was the center of contagion, and the animals being well bred, closely bred,—the finer bred the animal, the less

strong his constitution,—the virus got to work pretty fast, there being so much of it.

Q. Would there not be pretty good chance for the spread of the disease in the herd from the animals drinking out of the same trough?

A. Yes, they could get the disease that way, because it works just as rapidly in the digestive organs as in the respiratory organs.

Q. Don't you think that this disease had probably existed there for several years?

A. My inference would be that it existed there some time.

Q. I would like to ask whether the feeding of cotton-seed meal to cattle diseased in this way would have a tendency to hasten the result?

A. No, sir.

Q. Is it necessary that an animal should have tuberculosis developed in the lungs, in order to transmit it to the young?

A. No, sir. You may have the disease confined entirely to the genitive organs.

Q. Must it be developed in any place in the system?

A. It can suit itself about its location. It is not confined to any organs.

Q. Must the disease have any stage of development in the animal in order to transmit to the young?

A. I don't know what the exact period of incubation is.

Q. I want to get at whether there is a constitutional proclivity to transmit, without the tubercles existing?

A. Yes; there is a predisposition in all animals closely bred for something or other.

Q. I suppose the disease first exists in the blood?

A. Yes, sir; and it locates itself anywhere.

Q. The question is whether it could be transmitted while simply existing in the blood without being located?

A. That, sir, I could not say.

Q. Is it similar to consumption in people?

A. It is identical.

Q. Well, you find parents dying with consumption, and children never having it?

A. Yes, sir.

Q. Can you tell any nearer in the disease in an animal than you can in a man?

A. Yes, sir.

Q. Is the action of the disease in the bovine similar to that in the man?

A. Identical.

Q. What can you say about recommending the destruction of animals after three or four years?

A. The only recommendation I have made is that they be killed, because thus far my observation has been that it has been handed down from generation to generation, and I have been justified in killing their progeny, but I knew that those animals were diseased when their progeny came along. I never had any occasion to test it where they were dropped before the disease exhibited itself.

Q. Would you not make a greater distinction in the workings of this disease in the animal, than you would in the human race? Is there not a greater tendency to enlargement of the glands, and greater deposits.

A. I don't know much about the pathology of man, but I say the disease is identical to that in man. I supposed the workings would be the same.

Q. I understood you to say there was much more danger of contagion on account of difference in habits of the animals and the human race?

A. Yes, sir.

Q. I think a good many of these questions have been misleading. It has been asked here if a bull that came out of a cow from two to four years old might not have been bred from a healthy cow. The facts are these. The mother of these bulls was killed and found diseased, and their off-spring from two to four years killed at the same time and every one found to be diseased.

A. If the off-spring of these cows killed were found to be diseased, and they were older than the bull now living or were at least within six or nine months of his age, I should recommend the destruction of this bull.

Q. If the off-spring of these animals remained with that herd, does it necessarily follow that those who went out from the herd about two to four years before were diseased?

A. No, sir.

Q. One of those animals that was bred from a diseased animal does not have the disease. Now, is it possible that that animal, though the disease is not developed at all, may transmit it to its progeny?

A. I understand; that is the question I have answered that I did not know.

TESTIMONY OF A. W. CHEEVER.

I am a farmer by education, now connected with a newspaper and on the Cattle Commission of Massachusetts for a year and a little over. I have never seen a case of tuberculosis in a dead animal. My knowledge of it is by reading and being taught. Before coming here I inquired of Professor Stockbridge, who has been on the Commission nearly since its organization—20 years, more or less—in regard to the disease as it has developed itself at the College farm in Massachusetts, and that is about all I know of the disease practically. It was introduced on the College farm there in some Short-horn cattle, I think, about 11 years ago. There were, Professor Stockbridge tells me, at different times about sixty Short-horn cattle on the farm, and some 4 or half a dozen of the whole number, at one time, exhibited evidences of the disease. At one time 2 or 3 Ayrshire cattle gave evidences of the disease, whether taking it from the Short-horns or bringing it there themselves originally, I do not know. Two or three sales or disposals were made from this farm, Short-horns and Ayrshires, and afterwards a few were found to be diseased. One, supposed to be all right, except that she

refused to breed, was sent to the butcher and killed, and was found to have the disease in the internal organs. Two Ayrshires were sold off of the premises, and soon after, or at some time after, developed the disease; and they were destroyed or killed. The strong point that Professor Stockbridge wished to make, on the conservative side of the question, was that the disease had never spread in the herd beyond the first animals attacked; it had never spread outside of the college herd into the two herds into which were sold animals that had been diseased, and in which the disease developed while they were in those herds.

Q. Would you go to the herds which had among them the progeny of any of these diseased cattle, and kill them, down to the second, third or fourth generation?

A. I do not feel familiar enough with the workings of this disease to lay down the rule of action. Think we have had it in Massachusetts 11 years to my knowledge. On general principles, with a willing State to back it up, I would say weed out every imperfection in all animals and vegetables, and every thing the farm raises; but with public sentiment not educated up to that point, the question comes in, where is the money coming from? I should not feel that at the present time in our State we would dare to recommend killing and destroying everything that had been exposed to what we supposed is that disease. I consider the disease, according to my reading, contagious—something as glanders is. It would be a very cheap experiment, and worth the trial, to select four of the most suspicious animals that have gone out from this college herd and slaughter them. If they were all found to be diseased I would begin to examine their progeny if I could find them. The disease is known as a hereditary and contagious one, and a dangerous one among cattle. That is what a part of the authorities say.

Q. You heard read to your associate the condition in which the mother of a certain bull was found when killed—lungs loaded with deposits, etc. What would you recommend to be done with a bull dropped by that cow?

A. I would recommend the killing of him.

Q. What would you recommend as to the 11 other bulls dropped by other members of the herd there, from diseased mothers?

A. I do not see why we should not treat them all alike. I think I should recommend the killing of those eleven. Very likely that would be the wisest and cheapest course for the State to take. It would be liable to save a great expense to the people of the State in the future.

Q. Supposing the bulls were calved from a year and a half to four years before any knowledge of disease among those cows was had by anybody in attendance, any one connected with the animals: would you recommend their destruction?

A. I should recommend examining and killing some of them, as the State is able to do it.

Q. For what purpose?

A. To study the disease.

Q. Would your commission recommend their destruction in such cases, as a commission?

A. We have not done it yet, or anything like it.

Q. Have you known of any commission that has recommended or practiced that system of killing apparently sound animals?

A. No, sir. I do not know of any laws this side of Germany looking to that extreme action. We have never had a case in Massachusetts that I know of anywhere approaching the rankness of the case at Orono.

Q. Don't you think it would be dangerous to have those eleven bulls scattered over this State, with the pre-disposition to tuberculosis in them which they must have?

A. There is certainly a possibility. There is more probability that they will be dangerous than that they will not be. If I found in a herd of cattle of mine one case of tuberculosis I do not think I should immediately go at work and destroy the whole herd. Think I should kill none but the diseased one. Speaking as a farmer, and supposing under certain conditions that the meat would be wholesome, I should

try to get the most out of the diseased one that I could. If he was fit for beef I should kill him, and if not fit I would kill him anyhow.

TESTIMONY OF DR. A. R. G. SMITH.

I have been one of the members of Governor Robie's Council for the last two years. I went to the College farm and saw the cattle before they were slaughtered, but not after. From statements to me I found the herd losing flesh. Nearly all of them were kept on the same feed; very many of them had a dull-looking color, hair dead; a portion of the herd had a bad cough. I examined those most diseased, and found the lungs quite dull on percussion and the respiration bad, with every indication of tuberculosis as you will find it in human beings. In my practice as a physician I am acquainted with those indications in the human family. I found the same indications there in that herd. Nearly all of the herd showed more or less signs of the disease. Some 12 or 13 were quite diseased, although I examined particularly only two. Those two I found as I have stated, with some indications of hectic fever. They were cows. I was there March 23d. I do not consider consumption in the human family particularly contagious. I consider it hereditary. If persons are advancing to death with the disease, and you take their breath, as you naturally would do in sleeping with them, I should look upon it as contagious. You most always find the nurse who takes care of a consumptive to be afflicted with a cough, even if they do not get the germ seated in their system and die from it. I have seen healthy persons who have been companions of consumptives frequently follow them into consumption.

Q. So if the opportunities were as good to take it from person to person, as it is from cattle to cattle, through their eating from the same manger, drinking from the same tank, you would expect it to be terribly contagious in the human race?

A. I should. I would not advise for the human family the use of milk of cows that I had any suspicion were affected with the disease in any stage. My knowledge of this disease among cattle is not very great, but my view is that it is precisely the same as the disease in the human race. I had a case this summer where a consumptive mother transmitted the disease to her child by nursing it. The child lived about 6 months longer than its mother. Children born of consumptive mothers in my practice and experience have been puny, and have grown up in that condition if they have lived; the majority of them died. I think the taint is in the blood and may skip one or two generations without making itself manifest. I think tuberculosis is dangerous among cattle in this way: I think it is apt to crop out from one generation to another, and spread itself in that way. I would not recommend the use of beef from animals that had this disease. I approve of the policy of the destruction of the entire herd, and also of the policy of the college in not selling any butter, milk or beef from that herd after the disease was discovered.

TESTIMONY OF GILBERT M. GOWELL.

I reside at Orono on the State College farm. Have been on that farm 4 years last April. I have had the care of the stock in question during that time. Think it was in November, '85, that I first discovered any apparent signs of disease among the herd. Think in all there were 46 in the herd at that time. Think there were 26 cows and 2 bulls. The rest were young, heifers and bulls, except two steers, too young to come into milk. Sixteen were imported Jerseys and 16 Maine State Jerseys; 8 were Short-horns. During the time I was there we lost cattle from other disease than this. April 26, '83, we lost one Jersey cow. She was ailing for a few weeks. We thought it rheumatism at first, and called Dr. Wild, a practicing veterinarian of Bangor, and he was not able to decide the trouble. He found all the organs in their usual condition with the exception of the spleen, and

that was slightly shrivelled. He was unable to tell what the cause of it was. November, '83, we lost the cow Bess during the time of parturition. That was wholly a local cause—inversion of the uterus. October, '84, we lost the cow called Maggie, the one I spoke of to Dr. Bailey as having a cough when I went to the farm in the spring of '82. She did not have the cough up to the time of her death ; after that, in the spring, she became well of the cough, improved very much in appearance, and shortly after came into milk, milking the heaviest the next year of any cow in the herd. Nearly 2 years later she ran down and became very much reduced, though no cough was present. We slaughtered and buried her. We examined her. I have no knowledge of the disease of which she died. She had no cough again until her last sickness, then it came back on her. We had no examination of her by a veterinarian. I never discovered anything about her to locate any disease. Up to her last sickness she ate heartily. She was the only cow in the herd that could consume 20 pounds of hay in a day. Afterwards I learned the symptoms of tuberculosis, after the herd became infected with it. Looking back now, I think the cough that the cow Maggie had was very similar to the low cough that our other animals had in the years later ; and the loss of flesh was quite similar. She had that cough when I went there, and it continued not more than 2 or 2 1-2 months. Mr. Rich stated that she had had it before that time. After she got well of it she did not have it again until her last sickness, not to my knowledge. We next lost stock about February 7, '85. A Short-horn cow had failed to breed and had not carried a calf for more than a year, and we sold her for beef to a party in Bangor. She had no cough. Within a few days he notified me that the cow was in a very bad condition, which he described. He said she was "covered with bunches inside," as he expressed it. His statement was that there were bunches attached to her back and ribs, to the meat, as well as to the lungs. As he described it, she was completely filled up with bunches and a mass of matter. I did not see her. I knew the man and did not doubt his state-

ment. The meat was worth 2 cents a pound for feeding to hogs and the hide was worth something, and I paid back one half of the money loss. The cow was fat and I had never noticed any cough. I had not noticed any indications of disease. She had refused to breed although she was brought many times to the bull. We next lost the Jersey Lilly from the stock. She was something over two years old. She had a calf about that time. She with several other young animals had stiff necks, and I supposed at the time that it arose from feeding over a rather high manger. She had a bunch on her jaw, or right at the throat,—it was not attached to the jaw. It was quite a large swelling, and I opened it; it discharged somewhat. About this time she had a calf and she continued to lose ground so much that we slaughtered and buried her. I did not examine her to see what the trouble was. I supposed the trouble was still local. I should say the calf when we killed the mother was two or three weeks old. It was not thrifty, so we simply slaughtered it and laid it away too.

Q. How many of the young cattle were troubled with enlarged glands, a swelling about the neck?

A. I think there were four,—three heifers and one bull. They were tied on one side of the barn and fed from mangers constructed for older animals. They all stood together and were affected in the same way with the stiff necks. I supposed it was the manger, and reduced it.

Q. Was there any change for the better then?

A. With two of them there was, with the other two I think there was not.

Q. When next did you lose any stock?

A. November, 1885.

Q. Before or after you discovered tuberculosis in the herd?

A. Before we discovered it. The cow that I spoke of as coughing in the fall of 1885 was coughing at this time, November, when we lost those two young heifers, or slaughtered them, rather. These are two of the young heifers that

had stiff necks. We slaughtered one in November and one in December.

Q. Did you examine those two?

A. No, sir; any further than the others.

Q. What did you find with regard to the throats of those animals?

A. That the glands were somewhat swollen. That was all the trouble we discovered at the throat, but there was a tendency to carry the head to one side.

Q. Was there not some other appearance of disease about those cattle?

A. There was a reduction of flesh.

Q. Then the indication was that there was some other disease besides the swelling of the glands? You did not regard that as a trouble that would reduce the heifers to the condition where you were obliged to kill them?

A. I did not know how much they were troubled with that neck trouble.

Q. They were running sores?

A. No, sir. One of them lost flesh.

Q. Were their lungs examined?

A. They were not.

Q. You say only one of them lost flesh?

A. Only one of those slaughtered in the fall of 1885.

Q. Why did you slaughter the other one, if the trouble was simply an enlargement of the glands and she was in good condition?

A. From the fact that her neck was stiff as the other one's was, I feared it would result in the same way. She was not growing, was not thriving, but had not yet become poor as the other one had.

Q. Had you not called in any one at that time to make an examination?

A. Yes, sir. In the spring, at the time the Jersey heifer was slaughtered, I called upon the veterinarian in Bangor and gave him the condition of these animals. He thought it might have arisen from the cause I attributed it to, and told

me to apply iodine and treat them. I did so, and two of them, a heifer and a bull, seemed to recover under the treatment. The others did not, although we used it freely. In the fall he was called to the farm to see another cow, and saw these animals at that time. He then was of the same opinion that he was in the spring, that it arose from feeding from the high manger. That was while these two animals were in the barn.

Q. This was in November, 1885?

A. Yes, sir.

Q. How soon after that did you discover that there was tuberculosis in the herd?

A. In October or November, 1885, the cow Betsey was coughing slightly. The cough continued to increase during the winter, and she lost flesh and became so reduced that she was slaughtered, as we found her recovery was very doubtful. She lost ground very rapidly after she had the young calf. I think she was slaughtered the last of January. Her lungs were found to be,—the lower parts of them,—almost solid, like cheese; the upper parts of the lungs were full of bunches. I think the bunches were almost entirely confined to her lungs.

Q. Do you doubt these other cattle had the same disease?

A. I now think those heifers had the same disease, although their symptoms were different from the symptoms of the animals we had later affected.

EVENING SESSION.

TESTIMONY OF J. R. FARRINGTON.

Was on State College farm from April, 1872, to 1880. Lost from stock on the farm the following animals: A calf in April, 1872, with hoven or bloat; in 1875 a Short-horn bull (Napoleon). Symptoms, swelling in throat and suffocation. The swelling was mostly inside, not showing upon the out-

side to much extent. In 1877 Duchess of Lakeside was sick two weeks. The disease or distress seemed to be in stomach. Sold two cows, Susan and Dora, to Mr. Boardman in 1876. Know nothing of them since only by hearsay. Thought of the bull we lost when I heard of the outbreak of cattle disease at Orono. The two cows Dora and Susan were bred at the farm. Thought the disease of the bull might have been caused by a kick.

TESTIMONY OF LAMBERT SANDS.

Was a member of Governor's Council in March, 1886. Visited the Orono herd. The stock in new barn did not at first sight seem affected, though a little rough and thin for so well kept a herd. Those in the old stable were coughing and emaciated. Was there but once and by request of Governor Robie, to see what should be done about the cattle. Was present when it was decided to kill them. Cannot say how many cattle in each barn. There were not more than a dozen in the old or horse-barn. I cannot say as I should at that time have advised the investigation of the animals sold off the farm but since have thought it would have been a wise thing. Did not see any attempt on the part of the College to conceal anything in relation to the cattle sold from the farm. Would have had courage to have bought some of the cattle after the investigation. Cattle were coughing in the new barn but not continually.

TESTIMONY OF S. C. HATCH.

I was a member of Governor's Council in March, 1886, and visited the Orono State College farm, and after consultation at the house went to the new barn where very little symptoms of disease appeared. In the old barn there was much sign of disease. The cattle coughed and were rather thin. Went again in April to the farm, when we decided to have all the cattle slaughtered. There was, so far as I know, no effort made to inquire about

the stock sold off the farm. I was present when the cattle were slaughtered. The lungs of the cattle killed were filled with white masses. Can only explain why no effort was made to investigate the cattle sold by our want of familiarity with the disease. Don't know as the matter of authority to do it was questioned or mentioned. Should have favored such investigation after we had killed the herd. Mrs. Stetson wanted the College to pay her back the money she paid them for the cow and take back the cow. We told her we could do nothing for her and the College would not for fear of other calls of the same kind. I should have advised the College to buy up the cattle sold. There were no funds and we did not feel free to do it. The Kent bull was brought to the notice of the Governor. Dr. Bailey has since bought and killed him.

Dr. Bailey said when he first called he could not discover any disease till he saw the frozen carcass of a dead cow. Dr. B. said, Think you are more scared than hurt, till he saw said carcass.

Mr. Fernald heard part of this conversation. Would not say if Dr. Bailey appeared as a crank. Sold the bull with enlarged neck to Mr. Sutton of Orono. He killed the bull thinking he had a stiff neck. Examined the bull's lung. Found no sure signs of disease. Thought at first the neck had enlargement. Dr. B. found no signs of disease till he saw the dead cow.

President FERNALD said they ran in debt for stock and improvement, increasing both the debt and assets of the farm and one would offset the other at any time till the State destroyed the stock, and so now ask the State to appropriate money to pay this debt in consequence. Doubt if the trustees had a technical right to purchase the stock.

Mr. GOWELL, resuming, said:

The money to buy the cattle did not come from the State by appropriation. The farm Committee communicates to me the wishes of the trustees. No one except Mr. Gilbert has helped me buy cattle. Other moneys besides that I let them have went into purchasing fancy stock. Trustees loaned $1000

to buy stock. The College has owed me $3400 or $3600. Has been reduced to $2600. Should estimate that $2500 might now be owed towards the stock.

Don't feel it necessary to have trustees called on. Dr. Wilde gave no hint of contagious disease. Can't say if any disease existed or has in herds from which we have purchased.

I have looked after the accounts of the farm. Have that $2504.25 was paid for cattle bought by myself and Mr. Gilbert by order of the trustees. The College owes me $2600, or so. The cash accounts of the College also show it. I did not let the College have it all at one time. The largest sum I let them have at any one time was $225. The smallest sum $1.50. I cannot say how much of the money owed me by the College went to pay for the cattle destroyed. A part of it did. Four hundred dollars was paid by me in the purchase of these cattle. Can't say if there are others to whom the College owes money used in the purchase of the cattle which were destroyed. I called Dr. Wilde four times to see such cattle. I paid him from the farm income. Cannot give an opinion about the stiff-necked cattle. They had disease enough so that I called Dr. Wilde. Did not know that Dr. Bailey could be had without expense. Called Dr. Wilde. Did not call Dr. Bailey. I have no doubt that Rose 8th had this disease. She left Short-horn 3 register. Cannot say if I agree with Dr. Bailey in his report of individual cases of the slaughtered animals. Seven had been killed before the general slaughter. Cannot say I think the stiff-necked ones had tuberculosis. Called Dr. Wilde four times. Do not know that a herd from which we have purchased cattle has had tuberculosis. Nan Lizzie was there at the time of the slaughter. The dams in the herd were as reported by Dr. Bailey except in one instance. The Kent bull was sold from the farm to Mr. Kent of Bucksport. Two other bulls sold had the same sire. Had correspondence with Mr. Kent. Advised him to retain and use the bull after the disease at Orono broke out. Princess Alba was bad when killed. None of her offspring in existence. Soon after Jan., 1886, three

others began to cough and were removed to the other barn for treatment. They were kept there till last of February. Then nearly all the cattle began to cough. The old cow Pet was soon killed and lungs found filled with bunches and ulcers; the glands of throat also affected. Profs. Balentine and Jordan were present at the examination of this animal. Immediately after this the State was notified of the condition of the herd. Princess Alba and Alice were slaughtered March 12. The whole herd slaughtered April 21 and 22, 1886. Fourteen bulls were sold off farm as shown by the books.

(The tabulated statement appended to this, furnished by witness, is a part of his testimony.)

I received directions by letter in regard to the quarantine of the cattle. Had directions to separate them and keep them separate.

Mr. Davis told me he bought a cow from the farm in 1880, and when killed he found her lungs badly diseased. In 1882 a cow died and I think it may be she had this disease. When Dr. Bailey arrived and was examining Princess Alba, and had completed it, I asked him what he found, and his reply was, "I shall have to see more than I have seen to condemn any of this herd." But after he examined one of the slaughtered animals he changed his opinion. He did not say in his first examination that there was tuberculosis, but in an hour or two he decided that it was tuberculosis. Think his decision a very correct one. Think the faculty had been reading up on tuberculosis for a few days before Dr. Bailey came.

History of Males Sold from Maine State College Farm.

Date of Sale.	Purchaser.	Residence.	Date of Birth.	Sire.	Dam.	Price.
Oct. 24, 1882,	W. G. Chamberlain, [for other party.]	West Lebanon,	Aug. 5, 1882,	Reed's Bull, No.——, M. S. J. H.,	Butter Girl, No. 502, M. S J. H.,	$15 00
Feb. 16, 1883,	Bangor City—Farm	Bangor,	Feb. 3, 1883,	Samuel, No.——, M. S. J. H ,	Helen Hart, No. 22460, R. J. C. C.,	6 00
May 22, 1883,	Mr. Morrill,	Alton,	May 15. 1883,	Whip 2d, No. 350, M. S. J. H.,	Juno, No 688, M. S. J. H.,	6 00
Aug. 20, 1883,	Mr. Atkins,	Exeter,	July 13, 1883,	Regulus, No. 69465, A. S. H. H. B.,	Princess,	15 00
March 6, 1884,	J. C. Green,	Bangor,	Feb. 25, 1884,	Silver Blanket, No. 13196, A. J. C. C.,	Helen Hart, No. 22460, A. J. C. C.,	10 00
April 30, 1884,	Mr. Comins,	Eddington,	April 27, 1884,	Regulus (see above),	Pet,	3 00
Aug. 6, 1884,	M. D. Barnes,	Lee,	Dec. 29, 1884,	Silver Blanket, No. 13196, A. J. C. C.,	Tinney, No. 18015, A. J. C. C.,	35 00
Sept. 24, 1884,	E. C. Mallet,	Topsham,	Sept 6, 1884,	Silver Blanket, " "	Highland Belle 2d, No. 683, M S. J. H.,	10 00
Oct. 24, 1884,	E. G. Brimmer,	No. Mariaville,	June 3, 1883,	Regulus (see above),	Tulip 4th, Vol. 15, A. S. H. H. Book,	65 00
Dec. 6, 1884,	N P. Haskell,	Orono,	(Bred	by Blanchard Brothers, Cumberland,	Maine.)	100 00
May 13, 1885,	W. Hale & Son,	Brewer,	June 18, 1884,	Ginx of Cream Brook, No. 6415, A J. C. C.,	Mildred, No 969, M. S. J. H.,	35 00
May 14, 1885,	R. R. Blackstone,	Alton, (?)	March 30, 1885,	Ginx of Cream Brook, " "	Juno, No. 688, M. S J. H.,	15 00
Sept. 4, 1885,	S. N. Kent,	Bucksport,	May 11, 1885,	Ginx of Cream Brook, " "	Princess Alba, No. 596, M. S. J. H.,	20 00
Nov. 27, 1885,	A. B. Sutton,	Orono,	April 8, 1885,	Syringa's Lenox, No. 5499, A. J. C. C.,	Belle of West Meadows, No. 4927, A. J. C. C.,	30 00
						$365 00

History of Females Sold from Maine State College Farm.

Date of Sale.	Purchaser.	Residence.	Date of Birth.	Sire.	Dam.		Price.
Nov. 10, 1883,	J. C. Green,	Bangor,				Name, Princess—purchased by College in 1879,	$60 00
Nov. 10, 1883,	J. C. Green,	"				Name, Rockaway— " " " 1882,	60 00
Mar. 19, 1884,	N. Beamis,	Levant,	Mar. 19, 1884,	Ginx of Cream Brook,	Lulu,	Name, Juno,	40 00
Mar. 19, 1884,	N. Beamis,	"	Nov. 24, 1882,	Samuel,	Dotty Clover,	Name, Daisy,	40 00
Mar. 25. 1884,	R. Sproul,	Veazie,	Sept. 2, 1882,	Rogers' Bull,	Clover,	Name, Hattie,	25 00
Mar. 11, 1884,	W. Balentine & Son	Waterville,				Cow Lily of Valley and calf, (Cow bred in Rockland.)	100 00
Jan. 7, 1886.	Mrs. I. Stetson,	Bangor,				Cow Juno, No. 688, M. S. J. H., (Bred by B. F. Briggs of Auburn.)	125 00
						Total,	$815 00
							450 00
							$365 00

TESTIMONY OF G. W. McALISTER.

Municipal officer of Bucksport. Was called upon by Mr. Kent in regard to his bull. In March, 1886, called on me to write to the Superintendent of College farm about the matter. Thought the bull not fit for breeding purposes. He said he bought it for that purpose. Mr. Gowell advised the keeping and use of the bull. Mr. Gilbert wrote to him to use the bull, but I still advised him not to use him, as it might result in the slaughtering of his herd and perhaps others in town.

In July he notified me he had a diseased bull and I at once notified Dr. Bailey. Dr. B. advised Mr. Kent not to use the bull, decidedly. Dr. B. would not order the destruction of the bull as he had no knowledge of his coming from diseased stock. Got a letter later that Dr. B. was ill at home. Later Dr. B. bought the bull for $20 and I agreed to bear half the expense. The bull was a fine looking animal. Was not present when the bull was killed and the lungs sent to Dr. Bailey. Bull was not used at all. Kept the matter quiet, not conferring with the neighbors. Am a carriage-maker; worked at blacksmithing 20 years.

Had conversation with Mr. Gilbert on train on liability of the danger of the spread of this disease. He said that he had no reason to change his mind, and if the Kent bull showed no signs of disease he saw no reasons to fear to use him. He asked me if Dr. Bailey detected disease in the bull. I told him he could not.

TESTIMONY OF T. G. RICH.

Had charge College farm from 1878 to 1881. Lost 2 head of cattle, in 1880 a young cow. We called it dropsy; refused food and drink; bloated up; sick 5 or 6 weeks. Had some cough; grew thin; was full of water. Saw no signs of disease. In 1881 another cow 4 years old, was sick. Sent a man to kill her. He said he found lungs rotten. Was out to pasture; was barren. Don't know what came of her stock-calves. Sold one to Charles Buffum in 1878.

Died or was killed next year; examined by the butcher. Buffum sold her to him. Sold Mr. Davis a cow for beef, in 1880. She was killed and her lungs found affected. Did not see the lungs of any of these. Maggie 3d had a cough some time before I turned her over to Mr. Gowell. Sold one cow to Mr. King of Orono which would not breed. Sold her for $20. Was told she cost $250.

THURSDAY EVENING, Feb. 24th, 1887.

TESTIMONY OF LYNDON OAK.

I am president of the board of trustees. Have never been on the farm committee. I was present on March 12th when Dr. Bailey and Mr. Gilbert of the Cattle Commission were there to make a second examination, as I understood it at the time, of the condition of that stock. I noticed its condition myself. There were some 8 cows tied by themselves in the horse stable. Each one of that number gave unmistakable evidence of serious disease. The symptoms were nothing with which I was acquainted. I am not very familiar with the sickness incident to stock. I was not present when the animals were slaughtered. I know nothing of the condition in which they were found. In consequence of being frequently short of funds for the Institution, I urged Mr. Farrington, when he was on the farm, to increase his herd of dairy stock, which would give a sort of perpetual revenue. Mr. Gilbert, as a member of the board, first made the suggestion to me. He thought it would be good policy for the College to do more at the dairying business and realize more from it. We had no money to buy cattle at that time, which was in '82, or about that time. I will now state what I understand to be the facts about the purchase of this herd of cattle. In conversation with members of the board of trustees, among whom were Mr. Gilbert and others, and Mr. Gowell after he came onto the farm, we were confident that

if we got a herd of Jersey cows and used them for dairying purposes we could accomplish two very important purposes. And one was that we should have a perpetual revenue to use for farm purposes, and at the same time we should be instructing the students in practical dairying, which I regard as one of the most important agricultural interests of the State at this time, and did at that time. But we hadn't the money to make those purchases with. Think that was in '82, or about that time. We were getting ready for Mr. Gowell to enter upon that policy. We had made no application for any appropriation for that special purpose, but we had made applications for purposes often enough to know that we had got to economize and manage in some way to work that farm along without special appropriation from the State, to any great extent, to support it. And we did as many a farmer does; we made the best provisions we could to make the farm pay expenses and pay something over, and in a short time we reasoned that we could pay for that herd of stock, and that the stock, with what we paid for it along, would be amply sufficient in case of any emergency to pay the whole debt and leave a surplus besides, and the result, so far as we tried the experiment, proved the soundness of our conclusions in regard to this matter, and had it not been for that most unfortunate occurrence at the College by which it became necessary to destroy that whole herd, one of the finest I have ever seen anywhere, I think we should have come out all right; and if we could have that stock replaced now I do not think we should ever be under the necessity of calling upon the legislature for a single cent to be expended for farm purposes. I cannot tell the amount of the indebtedness incurred for the cattle. Authority to hire the money was given by the trustees. The trustees had no authority to hire it other than necessity. They delegated the power to hire it to the farm committee, consisting of Mr. Gilbert, Mr. Thing, and Mr. Wingate of Bangor. I think the records of the trustees show the vote by which that authority was given. No special report was made to the trustees by that committee of their

doings. We asked them from time to time about it. The records of the trustees do not show any communication from that committee as to what was done by them nor how much money was hired under the general power. I do not know what security was given to the people of whom they hired. None was given to my knowledge. The trustees loaned to the committee $1000 of the funds of the College which we happened to have at that time at interest at 4 per cent. No security was given or taken when that thousand dollars was passed over. The fact was certified to the treasurer. The farm has paid 4 per cent. The fact of this loan is only known by a charge on the books. In the report of the trustees to the first legislature which met after the farm committee hired this amount, the only mention of the one thousand dollar item is in the tabulated statement of the amount due from the College farm. I do not know of any report to the legislature by anybody as to the balance of the sum which was hired for the purpose of the purchase of this stock. The same report as to the thousand dollars was made to the legislature of '85. We did not ask that legislature to make an appropriation for the payment of that debt. We did not call their attention in any way to the fact that the debt existed. I do not think it was generally known prior to the destruction of the herd that it had been bought on credit. I do not know that any interest has been paid to Mr. Gowell for the amount hired of him. I had no personal knowledge of those diseased cattle in the years prior to '86. I remember on one occasion, at a meeting of the trustees, that Mr. Farrington said he was sorry to say he had lost a cow. I cannot say whether he ever made any report, but I have known the fact that there have been some few lost. I cannot say from whom I knew it. I do not know of any definite report that was made to us of the various deaths in the years prior to '86. My recollection is that there has been a full report made to the legislature by the farm superintendent.

TESTIMONY OF E. E. PARKHURST.

I am a farmer and reside at Presque Isle. I have been one of the trustees of the State College 2 or 2 1-2 years. I have attended every meeting of the trustees since my appointment except the first; I am not certain whether I attended the first meeting after my appointment. I was at the farm 3 or 4 times after my appointment up to the time I was called there when the herd was slaughtered. I was called there this last summer. I was called there and arrived either Tuesday or Wednesday morning, and the cattle were slaughtered the next day, or half of them were. I examined the herd at that time. They were then separate. The herd in the new barn was in good condition, as good as I ever saw it in, I think; but there were 6 or 8 animals that had been separated and taken into the horse stable, that were not looking so well, looking perhaps about as well as our ordinary farm stock does through the country. I heard them cough. The indications at that time did not show any disease I was acquainted with. I probably would not have known they were diseased by looking at them. I noticed that the cattle in the other barn coughed. I was there the day before they were slaughtered and in the barn 3 or 4 times, and I heard them cough every time. From the light I got from examining the cattle I came to the conclusion it was best to slaughter the herd. I was in doubt as to a few of them in which they could not discover the disease. I think they were all killed. I was not there when they were all slaughtered. I examined some after they were slaughtered and saw indications of tuberculosis. Think I looked at the lungs of every animal that was slaughtered that day. I had no acquaintance with that disease before that time. Should say I was notified of the disease about a month before the slaughter. I met Mr. Burleigh there the day of the slaughter. I do not want to state this as a fact, but my impression is that Mr. Burleigh said to me like this: Mr. Parkhurst, I hope this thing will be thoroughly investigated—the cause of this disease and

everything connected with it shown up. And I agreed with him in that. I now think it would have been wise to collect and slaughter the eleven bulls that have been mentioned here as having gone out from the farm in the time previous to that. I should not want to breed from them. I do not recollect that Mr. Burleigh said or intimated at that time that he thought there was any provision by which the College could buy in those bulls. I think no one intimated that it was the duty of the College to buy up those bulls. I understood that the Cattle Commissioners had the matter in charge at that time. I did not understand that the Governor and Council had any authority in the matter. Part of the Council were there and I think advising. I did not hear them advise or recommend. I understood they were there for that purpose. When I was summoned there I supposed the trustees would have something to do with it. After arriving there I learned better than that. I found that the whole thing was in the hands of the Cattle Commissioners and that the trustees were powerless. I went home that night and was not there the second day when they finished slaughtering. I understood that the trustees had no right to interfere after the Cattle Commissioners had taken it in hand. I did not understand that the trustees had any right to go and purchase back those bulls.

TESTIMONY OF N. P. HASKELL.

Reside in Orono. The farm I work adjoins the College farm. I knew nothing of the existence of disease in the herd at the College farm until after the matter came out before the public, and even at that time on going up there I should not have detected any signs of it. I was present when a part of the cattle were killed the first day. I examined every animal that was killed up to the time I left. Part of them showed unmistakable evidence of being badly diseased; others I should not have detected. There were little bunches, tubercles, as they call them, distributed through different

parts of the system, in the lungs of a great many, some very large and some very small. Think I noticed them as large as my two fists would be and containing matter of some sort. Those that I saw opened did not have large cavities. The tubercles seemed to be quite thick. I noticed them adhering to the ribs of animals in quite a number of cases. I noticed some indications of the disease in all of the animals, but do not think I should have detected it in some unless my attention was particularly called to it. I was present generally with Dr. Bailey and Dr. Michener, who made the examination, and noticed things that I should not have if I had been alone. I saw some of the herd slaughtered that were in the new barn, the herd that appeared and looked the best. I own Jersey cattle. I know about the feed and treatment of the cattle at the College farm. I should say that the care of the cattle had been the very best and the feed had been such as would be warranted.

Q. What was the actual condition of the cattle a month before the disease was known, as you saw them?

A. I called the cattle in extra condition. They were much fleshier than the ordinary farm stock. There was nothing about them to me a month before the disease broke out to indicate that there was any disease among them. There never has been any disease in my own herd. My barn is about 3-4 of a mile from the College barn, in a direct line. The pastures join each other and I think quite likely that the cattle may have been back and forth, but I do not know in regard to that. A good many of mine were Jerseys—Jerseys and high grades. To mature cows 5 years old in full flow of milk, I will say 4 weeks after dropping of calf, I fed generally about 4 quarts of Indian meal and 4 quarts of shorts a day. I let my cows run out in the pasture, but there was no feed to amount to anything and I was obliged to feed in the barn. I think the College herd ran out where they could get the air. I have no knowledge of the disease in my herd. The symptoms in these cattle were nothing I had ever seen before or was acquainted with. Since that I have seen the

lungs of an animal slaughtered, diseased beyond a doubt. The animal belonged to a gentleman in Bangor. Think that animal did not in any way come from the College herd. I do not think I would breed from those bulls that have gone out. I think it is policy for some one to kill them. I have taken no precaution to guard my herd from contagion; no different from my every-day care. The cattle had not been turned out that spring. As far as I am concerned, I would not breed from an animal that was diseased, or a descendant of one that was diseased, if I knew it. If they belonged to me and I knew they were diseased I would kill them in a moment.

TESTIMONY OF A. M. SHAW.

I was one of the farm hands and occasionally fed these animals. In the morning they had their fodder of hay. After they had eaten that they had their ration of grain. Their grain for a day's ration was a quart of shorts, a quart of Indian meal and a quart of cotton seed meal for matured cows; young cows that were in milk had a quart of shorts with a pint of Indian meal and a pint of cotton seed. That is what they give twice a day. That would be two quarts of each for mature cows. Hay was fed to them 3 times a day. They were watered twice a day. In the summer time they were turned out of the barn every day and ran in the pasture the same as other cattle, and put up nights in the barn. They were occasionally turned out in the winter season. They were turned out twice a day to drink and put up after drinking. Probably no herd in the State was kept cleaner than they were. The barn was well ventilated. I never saw any appearance of disease about the cattle up to a month before they were slaughtered. The disease appeared to me like a sudden outbreak. It broke out the first of the winter, I could not tell just the time. I think snow was on the ground when the symptoms first appeared. I had not noticed any cough among the cattle earlier than that except in the cow

Betsey that has been spoken of. Those others began to cough a few weeks after that. I have been on the place 4 years last June. I first noticed that the cow Betsey coughed sometime in the fall of '85.

TESTIMONY OF ARTHUR HARRIS.

I had the care of this stock and tended it about 2 years. I had charge of it when the disease broke out. I did not discover any trouble with the stock any length of time prior to the outbreak. To the oldest cows we fed a quart of bran and a quart of cotton seed and a quart of meal twice a day. I fed it from a list prepared by Mr. Gowell. In connection with this grain I fed to each cow about 20 pounds of hay a day. The animals were turned to pasture in the summer and put in the barn at night. The young stock was turned out in the yard for exercise in fine weather in the winter. Occasionally other stock was turned out during the winter. They were turned out to water twice a day. We fed from the barn night and morning during the summer. The pasture did not afford sufficient feed. In the winter time the stock was watered in the stable. Once in a while, in very fine weather in winter the older stock was turned out. I noticed this coughing in the cow Betsey at the time Mr. Shaw spoke of, and that is all I noticed. This is the first notice I had of it. That was in the fall of '85. This cow that coughed began to lose some flesh before the outbreak of the disease. The next indication of disease was in the cow Pet. I do not remember how soon that was. I do not remember how soon another was taken.

TESTIMONY OF GEORGE A. BAILEY.

Q. Are you the Secretary of the Cattle Commission?

A. I was when I was on the Board.

Q. Your report of this has been put in print?

A. It has.

Q. You were called to the State College farm at what time?

A. 5th day of March.

Q. Who invited you to come there?

A. Z. A. Gilbert.

Q. Will you state to the committee what condition you found the stock in generally?

A. Fair condition, good condition.

Q. Will you state to the committee what the sanitary conditions were in regard to the care of the stock, the condition of the barn?

A. As near perfect as I ever saw one, I think.

Q. Will you state to the committee what was the relative character of the herd of stock, setting aside the disease?

A. It was a high class of cattle in as fine appearance as I have ever seen in Maine.

Q. Whether or not you have heard the testimony as to the feed of these cattle?

A. I have.

Q. Whether or not in your judgment, as a veterinary surgeon, you think that the feed of these cattle had anything whatever to do with the origin or development of the disease tuberculosis?

A. I do not in the slightest.

Q. Whether or not from your examination of these cattle and what you know of the development of this disease there was anything to excite alarm in the common farmer so as to summon a cattle commission prior to the time that the disease broke out?

A. The 6th of March, do you mean? Do you call that the time?

Q. I do not know exactly what the time is. The time it broke out in their cattle, then, the first one?

A. Of course I do not know when it broke out in their cattle, of my own knowledge. The 6th of March was my first visit. Of course I have no knowledge of when they showed the first symptoms of the disease.

Q. You have heard the symptoms from Shaw?

A. Yes.

Q. What would you say as to the ordinary knowledge of a common farmer, or even a dairyman, as to summoning a commission on contagion diseases sooner than they did, from your knowledge of it?

A. I should say that it ought to have been done sooner than my call of the 6th of March, from the appearance of some members of the herd.

Q. And from your knowledge of how the disease has developed?

A. I do not know of my own knowledge how it has developed, only from what I hear of it—no personal knowledge. On March 6th, when I visited the herd, some of those individual cases were so poor that it must have been patent to somebody, long before that, that there was trouble there.

Q. You have understood what the facts were in regard to the symptoms prior to that, have you?

A. Yes, sir.

Q. You understand that all the symptoms there were the cough of the cow Betsey?

A. I do not quite understand it that way.

Q. How do you?

A. Several besides her that had shown symptoms; they had become emaciated and died, and been slaughtered, and coughed —several besides Betsey. Pet had been killed ten days before I arrived; prominent symptoms of tuberculosis.

Q. From what you heard and understood, were there any symptoms in these cattle until the disease developed to show itself, as you understand it did, that would lead a man to suppose there was a fatal disease lingering in this herd?

A. From what I heard we know now that they recognized it a long time before in some individual cases.

Q. Who recognized it?

A. Mr. Gowell, himself, as long ago as 1882, in Rose 8th. I do not know, of course, when she first showed it.

Q. Was there anything else about the rest of the herd other than this isolated case that would indicate it was a disease of the herd?

A. The *personnel* of that herd when I was called to see it was as unsuspicious as any herd I ever saw that finally proved to be diseased. They were as fine looking and as well kept and cared for as any herd I ever visited.

Q. You went there in your official capacity, did you?

A. I did, the 6th of March.

Q. These cattle were ordered quarantined?

A Immediately.

Q. Did you take charge of them the same as though they belonged to an individual?

A. We issued a written notice to the superintendent and put them in quarantine at once.

Q. Treated them as though they had been the property of any farmer?

A. Yes, sir.

Q. Pursued no different course?

A. No, sir.

Q. Did you issue any orders to the trustees in regard to them?

A. We did not, for Mr. Gilbert was a member of the trustees himself. He was also chairman of our board, *ex-officio*.

Q. Do I understand you that the Cattle Commissioners had full charge of this herd of cattle from the time they went there?

A. Yes, sir, they had full power to do so, under the law.

Q. Were you advised by the Governor and Council?

A. We advised with them in relation to it several times.

Q. Now this herd was killed by your advice, was it?

A. Yes, sir.

Q. Under your authority?

A. It was.

Q. Will you state whether there was any talk at that time about following up the disease at that time in other cattle?

A. Not at that time.

Q. I want to know whether there was anything said about following up the disease in the progeny of the cattle at this time?

A. I do not think there was. The statement was made to me that the bull calves had been sold and the heifers had been retained.

Q. What I want to get at is whether the trustees were notified by you that they must get back the bulls?

A. Not at all. The first thing in order was the disposition of that herd. Nothing was said by the Commissioners that the trustees must go round and get the rest of the bulls.

(The examination of Dr. Bailey at this point was temporarily suspended.)

TESTIMONY OF WILLIAM B. FERGUSON.

I was a member of the Cattle Commission up to Sept. 25th. I reside in Brewer and am a farmer. I received a letter from Mr. Gilbert about the middle of March. I suppose that letter is in Monroe, where I lived before moving to Brewer. He wrote me about the middle of March saying that he supposed I had learned through the papers then that there was difficulty with the herd of cattle at Orono. And he said when I was in Bangor I had better, at my convenience, go up, or he would like to have me go up and look them over. That is the purport of the letter. I went up alone the 18th of March and examined the cattle. I stopped over night and was there a part of two days, the 18th and 19th, and went back to Monroe. I saw the herd. The new barn contained the most of them, and as far as looks went they were in good condition. I noticed a cough about them. I knew enough about cattle to know that that cough was not right. The cough itself would be strange for well animals. I do not think well animals are afflicted with a cough. I had never before noticed creatures with a cough such as I saw there. The cough was all I should have noticed about the cattle in the new barn, and it was evident to me that something wrong produced it. They had a bad cough and were badly emaciated. I had never seen those symptoms in cattle before, that I am aware of, not of that disease. No one was with me except Mr. Gowell. From every appearance upon examination

I was satisfied beyond the possibility of a doubt that those in the smaller barn were badly diseased. After I returned from there I wrote to Mr. Gilbert that I had been up and I thought the quicker those isolated cattle were killed the better. I received a notice from Mr. Gilbert about the time of the slaughter, immediately before, saying that a veterinary, Michener his name is, was coming there, and he would like to have me there also; that he and Dr. Bailey should be there. I did not get the notice to enable me to be there sooner than the second day of the slaughter, in the morning, the 23d, I think. Probably half of them were killed after I got there. I examined those animals and saw them dissected. I also examined the lungs of several killed the day before. The worst cases were killed the first day, and it was surprising to me that they could live in the condition in which I found their lungs. I said to Mr. Gilbert those cattle better be killed, the sooner the better. The cattle killed the second day showed different degrees of the disease. As far as I know they were all diseased. A few days before the 20th of last October I received a communication from Mr. Gilbert saying he would like to have me meet him the 20th of October in Portland, at a meeting of the board. I went. After I got there I learned from Dr. Bailey that our commissions had expired, his and mine. They had expired a month before that meeting and there had been no re-appointment at that time. I had understood that Dr. Bailey was unwell and it was desirable to meet at his house. I and Mr. Gilbert and Mr. Bell met at the City Hotel. We had some conversation there principally in regard to the extermination of those bulls that had gone out from the College farm. I had not seen the Commissioners before since April. We went over to Dr. Bailey's house, and Dr. Bailey and Mr. Gilbert had a lively argument about following up those bulls and having them destroyed. Dr. Bailey contended that they should be looked after and destroyed and Mr. Gilbert objected to it, saying that there was no proof that they were diseased, and that the law gave no authority. I always received my notice to meet

with the Commissioners for any purpose from Mr. Gilbert. In one or two cases I acted without notice from anybody except the municipal officers. Dr. Bailey was chosen secretary of the board and I understood his duties to be to keep a record of our doings, the same as the secretary of any other board.

Q. Did you come to any conclusion at Portland as to what was best to do with the stock that was out?

A. I was out myself then by the expiration of my commission, and of course I was not very officious. Mr. Gilbert is a member of the board *ex-officio* and needs no appointment. Subsequent to our first appointment another was added to the Commission, making four on the board. When I got to Portland on Oct. 20th I had a consultation in Mr. Gilbert's room at the City Hotel, with Mr. Gilbert and Mr. Bell, before we went to Dr. Bailey's house. Mr. Gilbert invited us to his room. Mr. Gilbert said he wanted to prepare our minds for something that we should get from Dr. Bailey; he wanted to prepare our minds for something that Dr. Bailey was crazy on, to use his phrase. He said he was crazy on those outstanding bulls. We conversed in his room 30 minutes in regard to that, then we went to Dr. Bailey's house and talked the matter over there. I was of the opinion that those bulls should have been before taken care of. I agreed with Dr. Bailey in that particular and have signed the report which he has made to the legislature. Mr. Bell, the other Commissioner, also agreed in the propriety of the destruction of the bulls and also signed the report. I saw the Kent bull in Bucksport on Oct. 22d. Dr. Bailey said in Portland that inasmuch as I lived near by I had better go down and see the bull and the party who owned him. Think the matter of that bull was talked over on the 20th of October. I examined that bull the 22d. He was in fair condition as to flesh, but not fleshy enough for beef. He had a staring coat and I did not like the expression of his countenance, things that I should not call just right. I have had considerable to do with cattle

and horses and I can judge as quickly of the healthfulness or unhealthfulness by the looks of their eyes as by most anything. I told Kent that I should not use the bull. At our meeting on the 20th of October, Mr. Gilbert said there was no evidence that the bull was diseased that he knew of. Dr. Bailey stated at that time that the bull was out of one of the worst diseased cows that were killed in the previous April. I understood that Mr. Gilbert was opposed to having anything to do with the Kent bull. I saw Mr. Gilbert here at the opening of the legislature, and I understood him to say that Dr. Bailey had no business to go down to Bucksport when he did to make the examination. I think he disputed my right to fees for going down there on the same errand. I understood him to say that the board had nothing whatever to do with the Kent bull. I asked him at that time if he was not going to make a report, and I think he said he didn't know. I spoke to him about it here in this room, the first day of the session of the legislature. It was my opinion and advice in Portland that those bulls should be taken in charge and killed; I thought they had better not be propagating their kind.

Q. You thought it was Mr. Gilbert's duty as Cattle Commissioner to gather them up?

A. I haven't said anything about that.

Q. What is your opinion?

A. I think it was more the duty of the trustees of the College than anybody else's. I knew bulls were sold from the farm, but I knew nothing about them. The first I knew that the bulls had been sold from the farm was when I was in Portland. I agreed in Portland that the bulls had better be called in. Mr. Bell and Mr. Gilbert discussed considerably in Portland the question of whether or not there was a law allowing or providing for calling in the bulls. I might have expressed an opinion that the Commissioners might not have authority to take animals and kill them unless there was some evidence of disease. I do not understand that we have a law authorizing the Cattle Commissioners to go out and destroy an animal after it has been pronounced sound by proper authori-

ties. I understand there is law by which the trustees could call these cattle in—the law that they themselves do business there by. When I saw Kent he was very anxious to get rid of his bull.

Q. Unless there was evidence of disease in these cattle when they were sold, would you consider that the College was under any more obligation to buy them back than an individual would be?

A. Yes; I should, those animals, because they sold them.

Q. If you had sold an animal that was sound and you knew of no disease upon him or in the herd, and the disease afterwards developed in the herd and your cattle were destroyed, would you consider you were obliged to go and buy the cattle you had sold in a sound condition and that were still in sound condition?

A. If that disease could be traced back to the breeding animal I should consider I was under both moral and legal obligation to take him back.

Q. But that question as to whether it is traceable back is an open question, isn't it?

A. Perhaps so. I do not understand it is so among experts. I understand by veterinary authorities that it is hereditary.

Q. Do you understand that there is any certainty of how this disease developed in this herd of cattle at Orono?

A. By contagion and by heredity both. I understand there is no other way by which it can be propagated. I understand that these cattle were brought from different herds. Some got it probably by contagion, others by heredity.

Q. Then would you search out the bulls where there was a hereditary tendency and leave those where the dam died from contagion? How would you distinguish there?

A. I should say that the strong probability was that those bulls were unsound and unsafe from hereditary tendencies.

Q. We will say here is a cow brought into the herd at the College; that cow drops a bull one year prior to this contagion; that bull is sold at three months old and goes out. Afterwards that cow takes this contagion from the rest of the

cattle and dies. Do you think the College is under any moral legal obligation to call in that bull?

A. Perhaps not. If there is no suspicion of the bull I do not know any reason why they should take him back. But these bulls bred from cows diseased while they were carrying the calves I should say the College was under obligation to take back.

Q. As matter of fact, is there any certainty that any of these cows were diseased when they carried these calves four years ago?

A. I could not tell that. I understand that the Kent bull was really diseased. Dr. Bailey and Dr. Michener are my authority.

TESTIMONY OF Z. A. GILBERT.

You have alluded here to two reports of the Cattle Commissioners. Allow me to say in connection with this that the report you have spoken of as a minority report is a record of the doings of the Commission, required under the law, for the two years ending the 10th of January of this year. What you have designated as the majority report does not purport to cover the work of the board, but simply one feature of that work, which is the herd at the State College.

By Mr. Libby:

Q. What connection are you of Mr. Gowell, I mean what relation?

A. I did not know that I was related to him. I am not related to him. You mean by kin?

Q. Yes. Is Mr. Gowell connected in any way with you by marriage. Are you any connection of his in any way?

A. In no way, shape or manner that I know of.

Q. Then you say Mr. Gowell is not your nephew?

A. He is not my nephew.

By Mr. Rich:

Q. Have you got your report made up for the last 2 years?

A. That report was made up and presented to the legislature about the 12th or 15th of January. I am unable to state the date that it was laid on your table.

Mr. Libby: The report has been distributed here.

Mr. Rich: I have not received one.

Witness: My report was made up from *data* kept by Dr. Bailey and furnished to me for the purpose of making up my report, covering every item of our doings for the two years required by the law—every action of the board during that time. The *data* were furnished by Dr. Bailey.

Dr. Bailey: We agreed in our reports, as I understand it, clear up to the matter of the Kent bull.

By Mr. Cornish:

Q. Have you any statement you wish to make to the committee before any questions are asked?

A. No, sir.

Q. Very well. Did you receive an order from the legislature to make and file your report?

A. I did.

Q. And you hadn't filed it at that time?

A. It was in the hands of the printers, in preparation for presentation, at the time the order was passed through the legislature.

Q. What time was the order passed through the legislature?

A. I cannot tell you. The date of the order is in my valise at the house.

Q. It was not prepared and filed on or before January 10th, as required by the statute?

A. It was not.

Q. You speak of that as a record of your doings. Did you ask any of your associates to sign that with you?

A. Yes.

Q. Which ones?

A. Mr. Bell, the only associate I had at that time.

Q. Did Mr. Bell refuse to sign it?

A. He did.

Q. On what ground?

A. I was unable to find out.

Q. Did that conversation you had with him in regard to signing the report take place in the station at Woodford's?

A. No, on the platform.

Q. Well, at the station?

A. At the station.

Q. Did you ever ask him at any other time than that?

A. I do not recollect that I did.

Q. When did you first know of the existence of this disease, or have any suspicions of the existence of it at the State College?

A. I haven't the date. It was about the time of that fearful blow and blockade on the railroads last winter, the last days of February, I think.

Q. That was the first suspicion you had of it?

A. Yes, sir.

Q. Have you brought to the committee the letters in your possession from the other members of your board? Have you them here?

A. I have the letters of Dr. Bailey.

Q. They are all here, are they?

A. In relation to the cattle at the College?

Q. Yes. I mean in relation to this matter now being investigated. Those letters are here?

A. They are here.

Q. Have you the correspondence with the other members of your board?

A. I haven't. I haven't been requested to bring papers in here by any party whatever.

Q. But you knew the terms of the order under which the committee is acting?

A. I read the order, yes, sir.

Q. And assisted in making up the list of names of persons to be summoned?

A. I suggested names of parties whom I thought it would be well to summon.

Q. Now you say your suspicions were first aroused about the first of March?

A. No, I did not say so.

Q. When was it?

A. I cannot fix the time. It was about the time of that blockade. That was the first of March or the last of February.

Q. Prior to that time you had no suspicion of it?

A. None whatever.

Q. Had you never had a suspicion of the disease in portions of the State prior to that time?

A. I have been notified of disease in different portions of the State probably every year that I have been Secretary of the Board of Agriculture, and some years many times, in various sections of the State.

Q. Of tuberculosis?

A. Of contagious diseases.

Q. Had you prior to that, or within a few months prior to that, any notice of tuberculosis existing in any other section of the State?

A. No.

Q. Not in any other herd of cattle?

A. No.

Q. Had you within a few months any knowledge or suspicion of any contagious disease in any herd of cattle? I mean, prior to this outbreak, the first of March, had you received any knowledge or information as to the outbreak of any contagious disease in any herd of cattle in the State?

A. I could not answer that question. I presume I had, as I formerly stated—

Q. In any large herd of cattle?

A. As I formerly stated to you, I was receiving from time to time along—

Q. Can you state to the committee a single instance within three months prior to the first of March?

A. I cannot, but my letters at home might show it.

Q. You haven't in mind that it was called specially to your attention?

A. I could not specify any instance.

Q. (Letter dated February 2, 1886, and marked "A" shown witness) Is that your handwriting?

A. Yes, sir, it is.

Q. That is your letter?

A. Yes, sir.

(The letter was read in evidence, and is as follows:)

"A"

STATE OF MAINE.

Board of Agriculture,
North Greene, Feb. 2, 1886.

Dr. Bailey:—What have you to say of a case of death from tuberculosis of an animal kept till the time of her death in the stable with a large herd of other cattle?

Is it likely to follow herds, and possibly tardily, where an animal has been sick with it?

Pardon me for troubling you, but I would like information on above points.

Resp'y yours,

(Signed) Z. A. Gilbert.

Q. Now, can you state what herds you had in mind at that time, and what death you had in mind?

A. I cannot.

Q. Did you receive a reply to that from Dr. Bailey?

A. I think I did.

Q. Have you it in your possession?

A. I do not know as I shall be able to select the letter at once. All these letters I have here can go into the hands of the committee if they desire.

Q. Did you know of the killing of the Gray Nose and Jersey Lily, as they are called?

A. I do not know anything about any names. I am acquainted with the killing of the herd of cattle at Orono, but I cannot specify as to names.

Q. Do you remember when they were killed?

A. Yes. There were two cattle killed by order of the Commissioners; I cannot state the date, but it was sometime in March.

Dr. Bailey:—The 12th of March.

Witness:—12th of March by order of the Commissioners.

Q. Were you present at the killing of those two?

A. I was.

Q. Were you present at the examination of them?

A. I was.

Q. Was tuberculosis found to exist?

A. Something Dr. Bailey called tuberculosis.

Q. Up to that time did you know anything about the disease?

A. No.

Q. And you saw what he called the evidences of the disease?

A. I did.

Q. Was that Jersey Lily a half sister of the Kent bull?

A. I do not know anything about it.

Q. Do you know that she had the same dam, the Princess Alba?

A. No, I do not know anything about the breed; haven't kept the run of it.

Q. After the killing didn't you realize the fact that that Kent bull was out of the Princess Alba?

A. I did not know anything about it at that time.

Q. And that the Jersey Lily that was killed was a half sister?

A. I didn't know anything about it until Dr. Bailey informed me later in the season.

Q. Coming now to the Kent bull, what was the first information you had as to him?

A. I had a letter from Mr. Kent inquiring of me something in regard to a bull that he bought from the College herd.

Q. When was that?

A. I cannot tell you. It was sometime along in the spring or summer, but I haven't the date of it. It was not an official matter, and consequently I did not make any official record of it.

Q. Why was it not an official letter?

A. Because it did not call upon me as one of the Cattle Commissioners.

Q. How did he happen to write to you?

A. I do not know anything about that.

Q. Didn't you suppose he wrote to you as a member of the board of Commissioners?

A. He didn't address me as one of the Cattle Commissioners.

Q. Does a man have to address you in a matter of that kind as a member of that board before you take any action upon the matter?

A. I do not know whether that would be the case or not.

Q. If a man writes to you addressing you as "Z. A. Gilbert," or "Hon. Z. A. Gilbert," without putting on "Member" or "Chairman of the Board of Cattle Commissioners," and informs you of a suspicion of diseased animals in his herd, do you take no notice of the letter?

A. I do take notice of the letter.

Q. Why didn't you take notice of that letter?

A. I did.

Q. But not officially?

A. I did not officially.

Q. Do you take notice of the others officially?

A. He did not inform me of a diseased animal.

Q. Do you take notice of the others officially?

A. I do when I am informed of diseased animals.

Q. Have you that letter in your possession?

A. I have not. It was a private letter and I do not keep them on file. All my official letters are kept on file.

Q. How do you tell whether a letter comes to you in your private or official capacity?

A. If it was a letter in regard to a diseased bull I should suppose it was in an official capacity.

Q. This was not?

A. It was not.

Q. Was it not in regard to a bull he had suspicion about having the disease?

A. In this letter he told me the bull was not diseased.

Q. Why did he write to you then?

A. He addressed me as a brother Patron and asked my advice.

Q. About using a bull that was not diseased?

A. About using a bull which was purchased at the College farm prior to the outbreak of disease there.

Q. Did he at that time state to you anything about whether he had suspicion of the disease?

A. He stated to me that the animal was well, that he ate well, looked well and appeared well, and that he was well.

Q. And you haven't taken pains to preserve that letter, but are simply stating the contents of it now from memory?

A. I am stating it from memory; I did not preserve it.

Q. At the time you received that letter had any of the cattle at the State farm been killed?

A. They had all been killed.

Q. Did you take pains to answer him to ascertain the parentage of that bull?

A. I did not at all.

Q. Not the slightest?

A. Not at all.

Q. Didn't try to find out whether the mother of the bull was one of the worst diseased cattle of the herd?

A. I have answered that question.

Q. Did you or not?

A. I say I did not.

Q. Did you take any pains to inform yourself as to the condition of the bull before replying?

A. No.

Q. And this letter you received was immediately after the killing, was it not?

A. No, sir; I cannot state when it was. My impression is that it was immediately after the killing.

Q. On what days were the cattle killed there?

A. I think it was the 22d and 23d of April. (Letter marked "B" shown witness.)

Q. Is that the letter which you sent to Mr. Kent in reply to his?

A. It is.

Q. What is the date of that?

A. April 30th.

Q. Then prior to April 30th you had received from him his letter?

A. I presume so.

Q. Then it must have been immediately after the killing. It seems that you received his letter when the matter was entirely fresh in your mind?

A. Of course it must have been fresh in my mind at that time.

(Mr. Cornish reads in evidence the letter marked "B," which is as follows:)

"B"

STATE OF MAINE.

Board of Agriculture,
North Greene, April 30, 1886.

Mr. S. N. Kent:—Your letter is at hand. If I were in your place I should retain and use the bull. As long as he has shown no cough and no other signs of disease it is safe to conclude he is well. If he is well it is safe and proper to use him.

Resp'y yours,

(Signed) Z. A. Gilbert.

Q. You have heard the physicians testify, have you not, that an animal might have that disease and have no cough?

A. Yes, might have a cough and no disease.

Q. But he might have that disease and yet have no cough?

A. Yes.

Q. So that the cough is not the only symptom?

A. No.

Q. And not a necessary incident to the disease?

A. No, but a usual accompaniment of it.

Q. But still, not a necessary one?

A. Not always.

Q. Do you know when the stiff-necked one was killed, in March, 1885? Were you made acquainted with the fact that two stiff-necked ones were killed, in March, 1885?

A. No.

Q. And did you know that one of those was half sister to this very Kent bull?

A. No, sir, I didn't know anything about the breed, records or parentage, or anything about it; nothing at all.

Q. After your correspondence with Mr. Kent, what was your next correspondence in regard to the Kent bull?

A. I have no recollection of any further correspondence with Mr. Kent in regard to the bull.

Q. Well, with any member of your Commission?

A. I do not know as I could state that correctly. I had some correspondence with some members of the Commission in regard to that bull.

Q. Did you have a letter from Dr. Bailey inclosing Mr. McAlister's notice the latter part of July or the first part of August as to this bull?

A. I believe I received such a letter including Mr. McAlister's notice.

Q. And the document which I produce is the notice which was included?

A. I could not swear to the notice at all. It was returned by request to Dr. Bailey. I could not state whether this was the notice or not.

Q. Did you reply to Dr. Bailey on that matter?

A. I presume I did; I usually replied to his letters, all of them.

(Letter dated August 10th, 1886, and marked "C" shown witness.)

Q. Is that the letter which you sent to Dr. Bailey in reply?

A. I think that is the reply.

(The letter was read in evidence by Mr. Cornish, and is as follows:)

"C"

STATE OF MAINE.

Board of Agriculture,
North Greene, Aug. 10, 1886.

Dr. Bailey:

Dear Sir:—Your letter with doc's at hand. I do not think case warranted a visit from you and they probably took the course they did to get an examination of the animal at State's expense. I knew all about the case.

In regard to my advice to use the bull: it is the only position we can take. The bull was sound, so stated, "and we have no evidence that he came from any other than sound parentage." The only thing to say is that he is *all right*. If he doesn't feel easy about it, it is none of our business; then he must sell him, that's all.

Yours,

(Signed) Gilbert.

Q. Was not there evidence to you, as a member of the Board of Trustees of the College, or as a member of the Cattle Commissioners present at the killing in all your capacities, that he did come of unsound parentage?

A. There was a possibility, nothing further.

Q. You knew his mother was one of the worst cases, did you not?

A. I did not at that time.

Q. Could not you by the slightest work have obtained that information?

A. I probably could if I had sought it.

Q. But you didn't try to, did you?

A. I did not. I will make a word of explanation here, with the permission of the chairman, with reference to why I stated (in the letter) that he should not have visited the bull. The requirements of the law are that there should be diseased animals in order to warrant a notice; that that notice shall come from the municipal officers to the Commissioners. I had had this bull under my charge. The notice to me was that he was a well bull, and all right in every respect. There was only a possibility, a suspicion against him; but the statement was that he was all right, and, therefore, that was not a matter for legal notice to the Commissioners, and hence my statement.

Q. You say you had had the bull under your charge?

A. Under my notice.

Q. Under your charge as one of the members of the Cattle Commission, do you mean?

A. No, sir, under my notice; under my notice would have been a better word, because I had had the bull under consideration.

Q. Under your notice as a Cattle Commissioner?

A. No, sir, as an individual.

Q. You make that distinction all the way through, do you?

A. I make it now.

Q. Were you acting in respect to the Kent bull as a private citizen, or as one of the Board of Cattle Commissioners?

A. In that letter to Dr. Bailey I was acting as a Commissioner.

Q. And in your letter to Mr. Kent how were you acting?

A. As a private individual, as I was addressed by him.

Q. Then the way in which you act always depends upon the method by which you are addressed by those who write you letters?

A. I do not know about that.

Q. It did in this case?

A. I stated in each case how I acted.

Q. In the letter to Dr. Bailey you said of the Kent bull it was "none of our business?"

A. None of our business as Cattle Commissioners.

Q. Do you think the Cattle Commissioners have no "summary powers" in such matters?

A. What do you mean by "summary powers?"

Q. What does the statute mean when it uses the word?

A. I do not know. I ask for information.

Q. What is your construction of it?

A. I could not say. I could not tell what in law is understood by "summary."

Q. Haven't any idea what "summary powers" means?

A. No, not definite.

Q. Do you mean to say you think the Cattle Commissioners had no power to act in any case of diseased cattle unless the municipal officers should call upon them so to do?

A. Repeat that question.

Q. Do you think that the Board of Cattle Commissioners had no power to deal with diseased animals in any way, or those suspected of disease, unless notified by municipal officers of the town?

A. The only exception that I would make to that is a herd of stock belonging to the State.

Q. Otherwise they had no power?

A. Otherwise, in a town or municipality where the stock belonged to a private individual, the Cattle Commissioners have no power whatever to act in cases of disease unless called upon by municipal officers.

Q. You are very positive in that position?

A. I am.

By Mr. Walton:

Q. Did I understand you that this letter (letter marked "B") was written by you as a private individual to Mr. Kent?

A. Yes, sir.

Q. Did you understand that he wrote to you as a private individual asking your advice in regard to it?

A. I did. He addressed me as a brother Patron, that is, a brother Granger.

Q. You wrote this upon one of your blanks as Secretary of the Board of Agriculture?

A. Yes, sir, I was using that paper in all my correspondence, private and official, in various official directions. I have Experiment Station headings to some of my paper, and I sometimes use that. We have no official paper for the Cattle Commission.

Q. Yes, but this is official paper for the Board of Agriculture, is it not?

A. Yes, sir, but not the Cattle Commission.

Q. Certainly, but it is all the official paper you have?

A. No, sir, I have some other official paper.

Q. And in connection with the Board of Agriculture?

A. No, sir, in connection with the Experiment Station.

By Mr. Adams:

Q. Does not your office in the Board of Agriculture make you an officer also of this Commission?

A. I so understand it, yes, sir. This office as commissioner is an *ex-officio* office.

Q. So that would be sufficient for official paper in that capacity?

A. Perhaps so, but it was not so designed. It was designed as an individual.

By Mr. Cornish:

Q. Have you any official paper of the Board of Cattle Commissioners?

A. I have not.

Q. Has not all your official correspondence as a member of that board been upon this same paper upon which you wrote to Mr. Kent?

A. I presume it has. I use that in nearly all of my correspondence, private and official.

Q. In writing to other men do you make the same distinction? and when you write to them and sign simply your own name and without the word "Commissioner" under it, do you understand that to be a private correspondence?

A. Not necessarily so. Sometimes I sign officially and sometimes I do not; depends upon whom I am writing to.

Q. Then at the other end of the route, when the man receives that letter with that letter-head and your signature, he has no means of knowing whether you are writing to him as a Patron or as a member of the board, has he?

A. I do not know anything about what means he has; he has only the letter of course.

Q. So far as that goes, have you in any of your correspondence in regard to this Kent bull ever signed your name as "Commissioner on Contagious Diseases?"

A. I do not know. I may and may not.

Q. You haven't been very particular about that?

A. No. I am very particular if I am taking any legal action that it shall be a legal notice; I am very particular about that.

Q. Now, going back to the question of the power in the board, you say you so construed the law, and still have no idea as to the meaning of the words "summary powers" in the statute?

A. I do not interpret the law for our action myself. I use my judgment, but the interpretation of the law has been given to me by higher authority than myself. Of course I had the privilege of reading the law and using my judgment in regard to what the law was, but it has been interpreted and defined to us by higher authority.

Q. And using your own judgment upon it you so construed it, although the words "summary powers" are in the statute?

A. I do not know whether "summary powers" are in the Cattle Commission law or not. I presume the statute will show.

Mr. Haines:—"Summary orders."

Q. "Summary orders." Have you always maintained the same position?

A. I have. I think I have. I have no recollection of maintaining any different position.

(Letter dated April 13th, '86, and marked "D" shown witness.)

Q. Is that your signature and letter?

A. Looks like it; yes, sir, that is mine.

(Mr. Cornish placed in evidence the letter marked "D," which is as follows:)

"D"

STATE OF MAINE.

Board of Agriculture,
North Greene, Apr. 13, 1886.

Dear Doctor:—Your letters were duly rec'd Monday evening. My arrangements previously made are such that I cannot go down to Portland on Wednesday. I had planned to give some time to that matter next

week, and to do it must have my time for other work this week. The printers are at work on my annual report and *I am obliged to keep them at work*.

I don't want to put our heroic treatment into effect at Orono till we have letters from other authorities. Write to Billings and others and see what they will say to the course we proposed.

I don't think you had better go down to Wesley till we have consulted together.

Now in regard to scabby sheep. We must hold back about making expense for the State in such cases. If you are called by municipal officers you better diagnose the disease and leave the matter right there with the municipal officers to do further as they please. This will throw the whole responsibility—further than a decision as to the nature of the disease—on to the officers, where we want it. Sec. 38 of the law says, "said officers may order them killed," etc.

Sect. 50 gives us the "power to issue summary orders" but it does not say we shall. So we will take the easy horn and let the municipal officers do what they think best, when *they* and *not we* must bear the responsibility. I think this the proper course and by all means the best course. I don't want to take the responsibility of making cost on little flocks of sheep or pens of pigs. You tell them the nature of the disease and let them do as they please further. *We* must be careful how far we go.

Hastily yours,

(Signed) Gilbert.

You will not get this till after your interview with the Gov. I would like to know the tenor of it.

G.

Witness:—That was written to Dr. Bailey because I considered he had gone too far, and it was out of caution to him. He had visited several flocks of sheep, and had ordered them to be destroyed on his own responsibility singly, and they were destroyed on that order. Scab in sheep is a curable disease. We have no rights or authority as a commission to destroy stock that is diseased with a curable disease.

Q. And is hog cholera a contagious disease?

A. It is.

(Letter dated November 11th, '85, and marked "E" shown witness.)

Q. Is that your hand writing?

A. It looks like it.

(Mr. Cornish read in evidence the letter marked "E" which is as follows:)

"E"

STATE OF MAINE.

Board of Agriculture,
North Greene, Nov. 11, 1885.

Dr. Bailey:—Your bill was promptly attended to by me, and presented in person. At one session since I wrote a letter calling attention to it. At the last session they drew warrants for other matters, and I supposed that had been attended to. I did not see the council at the last session, as they were on a murder case while I was there. Have done all I could. I don't like the way we are treated and would resign if I could. I don't like the business either.

In all cases of a call to us from municipal officers, please preserve the call to file with your bill as authority for the action.

If I understand the Thorndike case we can do nothing for the parties.

In the cases of hog cholera at Saco, think the course is to let the authorities take care of the matter. You make your visits only on call, (for the present at least) and pronounce upon the disease. Sec. 50 of the law gives us the power to issue summary orders, but it is left to us to judge whether public safety requires it, and unless it does we are in no way *obliged* to act. If at any time we find the municipal officers are neglecting to protect the public then it becomes our duty to do it ourselves. So you diagnose the disease when called upon, and if the officers think it best to prize and kill, let them do it and collect the damage. If we find them negligent and public interests not protected, then we will step in and handle the matter ourselves. This throws the responsibility upon them, and we are to take it only when we are obliged to.

I go to Boston to-morrow and wish I could stop off at P., but cannot. If you want me to stop over a train when I come back on Tuesday next—at Saco or Portland—write me at 13 School St., Boston. I will telegraph you to strike me on noon train at Woodford's, and if it finds you at home we will consult.

Yours.

(Signed) Gilbert.

Witness:—My explanation of that is that in regard to these unimportant matters where the public safety was all right it was better to leave them in the hands of the municipal officers, where the law allows them to be, and let them take care of them. They could do it cheaper, easier and better than we could. That was my idea in these unimportant matters where the public safety was not jeopardized.

Q. Do you think if a case of tuberculosis is brought to your notice as cattle commissioner, and you learn that it exists in

a certain town in this State, that you cannot move one peg unless the municipal officers see fit to notify you?

A. I do think so. I have been so instructed by the Governor and Council of this State.

Q. And you have always acted in that way?

A. No. There is one exception.

Q. I mean, except the College?

A. Yes, sir, I think so. I do not recollect any case in which we have not always acted in that way.

Q. Now after this matter was brought to the attention of your board by this notice from the selectmen of Bucksport, did you then think that the Cattle Commissioners of this State ought to take hold of that matter?

A. I did not.

Q. Why?

A. Because that bull was a well bull.

Q. What information had you as to that?

A. I had the information from the owner of the bull.

Q. Do you take the information of the letter which you have described here giving the outward appearance of the bull, written to you, as you say, a brother Patron, in place of the official notice given to you in July as a member of the board of Cattle Commissioners?

A. Official notice was given to Dr. Bailey.

Q. He was one of the board?

A. Yes, sir; and he went to visit them in accordance with that notice.

Q. Then would you let that letter which you received the previous April, as you say a private individual, supersede the official notice which came to your board?

A. My knowledge of that animal was that he was a well animal. I had no other knowledge in regard to that animal, and consequently that was my position.

Q. Did you have any other knowledge except what was contained in that first letter written to you by Mr. Kent?

A. When?

Q. In April previous.

A. At the time the letter was written, do you mean?

Q. When this letter came to your board from Mr. McAlister, selectman of the town of Bucksport, did you at that time have any notice of the real condition of that bull other than what was contained in the letter from Mr. Kent of the previous April?

A. I do not know that I had.

Q. And that letter, you say, was written to you not officially, but as a member of the Patrons?

A. I say so.

Q. And you allowed that letter to supersede this official notice given to you as a member of the board? Is that so?

A. No, I do not understand it so.

Q. Didn't you take what you say were the statements in that letter in preference to what was contained in this notice?

A. I do not recollect what was in the notice.

Q. Did you ever visit the bull?

A. Never. I never visited the bull because I never was notified he was diseased.

Q. Did you concur in your associate's visiting that bull?

A. The letter says I did not.

Q. You did not approve of his course then?

A. Yes, I did approve of it. I think I wrote to him saying that under the notice to him he was justified in visiting the bull. But the notice was—I do not know how to express it, but I should say it was a sort of spring, one of those springs that have been attempted a good many times on the Commission to get an official diagnosis of a disease at the expense of the State in an individual case.

Q. And you were very glad to have that suspicion in this case, were you not?

A. I do not know.

Q. The only information you had was from the previous letter written to you as a Patron?

A. That is all I recollect now.

Q. Still, you neglected to take any part in the investigation of the Kent bull case as an officer?

A. No, sir. Dr. Bailey went down there and visited, professionally, the same as in all cases of disease.

Q. At your request?

A. On his own responsibility, as he frequently did.

Q. Did you approve of his action after he did it?

A. I was a good deal—

Q. Did you approve of his action after he did it?

A. I did.

Q. And thought that he had a perfect right to go there?

A. I thought under the call he received that it was his duty to answer that call.

Q. Didn't you tell Mr. Ferguson in the State House this winter that he had no business to go there?

A. I do not think I did. At least, I do not know why I should, because I think I had previously written to Bailey that he was justified in visiting the bull under the notice he received. I do not recollect that I told Mr. Ferguson that. I would swear that I have no recollection of telling him so.

By Mr. Libby:

Q. What was the result? Was the bull called sound?

A. Immediately after the visit of Dr. Bailey to the Kent bull he wrote me of his visit, and this is the letter: "Portland, August 8, 1886. "Dear Gilbert: I inclose to you some documents that I deemed of sufficient importance to receive my prompt attention, and went to Bucksport on Wednesday and met McAlister, who took me to Kent's place. The latter is a farmer with a large stock of cows from which he supplies the city with milk, and he also keeps a bull for public service. This bull he purchased at Orono, and he is apparently a well animal with a normal temperament and sound lungs as far as can be tested by percussion, and is about a year old." That is all that relates to the bull.

By Mr. Cornish:

Q. Do you know whether or not Dr. Bailey corresponded with Mr. Gowell after that as to the lineage of this animal?

A. He said he did.

Q. Did Dr. Bailey write a letter inclosing that reply from Gowell?

A. Dr. Bailey informed me that he had corresponded with Gowell and found that the bull was calved by one of the cows killed at the College, one of the diseased cows.

(Letter marked "F" shown witness.)

Q. Is that the letter you received inclosed, do you think?

A. I can tell by reading it through. Dr. Bailey informed me to that effect.

Q. Didn't he inclose a letter from Mr. Gowell?

A. I cannot tell you. He informed me of the fact.

(Mr. Cornish read in evidence letter marked "F," as follows:)

"F"

Orono, Aug. 9, 1886.

Dear Doctor:—The dam of the young bull was Princess Alba, one of the two cows we slaughtered in the field near the stable, and whose lungs and glands you brought into the stable. She was one of the worst cases. You doubtless remember her condition now. Lungs and glands badly off.

I am confined to the house by sickness and am writing to you with extreme difficulty.

Most truly,

(Signed) G. M. Gowell.

"Princess Alba" was the dam of the "Kent bull" whose lungs I refer to, sent to the American Vet. College.

G. H. B.

(Letter marked "G" shown witness.)

Q. Is that your hand writing?

A. It is.

(Mr. Cornish read in evidence letter marked "G," as follows:)

"G"

STATE OF MAINE.

Board of Agriculture,
North Greene, Aug. 13, 1886.

Dr. Bailey:

Dear Sir:—We haven't the ghost of a law that will authorize us to interere with that animal. If Mr. K. don't think the animal safe to use, it is his business, not ours. Besides, "a decision that the animal was unsound when bought binds the College to refund."

Remember, the College cattle were the State's property and we did not apply the law at all.

We can't do anything but let the animal alone just where he is, and not complicate ourselves with it. It is our only way.

I suppose we better square off with Scribner and settle the matter up. He can get more for those cattle to sell them for beef, and he better do it.

You see Locke and see what he says about it. The sooner we attend to it the better. The Gov. is gone, and you ask Locke if we better wait till he returns or go ahead as soon as we can arrange the matter. Let me know as soon as you can.

Yours.

(Signed) Gilbert.

Q. You were a trustee of the College, were you not?

A. Yes, sir.

Q. And one of the farm committee of the College?

A. Yes, sir.

Q. And had been instrumental in purchasing this whole herd?

A. Directly and indirectly.

Q. Largely so, had you not?

A. No, sir.

Q. You and Gowell together?

A. We made one purchase together.

Q. Did you make any alone?

A. No, sir.

Q. Advise as to purchases?

A. I presume so, as we had a perfect understanding with each other in regard to all these matters.

Q. Did you have another letter from Dr. Bailey on the 22d of October?

A. I presume so; I had a good many from him.

Q. Can you find that as readily as you found the last one you produced?

A. I do not know. I may have it here and I may not. Here is one dated October 23d.

Q. Yes, sir. Will you read that to the committee?

(Witness reads letter dated October 23d, '86, and marked "H," as follows:)

"H"

Portland, Oct. 23, 1886.

Dear Sir:—I am in receipt of two letters this morning, one from Danforth, that satisfies me that they have no "contagious disease" among their horses, and I do not propose to go. So, knowing no business East, I will go to Orono almost any day that I can be of service there. The other letter is from Mr. McAlister, Bucksport, in answer to my enquiry if Mr. Kent would consent to have his bull killed, without the intervention of the cattle commissioners, and he replied by saying: "If the State will give $25.00 the bull shall be disposed of and I will pay the rest of the bills myself. I make this proposition that the future of the community may be safe."

Please answer at once what you have to say to this proposition, as the Governor has said to me lately, "consult Gilbert." I have to request of you that you will return to me three letters, which I recently enclosed to you; one from Mr. Scribner, the rest from Mr. Gowell, in answer to my enquiry regarding the cow "Princess Alba," and last the postal from Mr. Chase in regard to the sale of cattle at Scribner's.

Mr. Ferguson called on me the next morning after our meeting, and told me he had seen Governor Robie in relation to his serving out the remainder of the year, (or until after the report of the commissioners was made up) and that the Governor had "promised him he should be continued in office, and would forward him papers to that effect." As far as I am concerned all this "backing and filling" has ceased to interest me, and I have no further objections to offer. Please let me know when you write if the appraisal and settlement at Scribner's is satisfactory to you, and if you are to be at home the coming week.

I am very truly yours,

(Signed) Geo. H. Bailey, V. S.

(Mr. Cornish proposed to read the McAlister letter inclosed in the letter of October 23d, but Mr. Gilbert raised the point that it had not been identified. The letter was then identified by Dr. Bailey and it was read in evidence by Mr. Cornish, being marked "I," as follows:)

"I"

Bucksport, October 22d, '86.

My dear Sir:—Yours of the 21st inst. rec'd, and contents noted. I fully appreciate your position in the case of Mr. Kent of this town and will co-operate with you and have the bull killed. Now if the State will give $25 the bull shall be disposed of and I will pay the rest of the bills myself. I make this proposition that the future of the community may be safe.

Respectfully yours,

(Signed) G. W. McAlister.

P. S. Mr. Kent wishes to get rid of the bull at once as he is to a great deal of trouble keeping the animal up.

McAlister.

Q. Did you reply to Dr. Bailey, and have you your reply?

A. I have a letter here dated October 27th, which I think is a reply to that letter.

Q. May I look at it?

A. No.

Q. You refuse to allow me to look at that letter?

A. I do until I read it. (Witness reading letter to himself.)

Q. Do you refuse to allow me to look at that letter?

A. I do. I am dealing with the committee and not you.

Q. And you refuse to allow me to look at the letter?

A. Yes, sir. The letter is mine, written by me, and I will read it.

(Witness reads letter dated October 27th, '86, and marked "J," as follows:)

"J"

STATE OF MAINE.

Board of Agriculture,
North Greene, October 27th, 1886.

Dr. Bailey:—I supposed Mr. Bell would consult you on that unfinished business after you had heard from the parties again.

I am still where I have been in the matter, and being there, know of no compromise ground I wish to take. If you and Mr. Bell decide differently from my views I must yield to the majority, but not convinced.

In view of the fact that the public will not use his bull, will not Mr Kent, with your advice, feed him off for beef?

The settlement with Scribner was satisfactory all around.

Yours,

(Signed) Gilbert.

Q. You notified Bell and Ferguson to meet you at the City Hotel in Portland last October, the 20th?

A. I did.

Q. And you met them there?

A. I did, or they met me there.

Q. Did you take them up into your room before going over to Dr. Bailey's?

A. I presume I did. We met there for the transaction of business, and I suppose I should take them to a room.

Q. Did you have any conversation with them as to what Dr. Bailey proposed to say in his report?

A. I have no special recollection in regard to it, but I presume we did.

Q. Did you try to influence those gentlemen at all as to which side they should take?

A. No.

Q. Not the slightest?

A. Not in the least. My statement to the Commission was to this effect: Dr. Bailey had been sick; he hadn't fully recovered. He was in a weak condition. I thought to save him the trouble of a full discussion of this matter by getting together ourselves and by ourselves talking the matter over before going to him, and that was my request and purpose—that we might have an understanding between ourselves and thus tax him less than otherwise would be the case.

Q. Then your motive in taking those gentlemen to your room and talking the matter over in advance was simply a humane one for Dr. Bailey?

A. A humane one for him in connection with the necessity for talking over business while and when we were present there in Portland at the meeting which was called for that purpose.

Q. And to save Dr. Bailey the worry of things was the only object you had, then?

A. Yes, sir.

Q. Did you represent to those associates that Dr. Bailey had taken grounds that you did not approve of?

A. Yes, sir.

Q. Did you represent to them that you hoped they would agree with you?

A. I do not know whether I did or not; I presume I did hope so.

Q. Did you communicate the fact to them?

A. I should suppose I did; I do not know.

Q. Did you communicate the fact to them that that was the reason you took them up to the room so as to have them forewarned and so forearmed?

A. No; no recollection of it.

Q. Have you the letter from Dr. Bailey with the proposition to make your reports this year?

A. I haven't it. I took only those relating to the subject matter under discussion here, under the investigation.

Q. And you did not take the correspondence relating to the reports?

A. No, sir; only relating to the subject under discussion.

Q. Would not the "doings" of the Commissioners come under the clause "relating to the doings of the Commissioners"?

A. Relating to this?—no, not at all.

Q. You construed it in that way?

A. I did.

Q. And therefore did not bring those letters?

A. I did not. I was not requested to bring any letters; but I did bring those relating to the wording of the order, all voluntarily on my part.

(Letter dated Dec. 21st, '86, and marked "K" shown witness.)

Q. Is that the letter which you wrote to Dr. Bailey in reply to his proposition?

A. It is my writing. That is my signature and my writing.

(Witness looking through the letter.)

Q. Is that the letter?

A. I presume it is.

Q. Don't you know it is?

A. No, I cannot tell until I read it.

Mr. Libby:—Look at it and see.

Q. Look at it until you have found out whether it is or not; look at it sufficiently long enough to tell whether it is your letter or not.

A. I cannot tell. I will see, getting along with it as fast as I can.

Q. I ask if that is your letter? [after a pause] You do not propose to answer my question as to whether that is your letter until you have read it through? Is that your proposition? You do not propose to answer whether that is your letter or not until you have read it all through?

A. I have got other business on hand. Mr. Libby, a member of this committee, has asked me to look at this and see.

Q. Will you or not state whether that is your letter before you have read it entirely through to know its contents?

A. I am satisfied that is my letter.

Q. How long have you been satisfied that that is your letter?

A. Long enough to answer it.

(Mr. Cornish read in evidence the letter dated Dec. 21st, and marked "K," as follows:)

"K"

STATE OF MAINE.

Board of Agriculture,
North Greene, December 21, 1886.

Dr. Bailey:—I have only a few minutes at command this morning and in that time state briefly just how far the *law* will justify the Commission in going, in my interpretation of it.

The law gives us no police powers whatever.

On appearance of disease which the municipal authorities *fear* endangers public interests they are to call upon us.

If we find contagious disease we are authorized to take charge of same. If *not*, we stop right there.

Just there we meet the Kent bull case; *you found the bull sound*, so there our jurisdiction under the law stops, and we have no further business with the case.

So far the legal bearings of the case, and I want you to repeat to Gov. just what we have been doing as a Commission, and when you have told the story of our work, stop.

I know as well as you there is a bearing beyond this, but it leads us as a Commission where we cannot go. Yes, and it leads us into that which

has no end. We cannot surround and exterminate this disease. It is all around at the present time. I have just found where there has a valuable bull died with it only a few weeks ago, and a cow not long since, and where there is another cow that will die soon. You can never report we are free from it. Further it is the height of folly, knowing these things, to single out those College bulls and recommend their destruction for public security, when there is the same danger lurking in the same way all around us.

There is still another view which we, as a Commission, must not overlook, whether professional honor and reputation are jeopardized or not. How long would it take to raise a good sized earthquake here in our State if we strike out here and there killing animals well in all outward appearances? I tell you, Doctor, we can accomplish far more by restricting our work than we can by taking but a single step that the law does not plainly require.

Hastily yours,

(Signed) Gilbert.

Witness:—I indorse every word of that and stand by it at this time, and put it in as evidence.

Q. Now, at that time how many other cases of tuberculosis in this State did you know of?

A. I have known of cases—

Q. At that time how many did you know?

A. I have known of cases in this State for 10 or 15 years back.

Q. How many at that time, when you wrote that letter, did you know existed in this State?

A. I had just been informed at that time of the death of a bull which was shown at both of our State fairs last fall.

Q. What other?

A. I had also been informed of the death of a cow.

Q. What other?

A. I had also been informed of another cow that was emaciated.

Q. A poor cow?

A. That was emaciated from a disease which to all appearance was that disease.

Q. How many more?

A. That is all that I have in mind that were meant or referred to in that letter.

Q. Those three are all you had in mind at the time you wrote that letter?

A. I think so.

Q. Did you know of any other cases existing in the State at that time besides those three?

A. No, I do not recollect of any.

Q. What became of the Kent bull?

A. Dr. Bailey stated, and Mr. McAlister stated, that they killed him. I do not know what became of him.

Q. When did you first learn or hear the report that he was dead?

A. I first learned of the fact by a statement of Dr. Bailey. I had heard previous to that time, a gentleman had told me that he had heard, that the bull was killed.

Q. Prior to that time that was the only information?

A. That was all the information I had.

Q. Who was that gentleman?

A. Mr. Whitmore of Verona.

Q. He is a member of the legislature?

A. He is, I believe.

Q. Did you not, after that conversation with Mr. Whitmore, state to the Committee on Agriculture here one day that you didn't know anything about where the Kent bull was?

A. No, I did not state it in those words exactly. I said I didn't know what had become of the bull.

Q. When you used the word "know" you stood upon the technical meaning of the term?

A. I did, as though I was giving testimony.

Q. Personal knowledge?

A. Yes, as I was before a committee.

Q. But prior to that time you had heard from two different sources?

A. No.

Q. From one source?

A. From one source.

Q. That he had been killed?

A. I had heard that he had heard that he had been killed.

Q. Did you have any reason to doubt that?

A. No, I hadn't any reason to doubt that he had heard so.

Q. Have you ever seen a report of the interview in the Lewiston Journal—

A. No, sir.

Q. —with you?

A. No, sir.

Q. And as copied into other papers and the Home Farm?

A. No, sir, I haven't seen the Home Farm for four weeks.

Q. Have you ever seen the printed account of that interview with yourself?

A. I would have it understood that I am not responsible for newspapers.

Q. I simply ask if you have read it and if you sanction it?

A. I have answered; I haven't read it.

Q. Haven't read it?

A. I haven't read the Home Farm.

Mr. Cornish:—I will read the words from the paper.

Mr. Gilbert (to the chairman):—Is a newspaper article to be introduced here as evidence?

Mr. Walton:—O, no, not at all. That newspaper article cannot be used as evidence in this case.

Mr. Cornish:—I do not offer it for that.

Q. Did you have any interview with any one purporting to be a correspondent of the Lewiston Journal?

A. When and where?

Q. At any time this winter?

A. Yes, I have seen correspondents of the Lewiston Journal very frequently, and I have had some conversation with the gentleman before you.

Q. Mr. Dingley?

A. And also had some conversation with Harry Andrews.

Q. Did you authorize either of the correspondents of the Lewiston Journal to publish any statement of yours that you made in this interview?

A. I authorized—

Mr. Walton:—If you want to ask the witness if he made such and such statements to any one I think, as one of the committee, I shall allow you to do it; but I do not care about whether he has authorized anybody to publish his statement or not.

Q. Did you state to any correspondent of the Lewiston Journal or anybody else as follows, or substantially as follows: "I hold that the law gave the Cattle Commissioners no power to take up the Kent bull after he had been pronounced sound, without a call from the municipal authorities, and gave us no liberty to interfere with the other bulls without a call from the municipal authorities. Last October the Commissioners met in Portland. There Ferguson and Bailey of the Commission told me that they agreed with me in my interpretation of the law." Did you ever make that statement?

A. Does your question cover all you have read?

Q. Yes, sir.

A. It is most too much to answer at once. I cannot retain that in my mind so as to give an intelligent answer.

Q. "I hold that the law gave the Cattle Commissioners no power to take up the Kent bull after he had been pronounced sound"?

A. I did hold it then; I hold it now.

Q. "And gave us no liberty to interfere with the other bulls without a call from municipal authorities"?

A. I did, and hold that now, and here state it.

Q. "Last October the Commissioners met in Portland." Did you state that?

A. What I supposed to be the Commissioners; yes, what was left of them came to Portland, and also Mr. Ferguson and Dr. Bailey.

Q. "There Ferguson and Bailey of the Commission told me that they agreed with me in my interpretation of the law"?

A. Ferguson told me, and he has testified so standing there.

Q. Whether you have stated that Ferguson and Bailey agreed with you in your interpretation of the law, at the Portland meeting?

A. Yes, I so understood it.

Q. "And since that time, Mr. McAlister, chairman of the selectmen of Bucksport, has told me that he agrees with me"?

A. Yes, I made that statement.

Q. Did you hear Mr. McAlister's statement last night?

A. I did. I met him on the train, going up on the train. He is an old acquaintance of mine, and I talked various matters over with him, and among the rest we talked about the Kent bull. We went over the history of the case and into the matter, and in the course of the conversation I alluded to the fact that I understood that the jurisdiction of the law ceased when the veterinary of the Commission pronounced the bull sound. And I understood him to accede to that. I am ready to swear that I honestly and truly understood him to accede to that. And he further said then: "I agree with you there; but it belonged to the trustees of the College to take care of the bull." "Very well," said I, "the College trustees never have been called upon to take care of that bull to my knowledge."

Q. You heard McAlister's statement here last night, did you?

A. I did.

Q. That he didn't agree with you, and didn't intend to say anything to that purport?

A. I heard that statement, and was very much surprised at it.

Q. Now, will you produce to the committee all the other letters and correspondence which you have had with the Cattle Commissioners?

A. I will if they ask me to or request it of me.

Mr. Walton:—The order requires us to call for all the correspondence.

Witness:—Mine you have here, and it is for you.

By Mr. Walton:

Q. Is this all the correspondence you have?

A. I have got some here in my pocket. It is all the correspondence relating to this cattle affair and to the action of the Commission connected therewith.

Q. Can you not produce the letter sent to you by Mr. Kent?

A. I do not think I can. As I have said before, my private correspondence is not filed, whereas, all my official correspondence is filed, and I can go and draw upon it any time.

By Mr. Rich:

Q. Do you think you have been as vigilant as you ought to have been in looking after this disease?

A. Mr. Chairman, in reply to that we haven't any police powers whatever.

Mr. Walton:—Answer the question.

A. I do. That is my answer to him.

Q. (By Mr. Rich.) I asked you if you thought you had been as vigilant as you ought in looking after this disease?

A. I do. That was my answer.

By Mr. Haines:

Q. Did ever anybody raise any objection to it?

A. No. As I said before, the Governor and Council gave us definite instructions in regard to these matters and in regard to this law when we had the foot and mouth disease under consideration. We consulted them in every detail, and they gave us instructions, and the legal gentlemen of his Council at the time from whom those instructions emanated, were Bolster of Auburn and Locke of Portland.

Mr. Walton:—Whose Council?

A. Governor Robie's Council.

TESTIMONY OF WILLIAM B. FERGUSON, resumed.

Mr. Gilbert asked me if I thought we should be justified in killing well cattle. I said, No. So much I agreed with him; but that does not imply that I agreed with him in other points. I think that should the Commissioners find diseased animals they would have authority to kill them. For instance,

if the Cattle Commissioners should find a glandered horse being used in the streets of this city, I think the law would justify and uphold them in destroying that animal, municipal officers or no municipal officers. That is my position.

By Mr Walton:

Q. And did you claim you could act in such a case without notice from the municipal officers?

A. I do claim that.

Q. And to Mr. Gilbert?

A. If that point was raised at all; I do not remember whether it was raised or not; I would not say it was not.

TESTIMONY OF W. H. JORDAN.

I am director of the Experiment Station. On my way to Augusta yesterday I learned that an animal had been killed near Bangor the day before, and from what the party owning the animal said to the gentleman who gave me the information I judged it was probably a case of tuberculosis. I stepped off of the train at Waterville, thinking this would be a matter of a good deal of interest in this investigation, and telegraphed to a gentleman who is a friend of mine to forward portion of lungs to me at Augusta, and also send statement as to breed of cow. He sent the lungs, which I will produce, and this statement in regard to the breed of cow: "This cow was ten years old and the party I purchased her of two years ago said he bought her mother of Dr. North, of Augusta, when a calf. That is all I know of it."

Q. A Jersey?

A. Yes. Wishing to know whether the cow had had any contact with College cattle in any way, I telegraphed to Mr. Miller this. "Within four years was dead cow ever served by J. C. Green's bull, Bangor City Farm bull, or W. Hall's bull," those being the three bulls in his vicinity that he could get at. I received from him this reply: "She never was served by any one of those bulls; never had any College stock. W. C. Miller." The gentleman lives in Bangor and has a farm

three miles beyond on the other side of the College. I sent this telegram with the purpose of getting information as to whether the cow had had any relation to the College stock whatever, and I believe this information shows that she had not.

Q. Who owned that cow?

A. W. C. Miller, who lives on the other side of Bangor from the College, being about eleven miles from the College.

Q. Lives in Bangor?

A. I think his farm is within the city limits two miles and a half or three miles out of the city.

TESTIMONY OF Z. A. GILBERT, resumed.

By Mr. Oak:

Q. To your knowledge had either of those three last animals you described, the bull which died, the cow which died and cow which was greatly emaciated, any connection, close or remote, with the College herd?

A. Not at all. They were over in the western part of the State.

(The lungs of the animal testified to by W. H. Jordan were brought in and exhibited to the committee.)

THURSDAY, March 3, 1887.

Frank E. Southard, Esq., of Augusta, appeared as counsel for Mr. Gilbert at this meeting.

TESTIMONY OF Z. A. GILBERT, resumed.

I think I could facilitate business and state it more rapidly than it could be drawn out by question alone, or by questions and answers alone; and if it will be just as satisfactory, I think I can make it just as intelligible.

Mr. Walton:—If you will do it without arguing your case, Mr. Gilbert, as you go along, it will be all right.

Mr. Gilbert:—I will thank the committee at any time, if I am not pursuing the proper course, or am not as plain or definite as I should be, to prompt me.

Mr Walton:—Well, now you can go on and state it.

Mr. Gilbert:—I will say there was one matter that I was not questioned upon, which I will refer to,—and that was my connection with the farm committee of the College trustees. I have been on the Board of Trustees of the State College for seven years. Immediately upon my assuming those duties, or having them laid upon me, I was, at the first meeting, I think, chosen a member of the farm committee. Associated with me at that time were the Hon. A. M. Robinson, of Dexter, and the Hon. W. P. Wingate, of Bangor. Later on there were changes in the Board of Trustees. Mr. Wingate dropped off, and Judge Bean, of Readfield, came on the board and was elected a member of the farm committee. Then Judge Bean dropped off and Mr. Daniel H. Thing, of Mount Vernon, took his place as trustee and was elected in his place as one of the committee. Since that time Hon. Mr. Parkhurst has been placed on that committee, and also, at the last meeting, I think, General Shepherd of Skowhegan; and this committee is composed now of myself and those two. The business of this farm committee was simply to look after the regulations of the Board of Trustees as bearing upon the farm itself as a department of the institution. You will bear in mind that this farm is a department of the College. It is not distinct in any other respect; it is a department, the same as the mechanical department, and the other departments. Consequently, all of the business arrangements were made in the Board of Trustees, and this farm committee were delegated to see that they were carried out. And the farm committee reported their doings, from time to time, to the Board of Trustees in session at the College, whenever they were together acting as a joint board of trustees.

Mr. Gowell, the farm superintendent, was placed in charge of the farm as its superintendent at the time stated. I think it was in the spring of 1882. His duties were to superintend

the work of the farm, carry on the work under plans defined and conveyed to him by the farm committee.

Mr. Walton:—You mean *communicated* to him, not *conveyed?*

Mr. Gilbert:—Yes,—communicated to him by the farm committee. And it was their business to see that they were carried out in conformity with directions. For that purpose they visited it at the regular meetings of the trustees twice a year; and had an extra meeting of the farm committee, usually, I believe, every year, in the spring of the year, to lay out the plans for the season. As the regular meeting of the Board of Trustees occurs the last week in November, it was always thought best to visit him at a special meeting.

Mr. Walton:—Now, Mr. Gilbert, will you be as brief as possible, and come to the point bearing on this case?

Mr. Gilbert:—Well, I thought this matter was brought up here.

Mr. Walton:—Well, it came up incidentally, and you can state it in that way, but no other.

Mr. Gilbert:—I do not care particularly about stating it.

Mr. Walton:—You can proceed.

Mr. Gilbert:—Mr. Gowell carried on the farm, and he was required to keep an account of stock and take an account of it twice a year on that farm and keep it carefully recorded. He was required to keep a full set of accounts, and those accounts were examined by this farm committee every time they had a meeting at the College—always twice a year, and sometimes, usually, three times or more. And also care was taken to examine the bills and accounts and all vouchers, to see that everything was correctly drawn. This was a critical examination and carried on without any exception in any year.

The question of raising money to carry on the business of the farm was referred to.

Mr. Walton:—I do not understand that there has been even a suggestion made here that the business of the College has not been properly carried on, by the farm committee and the other trustees, excepting, incidentally perhaps, such a

suggestion has been made that when this disease was discovered there was not such care taken as should have been. I hardly see how we can sit listening to the fact as to how the business is conducted at that College. The assumption is that it was conducted properly. Now, if you in your disclosures here should happen to state something that would lead us to think that it was not conducted properly, you might hurt your case.

Mr. Gilbert :—Trust me for that. However, I do not care to refer to it if you do not want it to come in.

Mr. Walton :—I have no objection to your making this statement, but the only question we raise is this: We are here to investigate a condition of things—well, we will say we are here to investigate tuberculosis. Now, anything that can be said in that connection is proper. For the benefit of all, I will read the order that we are acting under—or Mr. Chairman [Senator Allen] will read it, as I have not my glasses.

(Senator Allen here read the order.)

Mr. Southard :—The only reason that Mr. Gilbert desired to state anything with relation to the use of money to buy the stock there at the farm, was because during a lengthy cross-examination of Mr. Lyndon Oak, at the last session, that matter was extensively gone into, and for the purpose of throwing discredit on the trustees of the College. Of course, if that was not intended and it did not have that effect, we do not care to go into it.

Mr. Walton :—I thought the cross-examination of Mr. Oak was quite lengthy, and if I could have seen a point to cut it off, I would have; but brother Cornish had connected it so ingeniously that I could not.

Mr. Cornish :—I did not go into the matter of the farm committee's management. I simply inquired as to the purchase of this fine-bred stock. Incidentally the farm committee came in, but the management I did not care to touch upon. We do not care anything about it, as it has nothing to do with the case. It simply came up incidentally.

Mr. Walton :—Now can you state all the facts in connection with this matter?

Mr. Gilbert :—In the matter of the farm, you are aware, the State was aware, that there was no fund appropriated in recent years to work the farm well. The stock was in very indifferent condition when I went there, and was a disgrace to the institution. And we wanted some better stock to carry on better work. Not a dollar has been appropriated by the State for that purpose, during my service as trustee; and in order to carry on the farm we had to have some stock. To get the stock we either had to buy the stock on credit, or borrow the money to buy it with. It was decided that a portion of the money should be borrowed.

Mr. Libby :—Let me break in here for the benefit of the trustees of the College and the argument that you are making now. I do not presume that this committee's report will impeach anything in regard to the trustees' management of State College. I suppose we shall answer generally just that order (referring to the legislature under which the committee are acting). This other testimony is wholly unnecessary. Nobody disparages or places any stigma on the management of the College, whatever. Let us stick to that little piece of paper and get through here and go home, like men.

Mr. Gilbert :—I have discussed freely up to the present time all my transactions with that institution, all the facts I am in possession of, and at all times I have fully explained to the trustees all that I have done.

Mr. Walton :—Do you wish to make any further statement to this committee, in relation to the buying of those cattle?

Mr. Gilbert :—As I understand it, this committee is investigating this matter of tuberculosis at the College. Now, then, if it is understood that this matter is not to be referred to in this investigation, that you do not call for any testimony from me in regard to what I have been stating, and it is to be ruled out absolutely—the College management, and the farm matters—if you do not want it—

Mr. Walton :—Only so far as the tuberculosis is concerned.

Mr. Cornish :—Do not you remember, Mr. Gilbert, the first question I asked you the other night, prior to my examination, was whether you had any statement which you wished to make this committee ; and you answered that you had none?

A. Yes, sir ; I had a statement at the opening this evening, but if the committee do not wish to have it, I am perfectly willing that it shall go on without it.

Mr. Cornish :—Since the other night you have found one?

Mr. Southard :—Now that is not right. Certainly Mr. Gilbert is entitled to make any explanation that he chooses to that bears upon the cross-examination the other night.

Mr. Gilbert :—I have none to make.

Mr. Walton :—You may proceed and make any explanation in connection with the cross-examination of the other night.

Mr. Cornish :—I never asked a single question about the farm management or the buying of these cattle on credit.

Mr. Walton :—Well, let him go on.

Mr. Gilbert :—Mr. Gowell was authorized to secure money to carry on that work. Some of it he borrowed by and with the consent of the farm committee and the understanding of himself. That is all to be found in his cash book. It was put into a fund to work the farm. That was represented on the books, and it was drawn upon as needed—sometimes it was to pay for an animal, sometimes to pay for grain, feed, etc. That was the account with him. Money was not hired by note, but the account was settled and recognized by the full Board of Trustees. And Mr. Gowell was required annually to make a report officially of his department to the Board of Trustees, and it was annually done, read at the meeting of the Board of Trustees annually, accepted by them annually, and it was published annually—published in the College report. I have nothing further to say in that connection.

Mr. Walton :—Do you mean to say you authorized him to borrow what money he saw fit on the credit of the trustees of the College, to invest in cattle?

Mr. Gilbert:—Not at all. We authorized him, from time to time, to borrow sums of money needed to carry out our directions; not what he was a mind to borrow.

By Mr. Rich:

Q. That, you say, was used for various purposes?

A. Sometimes used to pay a meal bill, sometimes used to pay for a cow; and then the products, the income from butter made from this cow, the milk sold, and other products sold, accumulated money, and then it was from time to time paid back, or portions of it.

Q. Simply a running account?

A. A running account, that is all.

By Mr. Southard:

Q. A great deal was attempted to be made out of the letter which you wrote to Mr. Kent, and which you said was unofficial. Now, I would like to know, Mr. Gilbert, if you have been applied to in a private capacity by people who have on their places diseases among their animals?—

Mr. Gilbert:—When do you mean?

Mr. Southard:—At any time recently, or during the time you have been secretary of the Board of Agriculture?

A. I have from time to time, all along, been called upon and consulted in regard to cattle diseases. My intimacy with people throughout the State led me into a knowledge of the cattle business, and the leading herds of the State, while I owned a large herd of cattle myself, and I have from time to time been consulted in regard to cattle diseases, very frequently.

Mr. Walton:—In your official capacity, or privately?

Mr. Gilbert:—All privately. Of course, I have been consulted officially, and of that, since I was one of the Cattle Commissioners, I made an official report.

Mr. Walton:—Let me suggest, Mr. Gilbert, that you notice the question and answer it. We cannot have so much put to every question that is asked here, and I say to you, and to all the witnesses, that you have somebody to represent

you here. Now, when the attorney asks you a question, you answer him and stop.

Mr. Gilbert:—All right.

By Mr. Southard:

Q. How lately have you been consulted, Mr. Gilbert, in reference to the cattle diseases, in private capacity?

A. I have been consulted since the last hearing in this House.

Q. Do you know of any other of the Cattle Commissioners who have been consulted privately in relation to cattle diseases?

A. I do; my associate, Mr. Bailey, has been consulted privately.

Q. It is a common thing, is it not, for men to come to you as private citizens, and not as cattle commissioners, and ask you what to do in relation to diseases that appear among their herds?

A. It has been within the last two or three years a very common thing; scarcely a week has passed but I have been consulted in those connections.

Q. With relation to that letter to Dr. Bailey, dated March 10, 1886, in which you spoke of his visit to Bucksport about the Kent bull,—I want to know if you said anything, after that letter, to Dr. Bailey about this?

A. I don't know that I can recollect what letter you have reference to.

Q. I mean this letter of March 10, 1886, that has been put in this case and has been talked about so much. Now, I would like to know if you had any conversation with Dr. Bailey, after that, in which the Kent bull and his visit to Bucksport were referred to, and what you said in relation to it?

A. I did; I had a conversation with him following that.

Q. How long after was it?

A. I could not state. It was at our first meeting—soon after. The question came up there—what was referred to by me there was that I did not think the case warranted a

visit from him. I stated to him that under the call which he received he was called upon and should have responded as he did to that call, as it came from the municipal officers properly representing that there was disease there calling for his attention.

Q. Did you intend, in writing that letter, to make any criticism upon his action in responding to the notification of Mr. McAlister, one of the selectmen of Bucksport?

A. Not at all. Why I used that word was simply the fact that the bull had been represented to me as sound. I understood him to be sound. Therefore there was no reason for a call. That was my point.

Q. Now, what did Dr. Bailey's report say—(or has that been put in here)?

A. That was put in last evening. He reported the bull sound.

Q. And the previous knowledge that you had of the condition of the bull was what?

A. The bull had been reported to me as sound.

Q. By whom?

A. By the owner.

Q. In regard to Dr. Bailey's first visit to the Orono herd—will you detail precisely what was done at that time?

A. I think his visit was March 6th, if I remember correctly.

Q. I would like to know what he did after arriving there?

A. Well, of course, as soon as we could do so, we visited the barn together, and with Mr. Gowell and Professor Jordan, President Fernald and Professor Balentine, looked the cattle over deliberately and carefully. Dr. Bailey's first statement to me was, he says: "Well, Gilbert, I don't see any trouble here; this herd looks to me all right."

Q. What had he done previously to base these remarks on?

A. After a time, after looking the herd over and standing and examining them and watching their breathing, etc., he finally made some examination by sounding the lungs of two or three animals—I could not tell you just how many, but several animals. Finally he came to one animal and his sus-

picions were aroused that the animal was not quite right. He tried her temperature and found it a little elevated; and there were some suspicions expressed on her part that there was trouble with her water. He tried to draw her water, to show that it was not right, light-colored, etc., as he claimed the water would show, in consequence of the fever and high temperature, and he failed to draw her water. Very deliberately we looked the herd over, well over, and he offered expressions similar to the first.

Q. Did you hear them?

A. I did.

Q. State what they were?

A. He stated further, "Why, Gilbert, I don't think it can be; I don't see any serious matter here; it cannot be that there is any difficulty with this herd." And so we looked over still farther and watched. And the question was raised—he was inquiring in regard to the cough, if there was any cough on the part of any of the animals. I think Mr. Gowell stated that there had been some, but he failed to discover it at that time. There was none apparent at that time. Finally, at the suggestion of—I am not able to say whether it was Mr. Gowell or Professor Jordan—it was decided that we should go out into the field and examine the cow that had been previously killed.

Q. What cow was that? Do you remember?

A. I never have tried to remember their names.

Q. Was it the first one that died?

A. It was the one that died a couple of weeks previous. I have not tried to remember the names of those animals.

Q. You went out to the field to see that cow?

A. I did not; the others went, Professor Jordan, Mr. Gowell and Dr. Bailey. They went out and examined the cow out there—I did not go with them—and brought back one section of the lung, one lobe of the lung. We all hands examined it then and there.

Q. Then what did Dr. Bailey pronounce the disease to be?

A. After that he went and made further examination of the animals, and finally diagnosed the disease as plain cases of tuberculosis, and found several animals affected with it, by percussion and auscultation.

Q. Was he the only veterinary surgeon there?

A. He was.

Q. Was tuberculosis suggested before these gentlemen went out and examined the dead body of that cow?

A. I could not say whether it was or not?

Q. Do not know whether it was talked over or not?

A. No; I would not say.

Q. Did you have any idea that this was tuberculosis at that time?

A. No, I had not; I had not had any experience with tuberculosis. Of course, I was read up on it, as all our cattle treatises treat of it; but I had no knowledge of specific cases of tuberculosis, up to that time.

Q. None of these cases, up to that time, had been pronounced tuberculosis by any veterinary surgeon?

A. No; or by anybody else that I ever heard.

Q. Well, do you remember how those cattle looked when they came to the barn that fall, previous to their being killed in the spring? Did you see them the preceding summer?

A. I did, occasionally. I saw them at the time of the fair at Bangor, and I saw them at the time of the annual meeting of the Board of Trustees, the last week in November.

Q. What was the condition of the animals you took to Bangor to the fair?

A. They were in very fine condition, so much so that they attracted a good deal of attention.

Q. Any appearance of disease among them?

A. Not at all.

Q. Any cough noticed?

A. Not at all.

Q. How was it with the animals that you left back?

A. The same might be said of those, so far as their condition was concerned. Of course, we took the choicest animals

to the Fair; but the ones we left back there were equally well, or looked as well.

Q. Now, what is the rule followed by veterinary surgeons, whenever they find the disease called tuberculosis in a herd?

Mr. Cornish:—Mr. Chairman, and gentlemen, I have not raised an objection during the whole process of this investigation; but this man announced himself not to be a veterinary surgeon, and I submit this is not a proper question to put to him.

Mr. Southard:—Mr. Gilbert has acted, of course, under the advice of veterinary surgeons; he knows perfectly well what their rule is, and I think it perfectly competent for him to state the advice under which he has acted.

Mr. Walton:—Was not there a veterinary surgeon on the Cattle Commission?

Mr. Cornish:—Yes, sir; Dr. Bailey.

Mr. Walton:—Was he not put on it for the purpose of acting in that capacity?

Mr. Southard:—I presume he was; but if a veterinary surgeon was to have all to do with it there was no need of a Commission.

Mr. Walton:—But do you claim that Mr. Gilbert went out and got the advice of other veterinary surgeons, besides Dr. Bailey?

Mr. Southard:—I propose to show that Mr. Gilbert has had the advice of veterinary surgeons, and knows what their rule is in such a matter.

Mr. Walton:—Well, Dr. Bailey is to be a witness here. Wait until he gets through, and perhaps he will state it himself. If not, you can put in this class of testimony afterwards.

Mr. Southard:—I think, then, at this stage of the case, that is all we will ask Mr. Gilbert.

By Mr. Cornish:

Q. Mr. Gilbert, do you wish to communicate to this committee the idea that Dr. Bailey did not appreciate the disease at the State College?

A. In answer to that I will say that I wish to communicate to this committee all the facts in my possession that they want to hear.

Mr. Cornish:—Now, Mr. Chairman, I submit that this is going too far; we are going into another cross-examination, such as we had here the last session, page after page. I ask a simple question and it can be answered in a simple manner. I submit that you request him to answer my question.

Mr. Walton:—Suppose I request him, and he will not do it?

Mr. Cornish:—Then hold him in contempt of the committee.

Mr. Walton:—Have you any objection to answering the question by Yes or No, that Mr. Cornish has asked?

Mr. Southard:—His answer to one of my questions fully answered that question, Mr. Cornish.

Mr. Gilbert:—I would like *him* to repeat that question once more, and I will answer *you* (referring to the committee).

Mr. Cornish:—I wish to know, Mr. Gilbert, if you ignore me when I ask you a question?

Mr. Walton:—That is not the question you asked before, brother Cornish.

Mr. Cornish:—No; but it is one called out by his manner. The first question was this:

Q. Do you wish to communicate to this committee, Mr. Gilbert, the idea that Dr. Bailey, the veterinary surgeon, did not appreciate this disease when he called at the State College?

A. No.

Q. Do you wish to say that he was at all remiss in his duty?

A. I have not said so.

Q. Do you intend to say so?

A. I intended to answer the questions just as they were put to me, and state the facts.

Q. Do you mean now for the committee to infer that Dr. Bailey was at all remiss in his duty?

A. Mr. Chairman, have I not answered that question?

Mr. Walton:—Practically, I think you have, Mr. Gilbert. I do not think you are required to draw any conclusion from your own statements. You leave that for the committee. I guess, brother Cornish, he has got you there.

Mr. Cornish:—I don't think he has. I think you have got me because you are in the chair, but I don't think Mr. Gilbert has got me. I submit to the higher authority.

Q. How long after Dr. Bailey stepped into the barn, that day when you were with him, was it before he pronounced tuberculosis to exist in that herd?

A. I could not state the exact time.

Q. About how long?

A. I can approximate it. I should say it was about one-half an hour before they went to the field.

Q. How long after they went into the barn was it, approximately?

A. They went into the field and made the examination, and returned and then commenced a re-examination of the animals.

Q. Do you mean to say that before they went into the field he did not discover that tuberculosis existed there, so far as your observation went?

A. He did not state that he discovered it.

Q. Did he make any examination of the cattle before he went into the field?

A. He did.

Q. With any instruments?

A. Yes, sir.

Q. Did he try percussion?

A. Yes, sir.

Q. And still did not discover tuberculosis there?

A. Well, I have answered that question once.

Q. And you still stick to that statement?

A. I state the same as I did before.

Q. How long was he in the barn before they went out into the field?

A. About one-half an hour, as near as I can judge.

Q. How many cattle did he examine before he went into the field?

A. I do not know; several—say two or three.

Q. Do you know which one he examined first?

A. I could not state. I do not know the animals by name.

Q. Was it one of the cows?

A. I know which one he tried to draw water from, and where she stood.

Q. Was it one of the cows he examined first?

A. Yes, sir.

Q. Do you know which lung of the animal he examined first?

A. No, I could not state. I don't remember.

Q. Was Professor Balentine present there?

A. I think he was.

Q. One question more, Mr. Gilbert, I meant to ask you the other night. But before we come to that—is what you have stated here to-night the only explanation you wish to make regarding your correspondence in relation to the Kent bull?

A. No; I have some more correspondence in my pocket.

Q. Is that the only statement you wish to make regarding that correspondence?

A. I do not recall anything now.

Q. You stated the other night, in regard to the Kent bull, that at the hearing before the Agricultural Committee, January 19th, you did not know the Kent bull had been destroyed, did you not?

A. Yes, sir; and I so stated here the other night at your request.

Mr. Walton:—Have you the letter Mr. Kent wrote?

Mr. Gilbert:—I put it in testimony the other night.

Mr. Southard :—It was a private letter and destroyed with his private correspondence.

Mr. Cornish :—Yes; alleged private correspondence.

Mr. Southard :—That is unfair.

Mr. Cornish :—You stated the other night, did you not, that you did not know that the Kent bull had been destroyed?

A. I so stated to the committee, at that time.

Q. Had you not, on the 15th day of November, 1886, received a letter from Dr. Bailey, in which he spoke of the Kent bull having been killed?

A. No, sir; never received a letter from him, up to this time, in which he spoke of the Kent bull being killed.

Q. Did you not two days prior to that hearing before the Agricultural Committee, namely, the 17th of January, have a conversation with Mr. Bell, in which you spoke of the Kent bull being killed?

A. I don't recollect any.

Q. Do you say that you did not have it?

A. I say I don't recall any.

Q. Do you recollect testifying before the Agricultural Committee, on the 2d of February, in regard to tuberculosis, and stating that Dr. Bailey did not disagree with you professionally, and you did not disagree with him professionally?

A. I stated that I did not disagree with him professionally; I did not make the other statement, that I recollect.

Q. Did you not also state that you depended on him, and left all matters of that kind (tuberculosis) to him, because you did not pretend to know anything about tuberculosis?

A. All matters of diagnoses of disease, at all times, everywhere, were left with Dr. Bailey; and his opinions were considered at all times by the Commissioners.

Mr. Walton :—Then you did not get advice from other veterinary surgeons, without he recommended it?

Mr. Gilbert :—Certainly, we did.

Mr. Walton :—What did you do that for, if you left all that part of the business to him?

Mr. Gilbert:—He corresponded with them by arrangement with us, after talking it over with the President of the College, and the Governor and members of his Council—corresponded with veterinarians, the leading veterinarians of the country, including Dr. Salmon and Dr. Liautard.

Mr. Walton:—That was left for him to do, was it not?

A. That was left for him to do for the Commission, he being secretary of the Commission. And he did so. We got replies from them—advice.

Mr. Cornish:—Do you remember, after that statement which you made to the Agricultural Committee, February 2d, of having another conversation with Dr. Bailey and Mr. Bell, in another room near by, in relation to tuberculosis and what you knew about it in the State?

Mr. Southard:—I believe this is tuberculosis at the State College farm we are investigating. Still, it is not our purpose to object to anything proper they are of a mind to ask. We want to make a full breast of everything that ought to be known.

Mr. Walton:—Please repeat your question, brother Cornish.

Mr. Cornish:—I don't remember the exact phrasing of it. The stenographer can repeat it.

(Question read by the stenographer.)

Mr. Walton:—It is pretty remote.

Mr. Cornish:—Well, I do not insist on it.

Mr. Cornish:—Mr. Gilbert, you are secretary of the Board of Agriculture?

A. Yes, sir.

Q. And as such, of course, an *ex-officio* trustee of the College?

A. Yes, sir.

Q. And *ex-officio* a member of the Board of Cattle Commissioners?

A. Yes, sir.

Q. When were you put on the farm committee of the State College?

A. Sometime during my first term—

Mr. Southard :—I believe this is irrelevant under the ruling of the chair.

Mr. Walton :—Well, you might go on, Mr. Cornish.

Mr. Cornish :—Thank you.

A. Soon after I was elected secretary of the Board of Agriculture.

Q. In what year?

A. I was elected secretary of the Board of Agriculture on the 7th day of April, 1880.

Mr. Libby :—Do you think all of those cattle were sick that you killed there?

A. No; I do not. I never have thought so.

Q. What proportion of them do you think were sick with the consumption?

A. Well, there was from half to three-fourths—say three-fourths of them. I would not state very definitely, because I did not count up—say three-fourths.

Q. Did you see the most of them killed?

A. I saw what was killed the first day.

Q. How many?

A. Twenty-two, I think.

Q. You saw them opened?

A. All of those I examined.

Q. Could you detect disease in nearly all of those you saw killed?

A. Any one who had ever seen the internal organs of any animal could detect disease in any one of those. We took the worst first.

Q. You did not see the well ones killed?

A. No, I did not.

Mr. Rich :—Were there any well ones killed?

Mr. Walton :—Ask him his opinion of their condition.

Mr. Southard :—Do you mean, Mr. Gilbert, that there were well animals at the time of the killing?

A. At the time of the killing there were—veterinarians can pronounce on that better than I can, although I will make the statement if you wish me to.

Mr. Libby :—We ask your opinion as a farmer.

A. All right. The veterinarians pronounced indications of disease, as I understood the case—in fact nearly all of the animals had been examined before I left, that is, the principal part of the herd. There were four, as I remember it, good animals, that did not have indications of disease, that they did not find indications of disease in.

Mr. Cornish :—That was on the 22d day of April?

A. Yes, sir.

Q. And when was it you say only a half to three-fourths of them were diseased; how long prior to that time?

A. At that examination. I gave my opinion, not as an expert, but as a farmer. There were one-half to three-quarters of them diseased.

Q. But it proved, on examination, that all but four of them were diseased?

A. That is what they stated.

Mr. Libby :—Did you notice all these cattle coughed when you were there?

A. No, I did not.

Q. Were you around the barn considerable, so as to hear?

A. I was; I watched that herd pretty closely.

Q. You do not have an idea that half of them had a cough?

A. Yes, I think I heard more than one-half of them cough; but there was quite a considerable number of them I had not heard cough.

Mr. Cornish :—Do you doubt that all but four were afflicted with disease?

A. Mr. Counsel, shall I state what I doubt?

Mr. Southard :—I don't think you are called upon to state what you doubt.

Mr. Cornish :—Now, Mr. Chairman, I submit that I have seen a great many witnesses in court; but I never saw one that had to be protected so much as this one.

Mr. Walton:—I have just been talking to my friends on the committee about the danger of setting this thing going again.

Mr. Southard:—Better stop the pendulum.

Mr. Cornish:—I simply want to know this: He gets up here and says, as a farmer, he thinks three-fourths of those cattle that were killed were diseased. I ask him whether he doubts that all but four of those animals were diseased, more or less?

Mr. Gilbert:—I doubt about their being seriously diseased.

Q. Do you doubt they were more or less diseased?

A. There was not in those animals any other external appearances of disease than I spoke of.

Q. Now will you answer my question? Do you doubt that all but four of those animals were more or less diseased, when killed?

A. I don't think I can answer that question.

Mr. Cornish:—That is all I want to know.

TESTIMONY OF SAMUEL BELL.

I reside in Deering. Have no business at present. Have been in the retail shoe business some 39 years. I have carried on a farm some 25 years and had a stock of cattle during that time. I have partially served on the Cattle Commission of the State of Maine. I mean by that that I have not served fully with the other Commissioners; only served a part of the time. I was appointed one of the Commissioners by the Governor. I did not serve all the time because I was not notified to, was not informed that my labors were needed on the Commission. I commenced to act in 1884, soon after the breaking out of the foot and mouth disease. My commission has not yet expired. The only information I have in relation to the herd of cattle at Orono that was slaughtered is what I saw in the public prints, until the slaughter. I was not at all notified to act and did not go to the College nor see the cattle. About the 18th of last October I received a notice

from Mr. Gilbert that the Commission was to have a meeting on Oct. 20th, in the evening, at Portland. I have it here and it is as follows:

STATE OF MAINE.

Board of Agriculture,
North Greene, October 15th, 1886.

Mr. Bell:—You are requested to meet the Board of Cattle Commissioners at City Hotel, Portland, Wednesday evening, October 20th, at seven o'clock.

Yours,

(Signed) Z. A. Gilbert,
Pres't.

I went there at the time appointed and found Messrs. Gilbert and Ferguson there, the commission of the latter having run out at that time. After being there a few minutes Mr. Gilbert said to me and Mr. Ferguson that he would like to have us go up into his room a few minutes. We went up, and when we were fairly seated in the room he said he wanted to prepare our minds for what was coming before us. It was the first intimation that I had but that the meeting was to be there. It seemed by his remark that it was not, but was to be somewhere else. He commenced by saying, in substance, that we were to meet at Dr. Bailey's and he wanted to prepare our minds before we went there for what we should probably hear when we got there, from Dr. Bailey, with reference to the bulls that had gone out from the College farm. He said Dr. Bailey was somewhat crazy on the subject, to have those bulls slaughtered; and he commenced by saying the bulls were well so far as he knew; that there was no reason why they should be slaughtered; there was no evidence that the dams were diseased when the calves were dropped, and, in fact, if they were, we had nothing to do with that; that there was no law that would give us authority to have anything to do with them, and he thought the best way was to let them alone. He talked until he expressed his mind fully bearing upon this point. Perhaps we were there half an hour. We then went to Dr. Bailey's house. Of

course I had heard nothing before about the matter. It was news to me. After a few preliminary remarks at Dr. Bailey's, with reference to our meeting, the matter at once came up. Dr. Bailey asked Mr. Gilbert what was going to be done with the bulls that had gone out from the College herd. Mr. Gilbert said, Nothing; he did not know anything that could be done with them; that there was no evidence that the bulls were diseased. After talking a time in general terms with reference to them all, Dr. Bailey spoke of the Kent bull. He had been to see him. Mr. Gilbert told him that he had since understood that the Kent bull was sound and had been sound, and he didn't see as we had anything to do with him at all. Dr. Bailey made some further statements with reference to hearing from either Mr. Kent or Mr. McAlister, one of the selectmen of Bucksport—I think it was Mr. Kent—and after considerable talk between the two, it was finally brought down to the point, by Dr. Bailey, as to what was going to be done eventually with reference to the report, as the time was drawing near when the report was to be made. Dr. Bailey said: "If you will take the ground you do, why, I cannot agree with you, for I certainly never could sign a report without advising that those bulls should be examined, and if found diseased they should be put out of the way." Mr. Gilbert said there was no occasion for that at all that he could see; that we had nothing to do with them; that the State did not call upon us to tell them what we had not done, but simply what we had done, and he saw no reason why we should refer to them at all. Dr. Bailey told him his conscience never would be clear to make a report without making reference to them. He thought it was absolutely necessary. He thought the disease could be scattered all through the country if they were allowed to be used for stock purposes while they came from such diseased parents as many of them did. He finally made a proposition to Mr. Gilbert. He said: "I will make a report and make these recommendations, which we can all sign, perhaps, or you may have my minutes and make a report to suit yourselves, and if Mr. Bell or Mr. Ferguson are

disposed to sign it, all right." So the matter, so far as the bulls were concerned, closed. There was a great deal more said there than I have repeated, but it amounts to this, as I understand it. It closed up with the proposition of Dr. Bailey, which Mr. Gilbert neither accepted nor rejected, as I know of—that is, he did not propose to make any such report as Dr. Bailey desired, and he did not say he would make such a report as Dr. Bailey recommended him to make by taking his minutes.

I have had since that time at least two or three talks with Mr. Gilbert, and perhaps three or four. I went with him to South Waterboro,' I think the next day after the meeting, to settle some matters there connected with a herd, and one or two of them were destroyed afterwards. I was not present at the destruction though, didn't know anything about it. I had a notice from Mr. Gilbert to go up there, but got it too late. But I did go up to settle the business with him, and at that time, in going and coming, we talked more or less with reference to these bulls that were out and other matters pertaining to disagreements between him and Dr. Bailey, and each and every time I talked with him he took one and the same ground—that he was totally opposed to anything being done with reference to the bulls that were out, unless it was under different circumstances than had thus far come before us. I signed the report made by Dr. Bailey. There is, perhaps, one point that I have omitted with reference to that meeting. When I started from the hotel with Mr. Gilbert and Mr. Ferguson I thought that Mr. Gilbert was probably right in his view of the matter; yet I questioned the propriety, for the paltry sum that the bulls were worth, whether or not it would be prudent to leave them scattered round through the country as they were. But I did not decide one way or the other at the hotel. After we got to Dr. Bailey's and I heard the evidence that he produced from his professional standpoint, that the bulls were diseased, I made up my mind then and there that it was not safe to let them remain as they were. After the conversation between Mr. Gilbert and Dr. Bailey,

and the argument between them was wound up by each saying all they wanted to in the matter, they referred the case to Mr. Ferguson and myself, to know what our opinions were. I decided with Dr. Bailey that I thought it was right that the bulls should be slaughtered and put out of the way, because it seemed to me from the evidence of Dr. Bailey, given from his professional standpoint, that they must be diseased, from the parentage from which they came. I never saw these cattle that were at the College farm and had no personal knowledge of them whatever. I do not know that I ever saw any cattle sick with this disease. When I signed this report of Dr. Bailey's I signed it measurably on his knowledge, but I cannot say wholly so, because I have read the disease up and have talked with some other veterinarians, but not to any great extent. Some little time after going to South Waterboro' with Mr. Gilbert I received a letter from Mr. Gilbert inclosing a letter that was sent to him by Dr. Bailey, and from him sent to me for me to read in connection with some remarks in his letter to me. In that he referred to the bulls, with reference to Dr. Bailey's feelings to him; and there were some remarks in the letter with reference to what his views were. The letter is here. (The letter was read by the chairman and is as follows):

North Greene, Oct. 25, 1886.

Bro. Bell:—I inclose letter within from Dr. B. which, after reading his "proposition," you will please return to me. I have to request that you see the Dr. and talk the matter over with him as you think. You need not let him know I have written you, or that you have seen his letter. You may say to him I go to Washington county Wednesday, to return on Saturday. I think there has been about fooling enough over the Bucksport matter and I want it dried up. I never can consent to have anything to do with the matter further than as advisory to Mr. Kent.

Yours truly,

(Signed) Gilbert.

Mr. Bell:—After receiving that letter I went to see Dr. Bailey, and the first question he asked me was whether I had heard from Mr. Gilbert, saying that he had written him a letter and had received no answer. I explained it to him by

saying he had gone away. He said, "Have you received a letter from him?" I evaded the question at the time, for I did not feel as though I ought to inform him, but was finally obliged to do so or tell an absolute lie, and I told him I had received a letter from Mr. Gilbert, and told him what the letter contained. I immediately wrote to Mr. Gilbert saying I had seen Dr. Bailey and Dr. Bailey had cornered me so I had to explain that I had heard from him (Mr. Gilbert). Some little time after that I received a letter from Mr. Gilbert saying that he wanted me to assist in making up the report, and in substance that the Legislature was anxious to have a report from the Commission, and he had written Dr. Bailey and wanted me to meet him at Woodford's Corner and go into the city with him, and then, with Dr. Bailey, to go to Augusta and make out the report of the doings of the Commission. I met Mr. Gilbert at the depot at the appointed time, and he got off the train. I said: "You are not going into the city?" He said No, as it was no use; he had heard from Dr. Bailey and he did not propose to make any report with him, refused to make any report. We went into the depot and had some little talk before the train arrived, and then he got on and came back. In the conversation he asked me if I would go down to Augusta with him. I told him that I did not feel willing to sign such a report as he proposed to make; that I believed Dr. Bailey's suggestion was a proper one, and I could not conscientiously sign a report without referring to these bulls that had gone out from the College herd; I thought they ought to be put out of the way and it seemed to be the duty of the Commissioners to at least recommend it. He said we had nothing to do with it; that it was none of our business; that no evidence of their being diseased was before us, and he used the same language or similar language to that which he used at our meeting with Dr. Bailey. I said: "Well, there is one thing about it, I never have signed any report that has been made. You have never requested me to do it, and I do not feel as if I could go this one if I would." He told me he did not know what he should do, as nobody but

himself felt so about it. As he and I were the only other ones on the Commission he thought it was my duty to go with him and sign the report. I told him I could not do it conscientiously. He said: "There is one thing about it: if you do not do it I think the Commission will be broken up, and my opinion is that they will put the State Board of Health on the Commission." I said, "Very well, I shall accept the situation whatever it may be. I don't propose to do it." He urged me very strongly, and finally he said he wanted me to come down Thursday morning and sign it if I would. If not he would go down and make the report. I told him if I changed my mind I would come, and unless I did, I gave him to understand that I should not. In conversation with him then, in speaking of Dr. Bailey and the bulls that had gone out from the College herd, I said: "You know what was done with the Kent bull, I suppose? You know Dr. Bailey paid twenty dollars out of his own pocket and had that bull killed. I understand, besides, that the lungs of the bull were sent to him and that he found unmistakable evidences of disease, and he was not satisfied with that, or in other words wanted more evidence, and he sent a part of the lungs to New York and has since had testimony from veterinarians there that examined the lung that there were unmistakable traces of tuberculosis in the bull." I don't remember whether Mr. Gilbert said he was aware of the fact or not, but I told him as I understood it from Dr. Bailey. When I told him of the Kent bull I remember that he remarked something like this, that if Dr. Bailey had minded his own business there would have been no trouble with the Kent bull. He felt, as I understand him to say, that Dr. Bailey had busied himself and had really made trouble unnecessarily; that if he had kept quiet there would have been no trouble about it. I have here the letter which I received dated Jan. 13th. (The letter was read by the chairman, and is as follows:)

Skowhegan, Jan. 13, 1887.

Br. Bell:—Meet me at station on down Lewiston train on Monday next, and go into Portland station with me. The Legislature is in a stew over

the fact that we have not made a report. It must be done at once. I have written the doctor to this effect, and have asked him to be at the station and go to Augusta and fix it up.

Write by Saturday mail that I may know what to depend upon.

Yours,

(Signed) Gilbert.

Mr. Bell:—I met him at the station the following Monday, the 17th, and had the conversation with him which I have stated. I also received from him letter dated Feb. 8th, '87.

(This letter was read in evidence, and is as follows:)

STATE OF MAINE.

Board of Agriculture,
North Greene, Feb. 8, 1887.

Br. Bell:—I was surprised to find you mixed up with the mischief connected with that cattle disease matter. I don't know how to account for it on the estimate I have held of you, and after what you had said to me. I am sadly shocked over it.

I hope to see you at the Farmers' Institute at City Hall next Tuesday. I am now at liberty to reveal a secret bearing on yourself.

Hoping to meet you, I am,

Yours,

(Signed) Z. A. Gilbert.

Mr. Bell:—After this letter was written I met Mr. Gilbert at Dr. Bailey's house, where I went to see Dr. Bailey, and Mr. Gilbert was there. Mr. Gilbert came out and got into my sleigh and we went on a short ride, and whether he revealed the secret to me I do not know; but I accepted what he said as an explanation of what he wrote, that is, the secret. He did not say and I did not ask him if that was what his letter meant. What he told me amounted to this, that so far as my being ignored by the Cattle Commission, he was not to blame; that it was Dr. Bailey more than himself. Whether he meant to give me to understand that that was the secret referred to in his letter or not, I cannot say. But he tried to relieve himself from any blame in the matter of my not being countenanced or recognized as one of the Commission, which I had not been fully; had not been consulted as other Commissioners had been. And I felt it somewhat, of course;

but then, not enough to lay up any hardness at all. We never had but one meeting of the board while I was on it. I have no other letters from Mr. Gilbert except the one for me to go to South Waterboro', which is not of importance. Whenever I was called to serve on the Commission I was called by Mr. Gilbert. There was one case, a glandered horse, where I was called upon by Dr. Bailey, I think. It was a case in the city. I do not remember that I ever received any letter from Dr. Bailey. I was on the Commission with Dr. Bailey three years the thirty-first of this month. I think Dr. Bailey did ignore me. I do not dispute that Mr. Gilbert told me the truth. I signed this minority report. I read the report and also heard Dr. Bailey read it. I believed all the things stated in it and that is why I signed it. I understand that report to give a full account with reference to the disease at the College. It traces the disease from mother to offspring, &c., of the cattle in the herd. Perhaps there is nothing in the report which shows that these bulls that had gone out from that herd are diseased. I think the Kent bull was diseased because I heard the letter read from Dr. Michener with reference to the condition of the lung, and I had the testimony of Dr. Bailey in regard to it, and I believed it. I did not see the lung of the Kent bull. I do not say that Mr. Gilbert stated at the City Hotel that if the bull was diseased they would have nothing to do with him. I said that he said that we had nothing to do with it. He gave two reasons why, and one was that we had no law and the other that there was no evidence that the bull was diseased. He said Dr. Bailey had been and examined the bull and pronounced him well. I think that at the time Dr. Bailey examined him he had no evidence but that he was well. I thought the bull was not well for the reason I have given—from what I have learned from veterinarians in reference to the disease I thought it could not be possible it could be sound, being dropped by a dam so full of disease as Princess Alba; so it could not be that the calf was free from the disease.

I did not know whether Princess Alba was sick or well when she dropped this calf. I did not know anything about the thirteen bulls sent out from there, except what I learned from Mr. Gilbert. I never learned they were sick and have not up to this time. I believe they are sick. I did not contend with Mr. Gilbert at the meeting at the City Hotel or afterwards but that he was right as to the law in regard to the Kent bull; I did not contend but that he was right. I did not make any contention about the law at all. Mr. Gilbert said we had no law; Bailey said he thought we had. If the bull was well I should have no doubt that the Commissioners had no right to interfere with him; but I do not think he was well. I was not satisfied about his being well. I did not know where any of these bulls were except the Kent bull, and never had received any information. Mr. Gilbert never said anything about where they were or anything about it. I remember perfectly in the conversation that evening that Dr. Bailey indirectly asked where the bulls were, or in other words he said: "If you will tell me where those bulls are I can prove to you or show to you that some at least of those bulls will give evidence of disease." That was the idea that he presented. Mr. Gilbert replied that he had nothing to do with that; he did not, at any rate, tell him where they were. He did not tell Bailey that he had information as to where the bulls were at that time. He did not answer the question as to where the bulls were. He did not pretend that he knew, directly. I received no notice from Mr. Gilbert as to the cattle disease at Orono; never heard anything about it except what I saw in the papers. Dr. Bailey who lived near me said nothing to me about it. He was secretary of the Commission. I understood that Gilbert wrote to Bailey to go to Orono.

TESTIMONY OF GEORGE H. BAILEY.

By Mr. Walton:

Q. I believe you made a report in full of what you found there in regard to the disease of those cattle didn't you?

A. Yes, sir; too full, some of them think, I believe. I endeavored to make a full and fair report of that trouble at Orono.

By Mr. Allen:

Q. I wish you would state to the committee what occurred when you went into the stable at Orono in examining those cattle before you went out into the field to examine the dead creature?

A. I went out into the barn and met Prof. Balentine, Prof. Fernald, Prof. Jordan and, I think, Mr. Gowell, and some of the men were there looking over the cattle. I looked them over casually. I do not think I ever saw a finer lot of cattle than they were. They deceived me very much, I am willing to admit now, right on the start, as to their true condition. They looked well and appeared well, and looked full and sleek, and in good order and flesh, and I listened some time before I heard a single cough from an animal. Finally I asked Mr. Gowell if the cattle did cough; and he told me that first and last he had heard all of them cough but one. I kept listening, and one after another coughed. I took the temperature of several, quite a number of them.

Q. How did you do that?

A. By a thermometer in the rectum, and I found the temperature almost universally in those that I tried about 103. That of itself is a suspicious symptom of pleuro-pneumonia, or tuberculosis either. I examined the first cow as we entered by auscultation and percussion. That was the Princess Alba. She had a flatulent abdomen and her elbows stood out and she had some little labored respiration. I examined her on one side and found no alarming symptom, and said to Prof. Fernald, "You will have to show me something besides this to make me condemn her," and I think I had said before that, "I think you are more scared than hurt here." I went round the other side of Princess Alba and percussed her and found marked dullness over the whole lung. I think I had then been in the barn ten minutes. I turned round to Gilbert and said, "Gilbert, you have got tuberculosis in this herd.

You can depend upon that. There is no pleuro-pneumonia here." This was a long time before I went out into the field. I knew those cattle had tuberculosis before I went out of the barn. These gentlemen must not think I was such a fool as not to know that. I asked for the privilege of going out in the field because I wanted to verify my diagnosis. So after a while I did go out in the field to see that animal, and that proved the correctness of my diagnosis. I afterwards gave more of them careful examination and looked over the herd very carefully, and I came to a very solid conclusion. That is the first visit I am speaking of. It was on March 6th. Not only from seeing the cattle in the barn, but from that lung in the field I knew they had the disease. I had no doubt about it and told Gilbert so. They had a temperature of 103 and over. I took the temperature of lots of them. My first impression was that a part of them would have to be killed and a part of them could be saved. Part of them looked so well that I thought it was not possible for them all to develop the disease. That was my first visit. I think that at that visit I recommended taking out about ten or a dozen of the animals and putting them in the horse stable, those that I knew were diseased, and they were moved into the horse stable by themselves. They were the worst cases there. A good many of the others I never examined until the morning of the slaughter.

By Mr. Libby:

Q. Do you think they were all sick?

A. They all proved to be, yes, sir, afterwards.

Q. When you killed these cattle do you think one of us farmers could have discovered they were sick, by their lungs?

A. Yes; if a farmer had seen the lungs and did not know they were sick he had no business to be a farmer any longer. There were unmistakable lesions in about every lung.

By Mr. Rich:

Q. Did you see them all?

A. I saw them all except a very few of that herd. There were two or three that were not opened. Mr. Gowell had

some hesitancy. One or two cows were favorites of his and he did not like to have them cut, and we didn't open them. Several were not opened, because they were very thoroughly diseased, and they were condemned on general principles that they were not fit to live.

Q. In regard to these cattle: if you did not hear them cough, would there be any way of knowing they were sick?

A. That would depend upon circumstances. Some of them there you could tell. Most anybody who had ever seen the disease could have identified it in those put in the horse stable.

By Mr. Libby:

Q. You state that you knew positively?

A. Yes, sir, I did. If I hadn't I should not be fit to be on a cattle commission long, because there were some very marked cases.

Q. What would be the symptoms of the disease in a fat, smooth animal? how would you tell the disease?

A. The same as in a lean one; elevation of temperature, auscultation and percussion of the lungs, which is all treated of in my report. General external symptoms, rough, staring coat, standing out of the elbows, and rapid respiration if you move them.

Q. You are speaking of the last symptoms of the disease now?

Mr. Walton:—He asks you in the case of a sleek-looking animal.

Witness:—You could tell by auscultation and percussion of the lungs.

By Mr. Adams:

Q. Do you or not believe you would be able to discover tuberculosis quite early after the lungs became affected?

A. O, yes, most any time after the lungs became affected we ought to be able to diagnose it. By auscultation and percussion we can locate the diseased portion of the lung.

Q. If you gave the diseased creature a little exercise, what would be the result?

A. It would be increased respiration.

Q. Noticeable?

A. Yes, sir. They would have only a portion of sound lung tissue to breath through, and the breathing would be more rapid.

By Mr. Rich:

Q. You do not find the flesh to go off until after suppuration?

A. No, sir. Emaciation is in the later stages as a rule; emaciation, debility, diarrhœa, set in and follow each other rapidly.

By Mr. Adams:

Q. Is it a fact that sometimes animals in early stages of this disease will take on fat more rapidly than when well?

A. Yes, sir, that is the rule in a great many cases.

Q. From all you have read in regard to the contagion of this disease, from all you know of it in other cases, what do you say with regard to the contagion as demonstrated by the facts of the disease at Orono?

A. In all well advanced stages of it I have no doubt about the contagion. There are stages of it in which I should doubt its contagion.

Q. Have you or not reason to suppose that the disease made more rapid progress there in the cattle than you have ever known through your knowledge or from writers—than it usually does?

A. Yes, sir, I think this is the most virulent attack I have ever known or read about; I do not think we have a case on record where it approached such rapid conclusions as it did there. That disease had existed in that herd for a long time. They had enough there through the terms of the various superintendents to leaven the whole lump. They had had animals there with that disease coming down all the way through, and the animals that Gowell bought and carried there were brought in contact with those diseased animals. They were well when they were carried there, and I have no doubt about the soundness of the herds from which those

animals were bought. When he brought in new ones there was always enough of the old stock left to infect those brought in.

Q. Have you or not an idea of the first creature diseased there?

A. As far as we are able to trace it, it is given in my report as the cow sold to Mr. Boardman by Mr. Farrington in '76, ten years ago. That is the first animal to which we have been able to trace the disease. Mr. Gowell has assisted me in that.

Q. Have you been able to trace that cow back to a contaminated parentage or herd?

A. I have not.

Q. State to the committee your professional opinion as to transmitting this disease to the human family through the milk by disease of the cow.

A. There is no doubt of it on earth, in my opinion, in many cases; there are certain stages of it where I think it would be developed.

Mr. Libby:—What would be those stages?

A. I think where you had nothing but miliary deposits it would be very doubtful about transmitting it by way of the milk. But I think where the mammary glands are affected, or tubercles broken down, you may get contamination through the milk.

By Mr. Adams:

Q. What is this disease, and what is there about it different from any other disease?

A. No difference between this disease and consumption in the human family.

Q. I mean peculiar to the disease in cattle. What is the difference between a diseased spot in this and in the disease of pleuro-pneumonia? I mean right in the tissue itself?

A. In pleuro-pneumonia the lung is congested and solidified, and we get a marbleized appearance. In tuberculosis we have different portions of the lung affected, and we may have a diseased lung and still have left perfectly sound

portions of it. Tubercles form and grow, being at first a miliary deposit, finally progressing until they break down into pus, which when freed is coughed up and given up in the air expired by the animal. In this is the bacilli or specific germ, which is a thread-like particle, or filament, in width about one-fifth of its length and in length a half or two-thirds the width of a red blood-corpuscle.

Q. Do you understand that this disease can or cannot be propagated without one of these filaments?

A. I understand it cannot by contagion.

Q. And that in all cases of tuberculosis this peculiarity is found?

A. Yes, sir; you have got to have that specific germ to propagate it. I think it is the same identical germ that is in human consumption. I think we get the same in the human lung. They both have the same results, and would inoculate a man from an animal or an animal from a man. The disease can be transmitted, decidedly.

By Mr. Walton:

Q. Do you mean to say that the disease itself can be transmitted, or a tendency towards the disease?

A. Both. There is a pre-disposition in the very animals with which we are dealing in this case (in Jerseys) to consumption. Inbreeding has contributed a good deal to that pre-disposition in that class of cattle. That is, inbreeding weakens the animal. They have narrow chests and weak lungs, and are more susceptible to the disease. There is a great difference in the susceptibility of animals to the disease, one taking it readily and one resisting it with the same surroundings.

Q. So your idea is that a calf may be dropped with the germs all developed in the lungs or any part of the calf?

A. Yes, sir; time and time and time and again we have had cases to prove that. They become diseased *in utero*. The very fact of abortion shows that. The case of the Willard Insane Asylum to which I have alluded in my report

shows that calves aborted from diseased cows were full of tubercles.

By Mr. Adams:

Q. Does, or not, the disease often seize the uterus first?

A. Yes, the uterus, the fallopian tubes and the ovaries become affected. In a good many cases the animals fail to breed, and many did at Orono.

Q. If a cow was diseased in the womb with tubercles, and should have a calf, in what condition would you expect to find that calf?

A. I should expect to find it in a diseased condition when dropped.

By Mr. Walton:

Q. When tubercles first commence to form, isn't the disease there in the blood of that animal?

A. Yes, sir, most certainly.

Q. Then why wouldn't the milk be unhealthy even so early as that?

A. The milk in those cases would be more especially impregnated with it if the mammary glands were affected. We found cows at Orono whose milk was very bitter from the disease.

Q. Suppose a cow appeared healthy, but had the disease about her and the tubercles had begun to form. She would have the disease in her blood?

A. Yes, sir, in the later stages.

Q. Then could the milk be properly said to be healthy?

A. It would be almost impossible to tell just how much the cow would have to be affected. You would find the germ in the milk if it was affected.

Q. If the blood was unhealthy through the disease lurking in the system, must not the milk be more or less affected?

A. I should expect it to be.

By Mr. Adams:

A. Are, or not, these bacilli found in the early stages of tuberculosis?

A. Yes, sir, they are there all the time, but are not freed until the tubercles break down and liquefy.

Q. Now, in the early stages of tuberculous deposit these bacilli are found, and they are the elements of transmitting the disease; and would or not there be some danger of transmitting the disease at that time to a child through the milk?

A. Yes, sir, by the milk.

Q. The milk would contain them if the blood did, would it not?

A. Yes, sir, most probably.

By Mr. Rich:

Q. When you find bacilli, then, do you not consider the milk impure?

A. Most certainly.

Q. Unsuitable to use, and it would be poison to a child?

A. It would affect a child, because their powers of absorption are much more active than in grown people. In a man what might simply disturb the digestive organs would prove fatal to a child. There is not a doubt that it is contagious by ingestion, as is proved by the disease in the hogs from the offal of slaughtered cows killed on account of the disease. There have been a number of experiments of feeding milk to pigs which have demonstrated and proved the position I take. Veterinary surgeons have experimented very extensively on rabbits, guinea-pigs, foxes and other animals, and are able to propagate the disease in them by it.

By Mr. Libby:

Q. None of the meat would be poisonous if cooked?

A. That would kill every germ in it and make it harmless. Heated to 212 will do that.

Q. Do you have an idea that the lungs of this Kent bull or any part of them would show any disease that a farmer or any man could detect?

A. I should not think they would. Externally they did not show any to me. They were sent to me by express, and until I made the section I failed to discover anything wrong in them. They looked fair.

Q. Now don't you think that under ordinary circumstances, if that bull had been kept in airy quarters and in a healthy herd, he might have lived ten years?

A. He might have lived ten years I will admit. They sometimes live to a good old age with tubercles in their lungs. It is a chronic disease, but still is very progressive in a good many cases. In some cases it might terminate fatally in three months, what would be galloping consumption in a man. That Kent bull was out of Princess Alba, and she was one of the very worst cases at Orono. We killed her in March, and she dropped the bull Kent had the previous June. And with the great amount of deposit she had in her lungs when we killed her—Gilbert said I was crazy to kill her—I do not think any sane man would advise even unofficially the use of that bull. His lungs percussed clear, but he had a staring coat that I didn't like the looks of; it stood out pretty well on him. When I saw him in July I do not think anybody would have discovered any apparent disease about him; but when I found he was out of Princess Alba I did not think it was possible that he was fit to serve.

That Kent bull was in bad condition enough, beyond any doubt on earth, to have transmitted it to his offspring, at the time he was killed, but I do not think an expert could have made out enough disease in that bull at the time I first saw him to condemn him. If I had examined that bull and found no trouble except in the lung, I should still say that he could have transmitted the disease to his offspring. He had enough in the lung to transmit it. A bull can do a great deal more mischief in a year than a cow.

By Mr. Allen:

Q. Would you advise the killing of those other bulls that went out from the College farm if they could be found?

A. I would advise just as I always have. I would have them all inspected and killed if necessary. I would kill every one that showed the disease. I would not use one of them or advise any one else to do so under any circumstances, because I know they were all out of thoroughly diseased

dams and I do not think it is right and proper to use them for stock purposes.

By Mr. Adams:

Q. Suppose you should kill a number of those bulls, finding half of them diseased that you did kill, what would you recommend about killing the others of them?

A. I would recommend feeding them off for beef. If they are well enough for that, that is what ought to be done with them. I have seen none of them except the Kent bull. If there was disease in an animal it could positively be discovered by an autopsy. If an animal were slaughtered and showed no signs of disease to an experienced eye I should say it would be perfectly safe to eat it; if there was the disease germ lurking in the animal's whole anatomy it would be destroyed by cooking. If such an animal showed no signs of disease to an experienced eye I should say he was wholesome and safe; no doubt about it.

Mr. Libby:—A good many of those animals in the College herd should have been eaten?

A. Yes, sir, I think so. I know Gov. Robie said if they would send some of it to him he would agree to eat it. That is what he told me.

By Mr. Walton:

Q. If that disease is in the blood, is the milk safe at any time?

A. I do not regard it so.

Q. And the disease must be in the blood if it begins to show by a deposit, even if it is simply a hardened material of the lung?

A. Yes, sir.

Q. In other words, if it was not in the blood you would not find any deposit at any stage?

A. It must be in the blood to find a deposit.

Q. Then, granting that it is in the blood, can the milk which comes from the blood be healthy and proper food for a child, in your judgment?

A. The milk that was nourished by that impure blood would be impure milk, most certainly, and while it might not poison a man, I think it would disturb his digestion. He might have to drink considerable of it to be affected by it, but he could drink enough to be. I think if the lymphatics are affected, even if the tubercles are not broken down, that the milk would be unfit to use.

By Mr. Cornish:

Q. Tell the committee in your own way what took place between the Commissioners in regard to the Kent bull?

A. I was notified July 27th by an official notice from Mr. McAlister as chairman of the selectmen of Bucksport to come to Bucksport and see a bull bought from the College herd. I went and saw the Kent herd, and as I say to you, and stated to Gilbert on my return, the bull appeared well, and I put Kent off by saying I would go and consult Gilbert and see what could be done. I did not know what cow that bull was out of, and I immediately communicated with Gowell and found he was out of one of the worst cases there. I wrote to Gilbert and he thought the business didn't deserve a call from me; he knew all about it before and said we had no proof that the animal was from diseased parentage. I sent Gowell's letter to Gilbert, that the calf was from one of the worst cases, supposing he might modify his view. He did not, however, and said a decision from me that the bull was diseased would bind the College to refund, and if Kent didn't want to use him he could sell him. I was taken sick in August and had a severe attack of sickness, confined to the house some six weeks, and in the meantime nothing was done about it. Finally I saw Gilbert, and Kent had written to me about it. Gilbert said he would speak to the Governor and Council about it and see what could be done. Nothing was done about it. Finally Kent sent me a letter, which I have here, with a request from Mr. McAlister that I would present that communication to the Governor and Council, which was on Oct. 9th.

(Witness read letter from McAlister dated Oct. 9th; also letter dated Oct 8th; as follows:)

Bucksport, October 9, 1886.

Dear Sir:—I enclose Mr. Kent's letter to you. I trust the matter will be disposed of at the next session of Governor and Council, that Mr. Kent may know what to do.

Respectfully yours,

G. W. McAlister.

Bucksport, October 8, 1886.

Dr. Bailey:

Dear Sir—I have been informed that the Governor and Council meet the 14th of this month, and as nothing has been done in regard to that animal I bought of Mr. Gowell of the diseased herd of the State farm, I thought I would write you how I feel about the matter. I cannot believe those gentlemen can be so unjust as to try and make me lose that animal or so unwise as to have him kept in this, or any other, county in the State. I shall be a great loser at the best. I shall lose one year's service of my own cows and their calves besides what I might have had from the public, for I dare not use him. I am a poor man, my farm is under one thousand dollars mortgage, and I have worked hard for twenty years grading up and buying such animals as I thought come within my reach, until I have a herd of Jerseys I feel proud of, and am not ashamed for any man to see, even Gov. Robie and his Council, and to have them all swept away in two or three years by using that bull is more than I could bear; it would ruin me, for I am too old a man to begin again where I did begin twenty years ago, and I have not the means to do any different. If I had had means I would have killed him long ago, but as it is, I have kept him in strict quarantine ever since the disease broke out on the State farm. He has not been allowed to go with any cattle of any kind, I have hauled water for him half a mile all through the drouth, fed him hay and grain all summer, believing something just and honorable would be done by the State officers.

I bought him in good faith, took the best of care of him, and to get an animal that would bring certain ruin upon myself and herd, according to the report to Gov. Robie of the Doctors at the State Herd, is, I think, decidedly unjust and cruel in the extreme for a poor man without some recompense from some source. I do not know who may be liable, but it does look to me there is some one to back this whole thing and some one to make it *good*.

Brother Gilbert, Z. A., for such I will call him, for we both belong to the order of P. of H., advised me to keep him and use him; Mr. Gowell of the State farm did the same. Wonder if Mr. Gilbert would buy him for his own herd or for the College farm when they stock up again; if so, I will keep him for them. I do not know what the gentleman can be thinking about. It would be no worse to have another herd exterminated on the

arm than to have two or three towns in Hancock County have this contagious disease and cost the State the same amount of money. There is too much risk in using him in any community, private or publicly, and he must be got out of the way some way or other (unless the State officers take the responsibility upon themselves).

I think it is a shame and imposition to advise the use of such an animal. We can scarcely take up a paper but we see something of this terrible scourge in some parts of our country, and thousands upon thousands of dollars is lost by its fatality, and shall we let it spread in our own beloved State when so small a sum (for I only ask for fifty dollars) and a little caution will put an end to the whole thing?

I think I have had great patience, for I have waited something like six months to know what disposition would be made with my case by the officers of the State, and it is but just and right for them to say what they will do or if they intend to try to throw the loss upon me. I want to know, when the Governor and Council meets, what they will do, that I may know how to act on my part.

The correspondence with the State officers has been done mostly by Mr. McAlister and Mr. Cunningham, our town officers; they have taken great interest in this matter that the disease should not spread in this community.

I have great respect for your gentlemanly visit at our place and I shall hold you in great esteem as a true and faithful officer of the State.

Hoping that this matter will be justly and honorably disposed of immediately, I will remain,

Very truly yours,

S. H. Kent.

Dr. Bailey :—I presented Mr. Kent's letter to the Governor and Council and asked them for their advice about the matter, but they could only act as advisory to us, and the matter was finally left to Mr. Hatch, as I understood it. Nothing was done about it until I received a letter from Mr. McAlister saying if the State would pay $25 he would have the bull killed. I made that proposition to Gilbert and he would have nothing to do with it, and said he had no compromise to make. I told McAlister if he would take $20 I would pay it myself for the privilege of seeing the lungs of the animal. He accepted my offer and sent the lungs to me by express. I sent a part of them to New York and kept a a part of them myself until I could make use of them. I made a section and found some miliary deposits, and found tubercles in the lung. I sent the upper lobe of the lung to

Dr. Michener. I have the letter stating what he found. I have more than one letter from him. I consulted him when my attention was first called to the bull and asked his opinion about it, and I received this letter in reply to it. (Witness reads letter).

Dr. Bailey, D. V. S.:

Dear Sir—Your letter of 14th is rec'd. I do not see how any one can advise the keeping of said bull for service.

It must be remembered that tuberculosis is held to be hereditary by all best authorities, both human and veterinary. If this be true, and I believe it to be so *unquestionably*, then this particular animal is certainly an unsafe sire, or to put it differently, is a sire almost *certain* to propagate the disease. *He should be killed.*

Mrs. M. is at present out of the city and my work for the Bureau of Agricultural Industry will, I fear, keep me from getting down to Maine this summer.

With kindest regards to all, I am,

Sincerely yours,

(Signed) Ch. B. Michener.

He also wrote me on Nov. 19th. (Witness reads letter of that date.)

My Dear Doctor:—Your letter rec'd. I do not remember what L & L was made to refer to, but most likely "lungs and lymphatic glands involved." In some cases I used L. L. (without the &) to mean left lung. O. K. means all right, but I do not remember now of any grown animals that were entirely free. Those two cases are probably an error, then.

I am glad you wrote me concerning this, as it gives me an opportunity to say that by chance I saw a portion of lung left by you at the Am. Vet. College, said to be from the "Kent bull" (Dr. Liautard told me), a calf of one of the cows of Orono herd. These lungs show unmistakable lesions of tuberculosis. Why don't you hunt up all such bulls and have them destroyed? There can be but *little* doubt that they will all sooner or later develop this disease. They will serve to extend it in *many* herds when their services are required. The Com's and the *State Veterinarian* more than all will be, I think, directly responsible for every case of such extension. In the eyes of all veterinarians you will deserve censure if you fail to follow up each animal. They may yet be used as beef. Probably your hands are tied. I think this the case, for I know you well enough to judge that you are not one to avoid a duty, no matter how unpleasant. With regards to all, I am,

Sincerely yours,

(Signed) Ch. B. Michener.

Dr. Michener was present at the College and acted with me when the herd was slaughtered. There were also two heifers out of Princess Alba that had been killed, Jersey Lily and Crummie, 28 and 29 of my post-mortem list. They were killed by Mr. Gowell previous to my knowing anything about the herd, in '85 some time, one in March, I think, and one later. Those are the two stiff-neck heifers, a symptom which they connected with a high trough. Awry neck is a symptom of tuberculosis. The glands in the neck become affected and it makes them carry their necks awry. I heard Gowell testify as to the stiff-neck heifers. I think they were suffering from tuberculosis, and their being out of Princess Alba more than confirms me in that opinion. I first knew where these other bulls were when Mr. Gowell gave the list to the committee the other evening. I had not known anything about them before that time. I had talked with Mr. Gilbert about it at my house, and had endeavored to have him tell me where they were if he knew; I do not know whether he knew or not. I never asked him directly whether he knew where they were. I told him if he would show me the bulls I would agree to show tubercles in some of them, and eat them if I did not.

Q. State what took place at the meeting of the board Oct. 20th at your house.

A. The three commissioners came to my house. I had been sick, and we had quite a discussion over the subject of what should be done with those bulls. And I was very urgent that they should be inspected and something done about them, and Gilbert was just as urgent that nothing should be done about them, for which he gave two reasons; one was that we had no law that would enable us to have anything to do with them, and if we did we had no proof, only a suspicion that they were diseased. Those are the two positions he took. I told him I thought we had abundant proof after seeing the lungs of the dam he came from, and knowing that other animals from the same dam were thoroughly diseased, and I could not see it in any other light. We could not agree about it.

The other two agreed with me, and there it hung. I told Gilbert in regard to the report that if we remained of the same opinion I did not see how we could sign any report, knowing that he would not sign any I could make, and I could not sign any he would make; and the matter was left there, and nothing was said about it for some time afterwards. I offered to give him access to all my correspondence and authorities and let him and Bell make any report they liked and I would have nothing to do with it, or make a report of our whole proceedings, if he would sign my recommendation for the destruction of those bulls.

By Mr. Walton:

Q. Are there any further letters that you have not produced?

A. I have other letters. I have a letter from Gilbert under date of Jan. 29th. I have other letters from him, some referring directly and some indirectly to the cases at Orono. I do not think all the letters I have bear directly upon the question.

Mr. Walton [After looking at letters]:—I guess you had better read them.

(Witness thereupon read letter dated Jan. 29, 1887, as follows:)

STATE OF MAINE.

Board of Agriculture,
North Greene, Jan. 29, 1887.

Dr. Bailey:—Your letter found at College. Am glad to have confidence confirmed that there was no treachery between you and me. You need not fear any conspiracy against you at the College for they have always stood by you, and sworn by your authority at all times. The only trouble was that lying rascal between you and them.

I sent your Report yesterday. It is exactly in conformity with the date you kindly sent me save that I left out some cases where there was no disease found.

I saw McAlister Thursday evening and talked over the bull case. He says plumply that he agrees exactly with me as to the application of the law to that—

[The remaining portion of this letter was not to be found among the papers. STENOGRAPHER.]

Q. Who was that "lying rascal" referred to in that letter, if you know?

A. I know quite positively who it was.

Q. Who did you understand it was?

A. Hall C. Burleigh. We had just been writing in reference to him, and he sent me that back. I had received a letter from Gilbert after the hearing before the committee (Witness reads letter dated Jan. 21st, as follows:)

STATE OF MAINE.

Board of Agriculture,
North Greene, Jan. 21, 1887.

Dr. Bailey:

Dear Sir:—All who heard you the other day before the Committee understood at once that you was siding for Burleigh in a malicious attack upon me. It was a great surprise to me that you should do so, for our relations have been pleasant hitherto throughout our association together, and I am sorry to have these relations thus marred, not only as between us, but also to give it away to the public.

Regretting it more than words can express, and still more regretting that it has gone where it cannot be recalled. My Report is in type.

I am

Resp'y yours,

(Signed) Z. A. Gilbert.

—I immediately wrote to Mr. Gilbert that there was not a word of truth in my having any malicious intention toward him. I had seen him at the meeting and I shook hands with him after the meeting, and in a day or two after I got that letter. I did not know what it meant, and I wrote him stating it was understood differently between us, and that was all as far as I was concerned.

(Witness read letters dated Jan. 25, Feb. 1, '87, and March 13, '86, as follows:)

STATE OF MAINE.

Board of Agriculture,
Augusta, Jan. 25, 1887.

Dr. Bailey:—Your letter of last evening was duly received and it gave me much pleasure to be assured that there was no intent on your part to aid Mr. Burleigh with his malicious work against me. I now realize that I ought not to have countenanced the idea for a moment, but you will, I know, pardon me for being sensitive when my honesty is assailed and prob-

ably I was, and my friends shared it with me, over suspicious on one or two points. On the whole I think you helped me much more than you did Burleigh. In fact I do not think you substantially corroborated him in any particular.

I have taken your data and have made up as accurate a report of our "doings" as I knew how to. I add nothing to it whatever, leaving it a naked statement of what we have done, and I sign it as President of the Commission. I would be glad indeed to submit it to you before presenting to the legislature if there were an opportunity. If you are likely to come this way soon I will hold it for you to see on information to that effect. Please let me know.

Allow me to set you aright on one matter. *I never had a word of discord with Mr. Burleigh in my life*, and the "quarrel" is wholly on one side.

The decision of the Committee is unanimous in my favor and the case is dismissed without further hearing.

Doctor, I now have a direct question to ask of you. I have been told to-day that two of the Commissioners were making up a report of our doings to be presented to the Legislature. I can't for a moment believe you are doing this, and ask you frankly to inform me if you are not doing it. Mr. Burleigh made the above statement this afternoon.

Now, Doctor, having received the assurance that your friend y feelings toward me still continue, I wish to assure you of mine in return; and trusting this confidence is fully reciprocated I am

Resp'y yours,

Gilbert.

Augusta, Me., Feb. 1, 1887.

Dear Doctor:—Enclosed find Dr. Gerrish's letter which was overlooked when I wrote last.

I go to Augusta to-morrow and shall go to Portland with this letter and will call at your house. Fearing I may not find you at home, I send the letter of Dr. Gerrish by mail.

I want to see you much, for there are matters we ought to talk over, and must do so. There is lots of lying about you as well as me, and I know we have both worked faithfully, and *events have proved we have worked efficiently* in these matters. I want to see you about some of these matters in which we are jointly concerned.

Yours,

G.

STATE OF MAINE.

Board of Agriculture,
North Greene, March 13, 1886.

Dr. Bailey:—I staid up to Gowell's to complete some work, among the rest to draw up enclosed papers which I wish you to sign and forward to Mr. Gowell. They will cover the forms of law in our action.

I ought to be with you in case Dr. Salmon visits the cattle and I see no other way than that I must.

You will bear in mind that my mail from Portland leaves that point on the 1.20 P. M. train and reaches me at 6½ in the evening. If you have occasion to telegraph to me send dispatch to *Greene* with orders to forward by special messenger. It is a railroad station but they do public business.

Also send word to *Mr. Ferguson*, *Monroe*, and have him go up with us.

Yours,

Gilbert.

I think those are all the letters I have from Gilbert that bear directly upon the case; they are all I have been able to find.

(Witness also reads letter dated Oct. 30th, '86, as follows:)

STATE OF MAINE.

Board of Agriculture,
North Greene, Oct. 30, 1886.

Dr. Bailey:—Returning this noon find your letter. Regret your decision very much for I believe you are doing wrong. You will oblige me by returning my last letter to you.

Enclosed you will find the letters you refer to.

If you go to Orono please report what you decide upon, for I have some business depending upon your action.

Yours,

Gilbert.

By Mr. Gilbert:

Q. Please state what your decision was that that letter refers to?

A. Yes, sir. The only copy I have of any letter that I have ever written you is the letter of Nov. 13, and the decision I made was that I had decided at that time to withdraw from the Commission and take no further action as commissioner. That letter I suppose—I am saying what I suppose now—refers to one I wrote you (Gilbert) Nov. 13th—no, it does not, because I wrote this afterwards. I do not know whether it refers to my settling the matter of the bull, or not.

Mr. Gilbert:—It does?

A. It does, yes, sir.

Mr. Gilbert:—You reported to me that you had decided it.

A. Yes, I decided to pay the $20. The fact was, when I came down to present the matter of the Kent bull to the Gov-

ernor and Council I found my commission had expired on Sept. 25th. Gov. Robie seemed anxious to reappoint me. I said he had better continue me for the balance of the year, and that would leave Governor Bodwell free to appoint whom he liked. He said he would send the commission to me. I waited but never received any, I do not know for what reason. On Nov. 15th, finding I was not going to get any, I wrote to Mr. Gilbert the letter dated Nov. 15th, which is as follows:

PORTLAND, November 15, 1886.

My Dear Sir:—Your letter of Oct. 30th was received during my absence from home, and since then I had learned you had gone east, so delayed writing you until after I had inspected the College buildings, which I have now done, returning home on Saturday. I believe every detail of recommendations, from both Dr. Michener and myself, have been faithfully and honestly complied with, and that the stables are in safe condition as they can be made through the agency of disinfection to receive stock. In your letter of Oct. 30th you say "you regret my decision very much, for you believe I am doing wrong." As that is far from my intention, I wish you would write me wherein I am doing wrong.

Is it in settling the Bucksport case upon my own private account (after consulting with Mr. Bell, in which he fully concurred with me that some settlement ought to be made), or in urging the settlement of all similar College cases upon the best terms possible? If the *former* I have in no way compromised the State or the commissioners, Mr. McAlister and myself each having agreed to pay the amount, to have the case disposed of; and if the *latter*, having your decision, both verbal and in writing (Oct. 20th), that it is none of our business to hunt up the cases, and that (Oct. 27th) "you know of no compromise ground you wish to take, and if you should yield to the majority, you would still be unconvinced." I have decided to take no farther action as commissioner, and step aside, at a time when I can leave every case that has so far been called directly to the attention of our board fully disposed of. In taking this step, I certainly hope I do not misunderstand you, Mr. Gilbert, upon any matters connected with the commission, for while, *personally*, I have none other than the kindest feelings towards you, *professionally*, there is no earthly prospect of my being able to agree with you, and I cannot consent to remain upon the Board, to be regarded as a "disturber of the peace" or as interfering with the College cases, either complicating their present embarrassments or their future prosperity. Having no desire to appear in such a role, "I had rather be right and retire than be wrong and remain," and shall always believe my duties to the State to have been conscientiously and faithfully performed, after entering my earnest and official protest against keeping for *service* any of the *bulls* that have been sold (within the last two years) from the College farm, whose *dams* we killed at Orono, and now known by us to have been *thoroughly*

diseased, as the hereditary tendency of such animals would render them almost certain to propagate the disease. Not relying upon the theory of heredity, that appears capable of propagation from parent to progeny (by which we do not mean that actual diseased condition is necessarily propagated) but more often is a diseased condition under trifling influences to develop the disease or *one like it*. I am willing to abide by what has developed in the only case I have been allowed to see, what I advised *before* the animal was killed, as well as what has developed since the post mortem of the bull at Bucksport, and which Mr. Gowell now tells me in the one he expected would first show lesions of the disease, as his dam was one of the worst cases at Orono. I believed it to be as much the duty of the Cattle Commissioners to prevent disease (when possible to do) as to stamp it out after it has made its appearance, and, in my opinion, it would be a God-send to the College, if all the outstanding cases could be settled upon as liberal terms as the one at Bucksport.

I return the letter you ask for (that of Oct. 27th) and if there are any others you have written me you would like to have I will return them, while I am willing to abide by any opinions or statements I have made to you as the only vindication I shall ever need for any act of mine while Commissioner for Maine.

G. H. B.

By Mr. Cornish:

Q. First, Doctor, will you state to the committee the conversation you had with Mr. Gowell when you went there the first time? If you have any memorandum book containing any of the minutes, just state them.

A. I had some talk about the herd, and I took a little memorandum that morning in the barn on an old prescription blank. I showed it to Mr. Gowell last week. He said that was as he recollected it. There is not much to it. (The witness at this point read the minutes referred to from his memorandum book and said that he had some questions which Prof. Fernald wanted him to ask Dr. Liautard).

Q. Did you communicate those questions to him?

A. Yes, sir, I did.

Q. Did you receive a reply from him?

A. I did. I looked for that letter. Mr. Gilbert asked me for it and I was unable to find it.

Q. Do you recollect the purport of his answers?

A. Yes; I think I do generally; he decided that the milk was dangerous to use in all those cases, and I showed his

letter to President Fernald. He saw the letter in answer, and I have failed to put my hand upon it. He decided in the affirmative in all those different stages.

By Mr. Walton:

Q. While you are on those milk questions, as I have had some questions handed in in relation to using the milk after boiling it, Dr. Bailey, I will ask you to state if you think there is any danger from using the milk under such circumstances.

A. If the milk is boiled, I think it would be rendered perfectly harmless, if the degree reached 212, I think that would kill every disease germ that could possibly be contained in the milk; there is no doubt of that. That would render it perfectly safe to use; that is the general advice of veterinary surgeons,—if they use milk that is from diseased cows, to take the precaution to boil it.

By Mr. Cornish:

Q. Your views on this matter are carefully embodied in your report to the Legislature?

A. Yes, sir; I think they were called so.

Q. Have you any reason to change your views on any point there submitted?

A. I don't know of any change that I wish to make.

Q. Your report does not contain any of the doings of the Commission other than as relates to this tuberculosis at the State College.

A. I can explain that very easily. I had only a few days before furnished Mr. Gilbert with the items of all my visits as Commissioner during the year 1885–86; he had copied it in his report. This report of mine was intended for the use of the United States Veterinary Association, that meets in Philadelphia this month—that I intended to present to them as a clinical report of these cases, because they were so interesting. When I was asked by the House and Senate for the majority report—as they termed it—I took the report I had made with some few modifications that I wished to state and presented it

simply as a report of the College cases. Mr. Gilbert used the same thing over again—that I furnished him.

Q. The other business you gave him the minutes of?

A. I did. He asked me to go down and make the report. I told him the best I could do was to furnish all the data and he could do it himself, and I would do that cheerfully, and did do so.

Q. Have you anything else in mind you wish to state to the committee, touching this matter?

A. I think it would be no more than fair to Mr. Gilbert and myself. Something occurred in regard to ignoring Mr. Bell. Two years ago this month Mr. Gilbert and I were in Governor Robie's room, and they wanted to send me up in Washington County to examine a case of glanders in Topsfield, a long route. I asked Gov. Robie if I should consult Mr. Bell when I got back. He said no. He says Mr. Bell was appointed for a temporary purpose at the time, for the foot-and-mouth outbreak, and that purpose has been served. That was the statement he made to Mr. Gilbert and myself. Since that time I have looked at it as coming from my superior officer, and I obeyed it. I have seen him in connection with several things since.

Mr. Bell was asked if he received any notice from me. Mr. Gilbert is always in the habit of notifying the committee, and it has been rather left for him to do that. He told me he was going to call a meeting on the 20th of November. He has always notified Mr. Ferguson. I never notified Mr. Ferguson or Mr. Bell either. They have always come by no particular arrangement, but he has always done it.

Q. Have you any other letters touching this matter?

A. No.

Q. Who is Mr. Boardman?

A. He is treasurer of the Gas Company of Bangor; and in looking up the first cases that developed upon the College farm I wrote Mr. Boardman and received his letter.

(Letter dated, "Bangor, Dec. 13th, 1886," was read in evidence, together with inclosure dated Feb. 3d, 1877, as follows):

Bangor, December 13th, 1886.

Dr. Geo. H. Bailey,
Portland, Me.

Dear Sir:—You will please find enclosed copy of receipt of J. R. Farrington, Esq., as follows:

"Orono, October 3, 1886,

State College Farm,
Per J. R. Farrington.

Sold to Henry Boardman,
One red Grade Jersey Cow Five years old for $40.00,
Rec'd Payment by check on Farmers' Nat. Bank Bangor.

J. R. Farrington."

P. S. This cow he called Susan, I kept her five years, when she became sick and died with what I called consumption; she gave out all at once, wasted away and died. I buried her hide and all. She always seemed in perfect health until about two months before she died.

"Bangor, Feb. 3d, 1877.
Received from Harry Boardman
Fifty dollars
on acc't J. R. Farrington,
Norton & Farrington."

$50.00.

This was for Cow Grade Durham and I bought her on November 25, 1876. She always had a cough from the time I received her until I sold her to a butcher March 8th, 1879. She had only one calf and that was a bull and it died when about 3 weeks old. This cow was when killed found to be full of tubercles on the liver and lungs and on the ribs and plates and well up to throat.

You see this receipt was given by Messrs. Norton & Farrington for J. R. Farrington, as Mr. F. of N. & F. was J. R.'s brother. I was to pay for the cow in sixty days and so on the date of receipt I was ordered to pay to them which I did. So this will explain the dates, I think; any way these are the facts as my books, receipts and orders show them to be, and I know them to be correct. I would like one of your reports when they are printed as I no doubt they will be. I also hope this statement is plain enough and think you will understand it all. Anything more that I can furnish you I should be glad to do and should be pleased to see you whenever you are in our city and can spare time to call on me.

I Remain Yours Truly,

Henry Boardman.

That cow was not mentioned in the post mortem—that was in 1876, ten years ago; that was the primary case that was developed upon the College farm.

Q. What you read "1886" should be "1876"?

A. Yes, sir; I think that is an oversight; probably this was the primary case that developed upon the College farm.

Q. The year of purchasing this last cow was 1877?

A. 1876, he purchased in Nov. 1876, and sold her to a butcher March 8, 1879, and we believe that to be the primary case that was developed upon the College farm. The first case I am able to trace to the earliest case.

Q. Have you any other letters, Doctor, touching this matter? You put in a great many last night.

A. I think I put in all that I had relating to this matter.

Q. Have you any other from Dr. Michener?

A. I have got a letter that I didn't read last night, if you would like to see it—from Dr. Michener. I have one "Oct. 25th, 1886," which is as follows:

New York, Oct. 25, 1886.

My Dear Bailey:—Your letter of 15th inst. has been delayed somewhere. As you see, I've been moving, and that may possibly account for this. Am very sorry to hear of your sickness and trust you are rapidly gaining ground now.

I return your letter enclosed to me, and must say that I can form no opinion whatever from the description given. The statements, no doubt, are true enough but there is not enough given to enable anyone to form anything more than a *guess* at the trouble. Can not understand Gilbert's attitude concerning the tubercular bulls. The more I see however of "State Boards" the more convinced I am that they should be made up of a *majority* of vets. or *entirely* of them. Outsiders can not know what these diseases mean and they fail to see the trouble and cost they entail by such fool-hardy acts.

With sincere regards to you all and hoping to hear soon of your complete recovery, I am,

Cordially yours,

(Signed) Michener.

Witness:—That is the only letter I have from Michener that I did not furnish last night.

Q. Is there any other statement, Doctor, that you wish to make?

A. I don't know that I think of anything. I spoke of that in relation to Mr. Bell because Mr. Gilbert and I both had that view of it—that we were not to consult him any further. He was put on for a temporary purpose and given a commission for four years at the time of the foot-and-mouth disease in 1884. His commission still holds over a year. My commission expired September 25th, 1886, supposed I was reappointed by Gov. Robie at that time.

By Mr. Southard:

Q. This Boardman letter was received by you?

A. It was received in answer to my inquiry to give me a description of those two cows.

Q. At the time of the killing of the State College herd you had no knowledge of this?

A. I had heard of the killing of the cows of Boardman in some indirect way.

Q. Mr. Boardman may have notified the College?

A. I do not understand it so.

Q. You did not understand the superintendent of the farm or the trustees had any knowledge of this cow?

A. No, sir, I do not.

Q. You did decide that this cow had germs of consumption when she was sold away from the farm?

A. I think she must have had, sir.

Q. That it developed the time Mr. Boardman bought her?

A. I do; in the light of what has transpired.

Q. Do you think she had germs of disease or predisposition to it?

A. I should suppose she had germs of the disease in her at the time. I think she had the germs of the disease in her, in all probability, when she was sold from the College farm. Some source must have been prior to that, but I don't know what that source is.

Q. Regarding this letter of Dr. Michener's. What I wanted to know was whether you represented to Dr. Michener, at this time, that these bulls had tuberculosis?

A. I represented the fact to him.

Q. Do you think you carried the idea that the cows were diseased, to him?

A. I don't think I did.

Q. Would he pronounce the bull unsafe to use that had been dropped from a cow that had afterwards contracted the disease of consumption?

A. I don't think he would, sir; I shouldn't myself, certainly that would be contrary to my views of it, if I knew she contracted the disease after the bull was dropped. I don't believe anything attached to that bull was suspicious on account of her afterwards having dropped tuberculosed calves.

Q. I would like to inquire something about the propagation of this disease; if I understood you correctly last night it may be transmitted by heredity?

A. It may by contagion; yes, sir. By ingestion, inoculation, and through the milk. Inoculation would be a species of contagion; ingestion, by eating of the meat of tuberculosed animals. There would be two ways to contract this disease: first, by heredity; second, by contagion. Now, in heredity there would be first a predisposition to the disease transmitted from the mother or the parent to the child. Some animals and some men have the power to avoid it. There might be the predisposition in that germ. Intermarry cattle—cousins—and it will bring that about.

Q. That would be general in any inbreeding herd in the State, would it not?

A. Yes, sir, I think so.

Q. There would be another way that it might be transferred by heredity and that is by an actual transmission of the germ?

A. Yes, sir, by an actual transmission of the germ, I mean that the calf could be diseased *in utero*, that the bull would have the power to infect the calf in the utero; that is well settled. It can be transmitted by the sire or dam either.

Q. Now, if it is simply a predisposition to the disease, that never would develop itself as a disease unless there were a germ came in contact with it?

A. I think that would be necessary.

Q. And these germs are very generally in the atmosphere?

A. They are supposed to be; there is quite a number of theories in regard to germs. Some people think they are of vegetative origin entirely. Some think that it is due to a ferment. There is quite a dispute on that point.

Q. They are generally diffused?

A. Yes, sir.

Q. An animal with no predisposition to tuberculosis that had the power to throw off these germs would never be affected by it?

A. It would have more chance to escape; better able to resist it than if he had not.

Q. With predisposition he would be less able to resist it and the germ would be more apt to find fertile soil to work upon?

A. Yes, sir, I think so.

Q. Did I understand you last night to say that in order for this disease to be contagious the germs must be floating?

A. They must be freed from somewhere.

Q. The moment the germ takes root in the body it begins to develop, does it not?

A. It would be difficult to tell by the looks of the germ under a microscope just how long it had been developed. It is a specific virus in tuberculosis—a specific germ, just the same as a specific germ in glanders and leprosy. We recognize the germ and its appearance under a microscope; they are different in formation.

Q. So long as there was no breaking down of the tissues, it would not be contagious in that sense?

A. No, sir; until there is a breaking down of the tissue it is not, in my judgment, contagious from one animal to another. Certain stages of it would not be contagious. In the early stages I should regard it not contagious.

Q. Now, you say that you believe this disease has been on the State College farm for a good many years?

A. Since that Boardman case; I think it has been there ever since that time.

Q. That would go back to 1876?

A. Ten years.

Q. Do you believe that between 1882 and the outbreak in 1886 there were any active developments of this disease going on at that time?

A. Yes, sir, I do.

Q. In what animals?

A. In the Grade Shorthorn cow that Mr. Gowell had of Mr. Rich. He says, "she was coughing when I came here;" those are his own words. One Shorthorn cow—that is, "Maggie 3d." In another one, "Rose 8th, the Shorthorn that refused to breed, and upon being slaughtered was found badly affected," as I have before told you.

Q. "Maggie 3d," you say on page 58 of your report, "was emaciated and coughed badly." As a matter of fact, do you know whether she was emaciated?

A. I take Mr. Gowell's statement for that entirely.

Q. Did Mr. Gowell tell you at her death she coughed badly?

A. I have understood him so or else I shouldn't have it in that report. That has been my understanding of it, from the report I received.

Q. Is it not a fact that he told you "Maggie 3d" had a cough when he took her, but she had recovered from that cough, so that she was apparently all right, and then ran down, and he killed her in 1884?

A. I made that statement in another place.

Q. I don't think you have made the statement that she didn't cough at the time she died?

A. I know I have made that statement—that she had developed a cough and got better of it. That is here somewhere.

Q. If she had developed a cough and got better of that, what would that symptom be?

A. He says she developed a cough and did good work for a year or two, and afterwards she pined away and died. I think, perhaps, by good care that cow was enabled to go

along a piece further, and some reaction took place and she succumbed to the disease.

Q. In other words—the disease that was once active became dormant?

A. I don't think it ever left her, though. It is not necessary that the breaking down stop. I think she was able to propagate contagion during all that period. He said she was doing good work, I have no doubt of that, from the previous condition, as he described it.

Q. Turn to page 17 and 18 of your report. "Having been informed by Mr. Gowell, that between the time he became superintendent and his notice to the cattle commissioners, in March last, he had slaughtered five other cows besides 'Maggie 3d' and 'Rose 8th,' that all presented the same condition of glands and lungs as the cow 'Pet.'" Do you understand that he told you all those cows presented the same condition of glands and lungs as the cow "Pet"?

A. I did understand it so,—at that time.

Q. Doctor, you got information from Mr. Gowell and intended—

Witness:—I stated it in good faith when I read my paper before the committee. Since that Mr. Gowell has told me there was an error—having seen the lungs of all those cows; and I admitted I thought there ought to be a modification of that sentence before the committee. I sought to treat him perfectly fair in the matter. He has told me so since.

Q. So that those five cows were not examined?

A. Not all of them; part of them were.

Q. Do you understand that the lungs of "Gray Nose" were examined?

A. Yes; I do. Allow me to show you. There is a report. In getting the history of this case I wrote that as I took it from Mr. Gowell's own lips on the morning of March 6th. (Statement read by witness.) I took that from Mr. Gowell's own statement. I will take my oath on that. I think he must have given me to understand at that time they had tubercular lungs. I won't dispute anything Mr. Gowell would

say to me. I believe him to be a man of veracity. That is the statement I took from him at the time.

Q. Do you know anything about the bull Mr. Gowell sold to a neighbor, that he and the neighbor killed, after the killing of the College herd?

A. No; he called my attention to him in a letter; after that I never heard anything more about it at all. He said there was such a case and he would like to have me see it.

Q. If the lungs of "Gray Nose" and "Jersey Lily" were not examined, and they presented the same symptoms—stiff neck and bunches—that this bull which he sold the neighbor did, and the bull's lungs, upon examination, proved not to be tubercular, what would you say with reference to the lungs of Jersey Lily and Gray Nose?

A. I should say they were more likely to be diseased than the bull. Jersey Lily was out of Princess Alba—we know she was thoroughly diseased. I don't know what cow the little bull was out of. I think they would be more likely to show it than the bull.

Q. If those bunches and that stiff neck were symptoms of that disease, why were not they present in the bull?

A. I never saw the bull. I know nothing about him.

Q. This disease broke out, generally, in the herd, at about one time?

A. It developed very rapidly along toward the last of it; I judge so.

Q. In most of those individuals it developed by contagion?

A. That would be impossible for me to say. According to my theory they were sound when bought, and they must have been affected in that herd—

Q. Have you made up any judgment as to how long they were affected?

A. That would be impossible for any man to do;—to see a cow's lung with lesions in it, and tell how long that cow had been affected.

Q. On page 58 of your report—"Glands affected and coughed. Age three months. Purchased when three days old, at Oldtown". Is there any pretention that this heifer had this disease at Oldtown?

A. I don't know as there is; I don't know anything about it.

Q. You say in your report that the individuals of the herd—that the herd from which they came—were, so far as you could ascertain, all right.

A. Yes, sir; as far as I have been able to ascertain.

Q. When did that Roan Heifer contract this disease?

A. I think the probabilities all are it was congenital and hereditary both, from that heifer. That would be my belief about it. She was killed. I think it must have been congenital and hereditary both. By congenital I mean it was there when she was born.

Q. Then the herd from which she came is affected by this disease?

A. I don't know anything about that, I never was in Oldtown in my life.

Q. If you believe this Roan Heifer to have had this disease when she was born, don't you suppose it is in the herd from which she came?

Witness:—I think it is probably in it.

Q. Why is it you have not investigated that herd?

A. I had no business with that herd, and never have had a notice from Oldtown in my life.

Q. You have not had any more notice that that herd is diseased, than you have or had, prior to the killing of the Kent bull, that he was diseased, have you?

A. No; not prior to Jan. 27th. I knew that bull was at Bucksport.

Q. After Mr. Kent wrote his letter to Mr. Gilbert—after you went down and saw that bull and pronounced him sound, did you have any more—

A. I had no notice at all as to where the Roan Heifer came from; knew nothing about it, don't know to-day. I had

only my official notice to go out and see the Roan Heifer, and I pronounced her apparently well. A great many diseased animals can appear well and yet be thoroughly diseased. They deceived me and the trustees and superintendent of the farm, in that respect, much indeed.

Q. You said they did not deceive you a particle?

A. I beg your pardon—I said nothing of the kind.

Q. Did not you say—

A. I said I had not been in that barn ten minutes when I was thoroughly satisfied that that herd was affected with tuberculosis. I also spoke to Mr. Gilbert, who was in the further end of the barn, coming towards me, and I was examining some cow I said, "Mr. Gilbert, you have got tuberculosis to deal with here; there is no pleuro-pneumonia here." I think there were others in the barn—some other gentlemen there, I know. I addressed myself to him at the time.

Q. If this herd came to the barn in the summer of 1885, looking, as it is said in testimony they did look, you would say from that the same as you said with reference to the Kent bull—that they were apparently well?

A. Unless I had something to make me suspect or heard them cough or saw one standing as Princess Alba was, with elbows apeak, to give her a better chance to breathe. I don't know as I have ever been told about their condition when they came to the barn.

Q. You remember the testimony?

A. I do not, perhaps, recollect every part of it.

Q. You know, generally they were in good condition?

A. The statement was that they were in as good condition when I saw them as any herd I ever saw in my life. I think they must have been in as good condition then as when I saw them; I do not know that they were better.

Q. Were not they, in all probability, better?

A. I judge the probability would favor that idea. I did not see them.

Q. Was not that disease in a stage of advancement that was rapidly pulling them down?

A. It must have finally. It must have concentrated itself rapidly to produce the lesions I had found.

Q. If one of the cows in that herd had come to the barn, or a short time after coming to the barn, had developed this cough, had become emaciated and run down, and the last week in January had died, or been killed by reason of the disease, what would you say about the outbreak in the whole herd? What would you say as to the time when that herd of cattle contracted that disease?

A. I don't think any man could positively state in answer to that question. I don't think a man with one of those lungs on the table, to save his soul, could tell how long it had been in that condition. It is a chronic disease. A man might have a tubercle in his lung and live a hundred years.

Q. Can not you judge something about the time that this disease was contracted from the fact that in all those fifty cattle the disease manifested itself at the same time?

A. I don't think any man would be justified in doing so.

Q. Is it not an honest inference to draw, in view of the fact that these animals were all diseased, in this advanced stage, at this time, that they contracted the disease at the same time?

A. I do not think that would be a fair inference to draw. I think some of those may have extended over a long period. It would be impossible for a man to say.

Q. Do you know, as a matter of fact, when any of those cattle were bought?

A. Only from what I have been told.

Q. When do you understand Princess Alba was bought?

A. In Rockland, 1882 or 1883; that is my recollection about it. I stated in my report when she was bought. You will find I gave the date as I received it from Mr. Gowell's letter.

Q. Mr. Gowell said it was bought in 1884.

A. Whatever he said I should rely upon.

Q. You understand that Jersey Lily was bought with her at the same time in Rockland? Do you take the position that Jersey Lily received this disease by heredity?

A. That would be rather an unfair question. I don't think any man can decide positively whether she was diseased by heredity or contagion.

Q. I would like to know whether you think it was under these circumstances that she inherited that disease, or whether she caught it?

(The chair ruled that this question was immaterial, on the ground that inasmuch as the disease had been found to have existed in the animals, all inquiry as to its manner of origin was needless.)

Mr. Southard :—The doctor has said in his report, that in none of the herds from which these cattle were taken was this disease developed.

Witness :—No, sir.

Mr. Southard :—That it all had its advancement at the State College farm?

Witness :—I do not state that.

Q. Jersey Lily and Princess Alba were bought together. Jersey Lily was the daughter of Princess Alba. I would like to know from the doctor whether under those circumstances he believes this Jersey Lily inherited her disease or caught it?

Chair :—If you are testing the doctor's capacity or knowledge of these things, I have no objection; but the committee cannot receive any light from such a question, or an answer to such a question as that.

Mr. Southard :—On page 15, "In no instance have I been able to learn of a single herd or a single town in Maine from which these animals were purchased, that down to the present time have ever been affected with tuberculosis."

Witness :—Yes, sir; I stated that decidedly. None of these animals have ever been affected.

Q. If it existed in those herds you would learn of it?

A. Some of those herds are familiar to me. I have seen the Briggs cattle in Auburn. I wrote inquiring about the dam of this cow.

Q. What has been the result of this inquiry altogether?

A. In relation to Juno 2d that was sold in Bangor. She went away, I think, in the previous January, 1886. I think I received that information from Mr. Gowell and President Fernald. She was one of that herd, I suppose. They told me so.

Q. This was after they came to the barn, previous to their being killed?

A. I don't know when they came to the barn.

Q. It was the January, before the April?

A. I regard it so.

Q. She was taken away from the herd and carried to Bangor, and she was examined by Dr. Michener?

A. Yes, sir; I understand so.

Q. What was the conclusion with respect to her?

A. He told me he failed to discover lesions of disease about her. That is what he told me; but she is the mother of one of these cows that we killed and found disease in April.

Q. I want to know if the fact that she was taken away from that herd in January, never having been afflicted with the disease, would not indicate to your mind that the disease was not contagious at that time?

A. No, sir. There are several things that would lead me to that opinion. I have never examined the cow myself. She might appear well to me or Dr. Michener and have a tubercle so small that we couldn't diagnose by any external symptoms, and I don't think I would be justified in answering that question. She is living now, I understand, and the mother of two bulls that have gone out from the farm; is also the mother of the cow Susie.

Q. This cow might have caught the disease?

A. She might have caught it from some other animal besides her dam.

Q. The fact that Juno 2d is not diseased, and the two bulls she is the mother of, she has not diseased, would indicate that this Susie did not receive her disease by heredity?

A. You are asking something that I know nothing about. I don't assume that those bulls are all right.

Q. Let us try it. Suppose the fact to be that those two bulls and that cow are all right, does that indicate that Susie received her disease by heredity?

A. As long as she was mixed up in that herd she was in mighty bad company. She was in bad company because they had been affected for the last eight or ten years. I take the ground that the animals—the new cows—when Mr. Gowell bought them were all sound, as far as I am able to learn. So I am led irresistibly to the conclusion that the disease was generally developed and confined and generated in that College farm. I understood the word generated to mean producing one's own likeness—propagation, that is the proper definition of it. I think it is producing the likeness of one's own self. The way the first case appeared, I think there must have been a prior case to that cow Dora, but we are not able to trace it any farther than her. I have been unable to. I exercised all the diligence I was capable of.

Q. Don't the fact that there are no complaints coming from these bulls, and that they were supposed to be all right going from that herd prior to the winter that they were killed, indicate that the herd took the disease that winter?

A. No, sir; I do not suppose they are all right myself. I have no idea they are.

Q. Why don't you follow them up?

A. I am going to. I have got full power to do so, and I propose to avail myself of it.

Mr. Southard:—You might have to find out a number of—

Witness:—I had no authority to find out about them. I don't say Mr. Gilbert knew where they were. He didn't tell me.

Q. When you wrote for information respecting the cattle, you wrote Mr. Gowell?

A. I have had a great many letters from Mr. Gowell; he has always answered my inquiries freely. I think Mr. Gilbert spoke to me when I went down there. I said if I knew where they were I would inspect them and look them over;—if I didn't find tuberculosis in some of them, I would be greatly mistaken.

Q. Is it not somewhat peculiar that if these individuals, that were taken into that herd at different times, contracted that disease at the time they were taken in, the disease should break out all at once in the whole herd?

Witness:—They had the opportunity to contract the disease every day that they were there.

A. They didn't have the opportunity till the breaking-down process commenced.

Q. But you cannot tell how long that breaking-down process had been continued?

A. Not by the appearance of the lung. Dr. Adams and Dr. Rich will tell you they couldn't tell you, if they saw a man's lungs which had cavities—they couldn't tell how long those cavities existed.

Q. There were some of the pigs examined?

A. One pig.

Q. By whom?

A. By Dr. Michener and myself.

Q. And those pigs had been fed with the milk from that herd?

A. I don't know as I am in possession fully of that fact.

Q. Is that what you understood?

A. I wouldn't say whether I understood it so or not; I have forgotten.

Q. Does not Dr. Michener say, in his report, "that the swine on the farm that had been fed largely on the milk of these cows were examined and one pig nearly a year old was killed and carefully examined, but no traces of the tuberculosis could be detected?"

A. I think that was a supposition; we found no traces of tuberculosis in that pig. He was a little wheezing-looking

pig. Mr. Gowell said he would just as hef have him killed as not.

Q. If tuberculosis had been in an active form in that herd, before they came on to the farm in the winter, and those pigs had been fed with their milk, would not, in all probability, disease have developed itself in the pigs?

A. I should think, as a rule, it would. It didn't in that fellow.

Q. Pigs are very susceptible to it?

A. I can only speak of the one pig I saw.

Q. "The butcher who kills the pigs raised on the farm states that in some instances the liver has appeared diseased." Is it a fact that nine pigs out of every ten have abscesses upon their livers?

A. They have a condition of the liver that we very often call "waxy", and then they have an oily condition. If you put it on paper it will make it appear as though it was soaked with oil. It is lardaceous in character. They have two forms of liver trouble. I never had any talk with the butcher, that I know of, about it; I don't know whether Dr. Michener said anything to me with reference to it.

Q. You say, on page sixteen of your report, that "if no animals had ever been sold from the State College herd we could now report the malady as completely and effectually stamped out." Do you mean that?

A. I mean it, sir, in its broadest sense as regards the College farm.

Q. Do you confine it to that?

A. I have no doubt that there are a few isolated cases in Maine that may be affected with tuberculosis. One has developed since this hearing, in Bangor. The ground I take is that we are freer than any State in the country. We have not got one where they have ten in Massachusetts; one where they have got a hundred in New York. I got a report from the College officials in New York showing that of the milk that is being sold in New York city, 90 per cent of it is tuberculosed. Twenty-nine per cent of the deaths in New York

hospitals are from tuberculosis and 17 per cent of them can be traced directly to the use of tuberculosed milk. I do not mean the malady is completely stopped; but I think if there were no animals sold from that farm, as far as the College farm was concerned, we could declare it effectively stamped out. In addition to that I think there are a few—a very few—isolated cases. The first case I ever saw in this State, (I should have to think back sometime). I saw a case of consumption in this State since I have been in practice, (I graduated in 1879). I think in 1880 an inbred Jersey heifer at Allan's Corner; had no connection with the farm. She was got by her own full brother at the farm.

Q. Do you remember the Deering bull?

A. What Deering bull?

Q. A bull that was afflicted with tuberculosis; one that Dr. Salmon diagnosed.

A. At Rolfe's farm, Dr. Salmon was suspicious of a little bull; thought he had tuberculose tendencies. He thought he had better be killed, and at Dr. Salmon's suggestion that bull was killed, and his lung was sent to him at Washington for his inspection. I do not know that that bull developed tuberculosis; he had glandular symptoms of tuberculosis. They were very slight, and I don't know what his conclusion was; he never reported; he made the suggestion that that bull had tuberculose tendencies. He thought we had better kill that little bull. We did. That Jersey heifer? well, two cases, I don't know whether that proved to be a case or not. Two cases and the one at Waterboro' are the only ones I have had my attention called to, either privately or publicly, in my State, official or private practice.

Q. What was it you did with the cases at Waterboro'?

A. We found a very badly diseased cow; I had her exhumed to show Mr. Gilbert the lung. It was thoroughly diseased. She had a little wheezing calf up there two weeks old, and I decided to kill it because it simply came out of that cow. She also had two three-year-old heifers whose glands

were affected; we destroyed one of them. Two physicians were there the day we killed her, and I showed them the condition; she had affection of the glands.

Q. What did you recommend Mr Scribner to do with his cattle?

A. Mr. Gilbert and I together recommended him to turn them out to graze, and put them into quarantine for the summer. I visited them in the fall and found them fat, all of them. I regarded them as being in a safe condition to sell for beef at that time, and they were sold, I think. I didn't go to the final disposition of the case. Mr. Bell and Mr. Gilbert attended to it. I have their report; that is all of it.

Q. What has been your view of the law under which you have acted in taking these animals?

A. I am very glad to have the privilege of telling you, sir; and I never have consulted any attorney on it. But from what I read,—section 50 of the law says, "The Governor may when he deems it expedient, appoint commissioners, etc." Section 51 also, (Witness here read section 51).

Q. Have you ever made any regulations?

A. We put several herds into quarantine. We have made a great many regulations in the cases of the foot-and-mouth disease.

Q. Have you understood your law applied to animals like the Kent bull, that were apparently well on examination?

A. Yes, sir, I understand it gave us full power to take that bull at any time we saw fit, if we deemed him to be a diseased animal.

Q. Did you deem him to be a diseased animal?

A. I wrote to Mr. Gilbert what I found; I stated it fairly to him. I said "I found the bull apparently well," and reported my visit to him. I then took pains to ascertain, as near as I was able to find out, if he was from Princess Alba. I made up my mind that if from that dam he ought to be killed and never ought to serve a single cow. I believed I had ample authority to act.

Q. You stated last night with reference to the Kent bull and the other bulls that were out, that you would have the other bulls immediately examined?

A. Yes, sir; I would have them examined.

Q. And you would take bulls that appeared diseased and kill them?

A. That would be my recommendation; those that were not diseased I would advise the owners to feed them for beef, in the first instance, and if I was satisfied that they were diseased in any way—if they had the slightest taint of disease about them—I would have the full authority and justification of having them killed.

Q. You presupposed their disease. You are going out to make an examination of those other bulls. Now, suppose you find a bull that is apparently all right, what are you going to do?

A. I should not feel justified in killing that bull without some other evidence than that. If that bull, mind you, was out of a cow that I had seen the lungs of, and found them thoroughly diseased, and I knew that bull was dropped since that cow became in that condition, I should say, no matter how well he appeared, off with his head.

Q. Do you know Princess Alba had that disease when she had that bull?

A. I am as confident as you are that your name is Southard.

Q. How do you know?

A. Because the lesions were so apparent, and they had such solid adhesions—all solidly united together. Jersey cows are predisposed to the disease; do not think she could have been in that condition, without its being an old chronic case of long standing; she dropped her calf in June before, and we killed her in March. Particularly predisposed to this disease, she advanced very rapidly, more so than one that was not predisposed to it, that would have the power of resistance more than a weak animal. My recommendation has been to Mr. Gilbert, to have those bulls inspected, and killed

if necessary. Mr. Gilbert has a communication from me containing that recommendation.

Q. Under your view of the law you thought it was perfectly competent for the Commissioners, if he appeared apparently well, to seize him and have him appraised, and kill him at the expense of the State?

A. I do now; knowing all I have learned since I saw him at Bucksport. The day I saw him at Bucksport I had no knowledge that he was even from one of the cows of Orono. My view was if we found him diseased we had better take him away.

Q. How did you find him? At that time you believed you had no authority to kill him?

A. I did not feel justified that day to have that bull appraised, and—

Q. That is not the answer. I want to know if you believed at that time you had any authority to touch that bull.

A. If I believed he was diseased, I believe I had the full authority to do it. I became satisfied afterwards.

Q. Now, did you or not, at the time you made that examination of the bull at Bucksport, either you or the Board of Commissioners, have authority to take him and have him appraised, and kill him?

A. I did not do it.

Q. Do you believe you could?

A. Yes, sir; I believe I could, if I believed he was diseased in any particular.

Chair:—Do you believe you had authority, in the light you had at that time, to take that bull and kill him [To Mr. Southard]:—I want an answer to your question, and I want the Doctor to stop then.

Mr. Southard:—I asked him if he believed the Commissioners had authority, at the time he examined that bull at Bucksport, and found him apparently well, to take that bull and have him appraised at the expense of the State.

Witness:—I think I will decline to answer it. My action shows best what I thought: I did not feel justified from what

I saw down there in having him killed and appraised at the State's expense.

Chair :—It is a fair question.

Witness :—If I am obliged to answer it—I should hardly think I did have the authority that day, knowing what I did then about it.

Mr. Southard :—Mr. Gilbert was perfectly right at that time?

Witness :—When he wrote me back in answer to my letter that we had no proof he was from diseased parentage, and I immediately forwarded Mr. Gowell's letters showing him the dam was one of the worst cases at Orono, I thought Mr. Gilbert, when he knew that fact, would say, "if that is the case, I agree with you that we should dispose of him;" but he didn't say anything of that kind. He then replied if the bull was unsound it would oblige the College to refund. I consulted him at once—as has been my custom always.

Mr. Southard :—You don't believe that the law authorized you to kill all the animals. We have got two or three letters from Dr. Bailey to read at this time regarding the law. There is one dated Portland, Sept. 28th, 1886. This letter is to Mr. Gilbert from Mr. Bailey. (The letter was read in evidence and is as follows:)

Portland, Sept. 28th, 1886.

My Dear Sir:—I have heard nothing from you since you went to Waterboro', but received a letter this noon from Chase, which is so different from my supposed understanding with you, I write you at once. When I last inspected Scribner's cattle, I *told him*, and afterwards *told you*, I could see no reason why they were not fit for beef, when he replied that no one would give a cent a pound for them, and we then arranged that we would get Deering to buy them, as he was not afraid of them, and thus end the whole controversy, and Scribner thus get more for his cattle *for beef* than he could possibly get if they were condemned and destroyed as sick cattle. Mr. Chase now writes me, "Mr. Gilbert came out here to see the cattle Saturday. I was not here, but he told Mr. Scribner to sell his cattle his first opportunity and said to him to have the *cattle appraised* and whatever they sold *under the appraisal*, the State and town would make up to him. The appraisers were there yesterday and prized the whole stock $255.50. I think this is a *little more than they will sell* for, but not very much. Mr. Harper Deering said to me he would come and see the cattle

in a day or two, and I have no doubt Mr. Scribner will dispose of them to him or *some one else*, in a few days. As soon as he sells them I will let you know. J. H. C.

P. S. Mr. Deering left here about an hour before Gilbert came Saturday, and he did not see him. Now, as I look at this arrangement, we have had a lot of *well cattle appraised*, for which we have no "shadow of law" for if well we had nothing on earth to do with them, while if *appraised at all*, it could only be as *sick ones*, and for which no other price could be realized by the owners. Now, Chase says he don't think they will bring the appraisal and Scribner has the right to dispose of them to Deering, or *some one else*, with *all the prejudice surrounding them*, at any price *he likes*, and the *State makes good*.

Why, if they are *fit for beef*, as we have decided, what has the State to do with them any way? Is this the way you understand it? If not, you may have time now to complete our arrangement with Deering, and not have the whole thing abort, but if Scribner and Chase understand it as you do I am completely nonplussed. What is to be done about Gowell's request to go to Orono? I am able to sit up a few hours a day, but it is a great exertion to write anything, so please excuse my scribbling, as I am anxious about the case.

Yours, Geo. H. Bailey.

Witness :—Scribner's cattle were diseased. Scribner is the man who owned the cattle at North Waterboro'; not connected with the College herd at all. I swear by that letter now, and I only wish I had the letter I received from Mr. Gilbert in reply. I know the tenor of it very well. I disagreed with him about the propriety of appraising animals after we had lost control of them—after we had discharged them from quarantine. I did not believe we had any right to have them appraised at the State's expense. They were not animals that had tuberculosis; they were animals that had been exposed to it, and might have it in their systems at least.

The only calf that we killed at Scribner's was a little wheezing calf. These other cattle were not from any cow that we know had tuberculosis, we did not know that the dams were unsound.

Q. There was a pretty good suspicion, was not there?

A. It proved not; they recovered at pasture and got well. The ground I took was we had nothing to do with having them appraised after that; they were virtually well animals;

we had pronounced them sound as far as discharging them from quarantine.

Q. When a creature was apparently well you had no right to proceed against him?

A. When we took our hands off them we had no control of them at all.

Q. Did the Scribner cattle have this disease or not?

A. They had not; no, sir. The two we killed had it but the rest of them didn't have it. They proved not to have it; after I put them into quarantine. They sold for beef.

Q. Did you examine them?

A. I did percuss the lungs of every one of them.

Q. What was the conclusion with respect to them?

A. That they were fit to discharge.

Q. I mean at the time you examined them first?

A. There was one,—that Roan Heifer—at that time I regarded with suspicion, because she had enlargement of the throat. Mr. Gilbert didn't like the appearance of the previous one. He says "let us recommend them to turn them out." He regarded that they were going to be appraised too highly.

Q. You pronounced the case at that time to be tuberculosis, did you not?

A. I did—the old cow—the calf on general principles.

Q. Did you act under the law at Orono?

A. Yes, sir.

Q. Wholly, did you not?

A. Wholly? No, sir; we put them into quarantine and conformed to the law strictly in that respect.

Q. What authority was the slaughter of the herd conducted under?

A. We did not conform to the law in anything of this—

Q. I want to know by what authority you took charge of that herd at Orono?

A. We were notified as Cattle Commissioners that there was a disease in that herd.

Q. Was it by the authority of the law or not?

A. I don't know what authority Mr. Gilbert had; I got my authority from him to go there and act.

Q. How did you act? under the law, or not?

A. The first instance we put them into quarantine.

Q. And what did you do in the next instance?

A. Kept them in quarantine.

Q. Was that under the law or not?

A. You may regard it either way you like, I am not a lawyer.

Q. You are a Commissioner?

A. I would rather be a good doctor than a poor lawyer any time. I don't know anything about the law.

Q. Don't you claim to know something about the law?

A. I claim that that law reads so clearly to me that I understand it.

Q. You may claim that you know the law. You claim that action at Orono was under the law?

A. We may have departed from the law when we killed those cattle, inasmuch as they had not been appraised.

Q. But that was the only thing?

A. I don't know as I can think of any little technicality that we let go unobserved.

(Mr. Southard read a letter dated "Portland, Aug. 11th, 1886," as follows:)

Portland, Aug. 11th, 1886.

Dear Sir:—I went to North Waterboro' yesterday to see Scribner's cattle, and they have much improved in every respect, so much so, that they are each and all fit for beef in my opinion. Scribner scouts the idea, however, and says nobody will buy or eat them, etc. He talks like a fool, and says a dozen lawyers have told him he had a right to have had his cattle appraised (all of them), when we killed the heifer, and Judge Tapley tells him that one should have been appraised at her value *when she was well.*

His cows have gained much flesh since they have been turned out and had *something to eat*, while the oxen are fat, and have gained *four inches* each since we were there.

That "bull calf" at Bucksport, I have written Gowell about, and he tells me he is out of *Princess Alba*, one of the two cows I ordered killed when Mr. Oaks was there, and that proved one of the *worst cases* on the farm.

In view of this fact I have no doubt of the *policy* of having him *destroyed*. It was *policy* that governed our action at Orono, wherever we were in doubt, and this bull, if allowed to be used, might get a hundred calves that would become predisposed to tuberculosis by heredity, certainly, even if this animal remained for a time apparently free from the disease.

We certainly have thus far subjected ourselves to no criticism that would re-act upon us with such force as this, and justly too, if such a thing took place, while in case of that cow at Bangor, that Michener pronounced sound, if covered by a "sound bull" she might never produce a calf that would prove to be infected.

Let me hear from you in regard to this matter, for I have promised Mr. McAlister that I would take prompt action in this matter, while a "post-mortem" of this animal might prove of especial interest to us in regard to our future action if the same emergency arises. I have no doubt Mr. Hatch will endorse this action fully, when the matter is explained to him, in the absence of Gov. Robie.

Yours respectfully,

Geo. H. Bailey.

Q. Has it been policy that has prompted you in reference to the Kent bull, or the law?

A. I think it was mighty good policy to have him killed.

Q. Yes, sir; I want to know whether it is policy or law?

A. I am willing you should know just what the truth was about the policy of killing the Orono herd now. There was a good deal of talk at Orono among the Governor and Council about the policy of killing that herd before we finally decided whether they were all unsound or not. The proposition came up, that nobody could tell. The question arose among the State College trustees, and the Governor and Council, whether it would be policy to kill that whole herd. I had several talks with Mr. Gilbert about it. I told him I was in doubt whether my profession would sustain me in allowing that herd to be killed, and I wished to correspond with parties to get their opinions. I corresponded with Dr. Liautard and Dr. Salmon. When we came to kill the cattle the emergency did not arise, for every one of them proved to be diseased; but the proposition came from the Governor and Council, whether they were diseased or not they would stand behind us; they believed it policy to do so; they did not know

when it would be safe to put in fresh cattle, or the milk safe to use. So they said, "Let us kill them and wipe them out." I wrote Dr. Salmon on that point.

(Letter dated at Washington, D. C., April 8th, 1886, from Dr. Salmon, was read by witness, as follows:)

Washington, D. C., April 8th, 1886.

Dr. Geo. H. Bailey, 1 Pine Street, Portland, Me.:

Sir—In regard to the herd of cattle at Orono would say I cannot recommend the slaughter of the animals that appear to be perfectly healthy; such may be, and may remain, perfectly free from the disease. My advice would be to destroy all that show signs of disease, thoroughly disinfect the stables and keep the balance under supervision. If there are no other quarters in which to put the new herd, it seems to me that they, too, would be open to suspicion because the stables and grounds must be infected with the germ of tuberculosis. If the new cattle are to be put immediately into the same stables and upon the same grounds, will they not too become infected? If the council believe that, as a matter of policy, it is better to kill the whole herd and start out with a new one, that is a question of business and not a professional one. I do not see what I could say more than this. I have given you advice from a professional standpoint and cannot go beyond that and decide as to the best policy from a business standpoint for the institution to adopt.

Very respectfully,

A. E. Salmon.

Mr. Southard:—That was before the slaughter. He says in regard to the herd of cattle at Orono, "I would say I cannot recommend the slaughter of the animals that appeared to be perfectly healthy." He advised that those that appeared to be perefctly healthy ought not to be killed.

Witness:—That was my proposition to President Fernald the first time I ever talked with him.

Q. To kill those that proved to be diseased, and those that bore suspicion to isolate them and keep them apart?

A. Yes, sir.

Q. Why did you insist that the Kent bull be appraised and killed at the State's expense when he appeared perfectly healthy?

A. I say to you I did not feel justified at what I saw down there, to have him appraised and killed at the expense of the

State;—I say that now, and I say that always. I told Mr. Kent I did not feel justified in having him killed at that time —both him and Mr. McAlister.

(Letter of March 8th, 1886, was read by Mr. Southard as follows:)

Portland, March 8th, 1886.

Gentlemen:—Since my arrival home yesterday morning, I have submitted the specimen I took from the lung of Pet to several tests that seem to my mind to conclusively confirm the diagnosis of tuberculosis, made by me at Orono, and I am going to Boston this afternoon to consult a member of my profession, in whom I have great confidence, as to the future care and disposal of your herd.

While I am at a loss to account for the uniformity of symptoms exhibited in so large a number of animals as harmonizing with the theory of phthisis, my mind is still irresistibly drawn to the conclusion, that if my diagnosis in the case of Pet is correct, that all the preceding cases have been alike, and that all of the present herd, that are in any way affected, all have tuberculosis. Not that they are *all affected* at the present time, (but such as are), and right here is where I expect to encounter my chief difficulty *where to draw the line*, and be able to say positively, what individual members should be destroyed, what number be quarantined, and what proportion of them are entirely above suspicion. The difficulty experienced by the most skillful veterinarians in the auscultation and percussion of the lungs of bovines, in these cases, renders every precaution necessary to be taken to avoid mistakes, and as this is a case of much importance to us all, I shall endeavor to possess myself of the fullest information and advice before proceeding further.

Not that I intend to shirk any part of my duty as Veterinary Officer of the State, but first having conclusively proven my diagnosis correct, to then proceed cautiously and humanely as possible in the work before us.

To this end, I ask for the fullest co-operation of your faculty, and for closest observance of the symptoms of each and every member of the herd, between now and the time of my next visit of Friday of this week, by which time we should be able to identify the disease in quite a number of the animals, beyond any reasonable doubt, and also to regard as free from suspicion, a certain number that during this time give no evidence of disease.

Of course, if there are any members of the present herd, from the dams of either of the cases killed, such as Pet or Betsey, they would become "self condemned" by direct hereditary tendency, while those calves who are from dams having no symptoms of disease could be safely retained.

While I have no doubt about condemning the *milk* of any animal affected, there are considerations regarding the *butter*, about which we will get more light before we meet again. In the meantime, believe me,

Yours sincerely,

Geo. H. Bailey, V. S.

Witness:—That question arose, I consulted our authorities on the subject.

Q. You believed that this Kent bull was a very dangerous creature to be at large?

A. I think he was an unsafe creature, I regarded him so.

Q. You told he was a dangerous animal somewhere in your testimony?

A. I regarded him as an unsafe animal to be at large.

Q. You believed it was the duty of the Commissioners to immediately take that bull and have him taken care of?

A. Yes, I so advised after I found he came from Princess Alba. I felt justified in doing it. Knowing that two other calves from the same cow were also diseased and both killed, —from Princess Alba—both were dropped before this bull was, and they were both diseased.

Q. You believed that the duty of the Commissioners was at once to take charge of that bull?

A. I wouldn't say as to that.

Q. You believed in doing it just as soon as you could?

A. I think it is always best to act, when we are satisfied of the presence of the contagion, and talk afterwards. Your Commissioners ought always to act promptly in such matters. That is my belief about it. (Letter dated "Kennebunk, Apr. 10th," offered by Mr. Southard as evidence, and read, as follows:)

Kennebunk, April 10th, 1886.

Dear Gilbert:—I came out here this morning at the request of the selectmen, and have ridden all the forenoon to see four lots of sheep, all badly diseased with scab. Two of these lots, fourteen in one, and six in the other, were mere skeletons, and I have ordered them condemned and buried. The other two lots I have instructed the owners how to proceed to cure them and disinfect their premises, and have no doubt they can be saved without any expense to the State. I have cautioned the selectmen about an appraisal and they are to let me know all about it. I have also received a very urgent call from the selectmen of Monson and have agreed to go down there *Monday*, although I much dislike the trip, but don't see any way to avoid it. I have also a letter from *Wesley*, which I will send you when I get home, and from what they say I think they must have a case of glanders, but it is *24 miles* from the steamboat landing at Machiasport, and *31 miles* from any railroad so I think we better "stave them off"

for awhile anyway. I have heard nothing yet from Salmon or Liautard but am afraid they may think our proposed action too sweeping to be fully justified, although I have no doubt of the policy of it from a "money point of view." Everything seems to "come in a heap" lately in the State's business.

Yours truly,

Geo. M. Bailey, V. S.

Witness:—What in that letter do you want to criticise?

Mr. Southard:—What do you?

Witness:—I am at your service, if you have got any question.

Q. What do you think of "staving" off a case of the glanders?

A. I communicated with parties (Wesley) and received a letter from them that satisfied me that they didn't have it, and consequently I didn't go, and they proved not to have it.

Q. You didn't have that letter at the time you wrote this?

A. No, sir; I did not have the letter at the time I wrote this.

Q. You stated that they had a case of the glanders?

A. It was in the winter. I did not know whether they had or not.

Q. What do you say in that letter?

A. If you will read me the passage you refer to—I am glad to have you press this matter.

Mr. Southard:—You say, "I have also a letter from Wesley which I will send you when I get home and from what they say they must have a case of glanders; but it is twenty-four miles from the steamboat landing, (M)—thirty-six miles from any railroad, so I think we had better stave them off for awhile." Now, I would like to know—

Witness:—What is the date of that letter?

Mr. Southard:—April 10th. I would like to know how you reconcile "staving" off a case of the glanders when you showed so much anxiety to get hold of this Kent bull?

Witness:—I am very glad you called my attention to it. The first letter I got from those gentlemen gave me an impression that they had a case of glanders down. I wrote them

a set of questions, and I found it was a bad trip to make; and I asked them to answer the questions I wrote them and I would judge whether they had a case. The answer I got satisfied me they were deceived themselves, and I didn't go, and never heard about it from that day to this.

Q. And at that time you were "staving" off a case of the glanders, from all the evidence you had?

A. The first letter I got from them I judged they might have a case of glanders. (Letter dated "Portland, Oct. 11th, 1886," read and introduced as evidence, as follows:)

Portland, Oct. 11th, 1886.

Dear Sir:—I have sent you several communications which are unanswered for the reason, as I suppose, that you have been away from home. I also wrote Gov. Robie, a *week ago*, but have received *no answer*, and also wrote Gov. Elect Bodwell, sending him some documents that were not in his possession, by all of which I suppose you will say I am getting anxious about "pleuro-pneumonia," *and so I am*. I sent you a slip this morning, that you may have seen. I also received this morning a letter from Mr. Kent of Bucksport, complaining that nothing has been done in his case, and as you are well aware that I do not feel at all satisfied myself as to the future of that and some other cases connected with the College farm, I have felt like leaving them to your disposal, as you are to remain upon the Board in any event, while my commission and that of Ferguson will expire with Governor Robie's term of office. I understand the Governor and Council are to meet at Augusta, Wednesday, Oct. 14th, and as I think I will be able to take a ride by that time, I will come to Augusta, if you are to be there Wednesday, and see if something cannot be arranged for our present and future protection, in case anything happens while I am still a member of the Board. Please let me know if you will be at Augusta.

And greatly oblige

Yours truly,

Geo. H. Bailey.

Mr. Southard:—With reference to the Waterboro' cattle, you recommended that they be fed off for beef?

A. I did, finally.

Q. Why didn't you make the same recommendation with regard to the Kent bull?

A. I did; I wrote Mr. Kent that I believed that the bull's beef was safe to use, after seeing the lung.

Q. Why didn't you recommend it before you killed him?

A. You couldn't feed him off to beef, after we killed him.

Q. Do you know what I mean by feeding a cow off to beef? Don't be funny, because when you are funny you are out of your element.

Witness :—Selling him for beef, I understand you.

Mr. Southard :—I mean that he fattens him.

Witness :—I may have misunderstood you about it. I supposed you said selling him for beef.

Mr. Southard :—We don't want any fun.

Witness :—We won't have any, I think.

Q. Did you use your influence to get him to feed that bull off for beef?

A. I would say that I made the suggestion to him upon it. I am rather inclined to think I did.

Q. What did he say about it?

A. I can't tell you that. I won't say positively that I advised him so to do.

Q. If he were killed at the expense of the State he would be a dead loss?

A. Yes, sir, he would; as a diseased animal.

Q. You would rather make him a dead loss to the State than to have Mr. Kent feed him off for beef.

A. That would depend upon the developments;—whether he was fit for beef or not. (Letter dated "Portland, Apr. 8th, 1886," was read, as follows:)

Portland, April 8th, 1886.

Dear Gilbert:—I was expecting to go to Connecticut Monday morning, but got word from Gov. Robie this morning that he had a telegram from Frye, that the Department was to send some one from New York to inspect the cattle at Orono. So he thinks I had better not go, as I may be needed here before I could well get back.

The Governor suggests that you go to Augusta, upon receipt of this letter, and you will then be on the line, so he can telegraph you when we start, and you go with us from there.

Whoever is coming may be here very soon, but if Salmon could not come I would rather not had anyone but have "gorn it alone."

Yours truly,

Geo. H. Bailey.

Chair :—Let me ask a question: do you raise the issue here that this matter of tuberculosis should not have been looked into, and all infected cattle destroyed?

Mr. Southard :—Not at all.

Chair :—What is the issue you propose to raise? That is what I want to get at so as to see the bearing of the examination.

Mr. Southard :—We do not believe that this herd during the summer of 1885 was generally affected with that disease. We do believe that in 1886, that winter, all the conditions being favorable, and they being exposed to the cough of Betsey and Pet, they took the disease at that time, and that these bulls that have gone from the farm, and this Kent bull, were all right; and that this cow that has gone to Bangor was all right.

Chair :—"The proof of the pudding is in the eating of it." Do you raise the question that those bulls should not be examined?

Mr. Southard :—Not at all; but we do say, Mr. Walton, that it is entirely unfair to the people of this State and its cattle interests, to have this thing go out—that these bulls are diseased.

Chair :—Is it not much better to have the idea go out that those bulls may be diseased, than it is to undertake to prove the fact that the whole State is diseased and that it is not only in the College herd, but that it is scattered all over the State?

Mr. Southard :—Mr. Bailey has tried to make it appear—I say Mr. Bailey and his counsel—that this State College at Orono is the only thing that is spreading this disease over the State. They spread that out here effectively. We know a good deal better. It is not all down there; it has not been there generally amongst that herd, during all this time.

Chair :—I understand that is conceded—that there are other cases in the State. The only object I have is that I desire to know the point that you raise; because, of course, we want to be able to apply the evidence as it comes along.

Mr. Southard :—At present I believe that is not fair to the owners of those bulls that have gone out, and the people of the State of Maine. The report that they have tuberculosis is unfounded.

Chair :—Would it not be a good plan to examine them and see whether it is or not? What is the object of spending two or three days here to prove the fact whether they have got tuberculosis or not?

Mr. Southard :—How are you going to find out?

Chair :—Go and see whether they have or not.

Mr. Southard :—Are you going to kill them?

Chair :—I don't know; I am not going to.

Mr. Cornish :—What is the issue now?

Mr. Southard :—The issue is that that herd was not generally diseased during the summer of 1885; that those bulls are not diseased in all probability to-day. The issue which has been attempted to be made by certain persons here is the issue of Mr. Gilbert's good faith; that is all. And we want to show that his practice and what he has stood up to is sanctioned by law, and by letters from standard veterinary surgeons. It has been attempted to show that he did not do his duty.

Chair :—If the trustees of the State College had been as careful about obeying the law when they authorized a man to buy stock as they were when that tuberculosis came out, I do not believe there would have been all of this trouble. They authorized a man to go out there to buy stock and start in stock-raising—

Mr. Southard :—They took a part of the interest money which they had a right to spend—no, they borrowed money.

Chair :—What is the difference whether they borrowed or not? They furnished it to him in the first place. These cattle, as I understand, were reckoned as State cattle.

Mr. Southard :—I want to say that Mr. Gilbert acted in perfect good faith; whatever he did was sanctioned by the veterinary surgeons. It has been attempted by certain persons to cast a reflection on Mr. Gilbert; and the organ of

this person, in to-day's issue, states it, in so many words, that Mr. Gilbert has been sadly negligent, and has been guilty of a want of good faith. It seems very wrong.

(A letter from Dr. Michener was read, as follows:)

New York, Feb. 21st, 1887.

Z. A. Gilbert, Esq.

Dear Sir:—Owing to the fact that I have been moving the past week, your letter is as yet unanswered. In my opinion your State acts very wisely in ordering an examination of descendants of the College herd. This should be a *thorough* examination—and in the event of finding any such descendants affected with tuberculosis, the State could not possibly do less than purchase and destroy such animals.

There is no reason for destroying the "entire herds" in which may be found descendants of the College herd that are affected with the trouble, as would be advisable in case contagious pleuro-pneumonia was the disease in question, but only to destroy those actually and unmistakably diseased. It is only in a *very* few instances that such action as was taken at Orono is to be sanctioned and sustained. I am surprised that any should recommend the destruction of off-spring from the College herd that are "sound and well and always have been." Such animals should not be destroyed—but *all* such *should* be examined by competent authorities to ascertain if in fact they *are* "sound and well." You *well* know it won't do to judge by external appearances, etc.

In my hurry this morning I may not have answered your queries fully, in which event please write me again and I trust then to have more time to give you.

Sincerely yours,

Ch. B. Michener, V. S.,
1779 Broadway,
New York.

Witness:—I believe in that; I have always agreed with this letter.

(A letter from Dr. Salmon was read, as follows:)

Dr. G. H. Bailey,
1 Pine Street,
Portland, Me.

Dear Doctor:— In reply to your favor of the 21st instant, asking for recommendations in regard to the action that should be adopted with the outbreak of tuberculosis at Orono, I would give it briefly as my opinion: 1st, that all animals which show clear evidence of tuberculosis should be slaughtered at once. 2nd, that those in regard to which there is reason for doubt should be placed by themselves and carefully isolated, and that

constant disinfection should be kept up in their stable. 3rd, that those which to all appearances are well should be placed, if possible, in a new stable or on a piece of ground to which the affected animals have not had access, and should be kept under careful supervision. Any new cases which should develop among these should be removed as soon as possible. Of course, the stable where the diseased animals have been should be cleaned and disinfected in the most thorough manner and no animals allowed in it for a considerable time.

You will notice that my recommendations are such as would be made for any virulent contagious disease of slow incubation and in which the virus has considerable power of resistance to external conditions. My belief is that the more we cut loose from old ideas of tuberculosis being a hereditary disease, and the more we treat it as a contagious plague the more successful will be our efforts to control it.

Trusting that these suggestions will prove satisfactory, I am,

Very respectfully,
D. E. Salmon,
Chief of Bureau.

Witness :—Nobody would argue from that, that the disease is not hereditary.

Mr. Southard :—Not at all.

(Letter dated "Portland, March 21st, 1886," was read, as follows :)

Portland, March 21st, 1886.

My Dear Sir :—Enclosed find Salmon's letter, by which you will see he declines the invitation to come to Maine. I have written him upon receipt of his decision, full particulars of the outbreak and present appearance and condition of the herd.

Now what do you propose? If we are to go there to exterminate all animals that present lesions of the disease, it is going to be a very nice distinction to make in some of those cases, and I much regret Salmon's decision, as I shall approach a decision in some of these cases with much reluctance, if obliged to do so single handed. As soon as I hear from Salmon again I will let you know.

Yours truly,
Geo. H. Bailey.

Mr. Southard :—It says it never was the intention of any one to kill apparently well animals.

Mr. Cornish :—Don't argue the case now.

(Letter dated "Portland, Oct. 16th, 1886," was read, and also a postal card from Mr. Bailey to Mr. Gilbert, as follows :)

Portland, Oct. 16th, 1886.

Dear Sir:—I am just in receipt of your letter of the 15th, saying you shall call "all the board" together on Wednesday evening at City Hotel. We have been struggling along for a year past with an indefinite number, but I found out one thing by going to Augusta, and that was, that both Ferguson and myself *were not members*, our commissions having both expired Sep. 22nd, and I had to be reappointed Wednesday evening, in order to finish up the business of the year, which I hope to do with a "clean bill of health." You can see therefore it will be of no use to notify Mr. Ferguson, for he is no longer a "member of the board." Not knowing that you were aware of the fact, I write at once to inform you.

Yours truly,
Geo. H. Bailey, V. S.

Portland, Oct. 26th, 1886.

Dear Sir:—Be kind enough to give me your answer to the proposition in regard to Kent's case, and also other items in my letter of the *23rd*. Mr. Kent is anxious to have the case disposed of, so Mr. McAlister writes.

Yours truly,
Geo. H. Bailey, V. S.

Q. I want to know if you did, as a matter of fact, see any position to cover up or conceal anything down there?

A. I never have seen a single thing on the part of any of the trustees.

Q. Has not Mr. Gilbert given you all the facts you have asked for?

A. No, sir, he has not.

Q. He is one of the trustees?

A. He is one of the Cattle Commissioners also. You called my attention, very pointedly, to that case of glanders where you criticised my action in "staving it off."

Mr. Southard:—I don't criticise your action, Doctor, in staving it off, at all. But I want to know why you should appear to be so very anxious to get at this Kent bull, and at the same time neglect a case of the glanders?

A. I investigated that case of glanders and found it was not a case, in my opinion. It was a long route; an expensive one to the State; it proved eventually that I was right. They wrote me they didn't have a case. On the subject of glanders I want to read another letter I have—forwarded to

me by Mr Gilbert. "Some time in June there was a case of glanders reported at Patten. It was a long route," etc. Upon the back of the letter I received from Mr. Gilbert I received an indorsement of his opinion. I found a red hot case of glanders in the public stable at the hotel, in Patten. Here is what Mr. Gilbert says upon the back of the letter: "the foregoing was received after the other letters. I don't believe there is any glanders there. We don't want to incur the expense of a trip down there on a probable fool's errand. I have a pile of letters notifying me of cattle diseases; but am staving them off for the cattle to get well." I want to know what you have to say to our Cattle Commissioners "staving off" a pile of letters, from the municipal officers, to allow the cattle to get well.

Mr. Southard:—I have only to say that I didn't criticise your action because you staved—

Witness:—You don't now, because, in doing that you would have to criticise your client. I didn't know anything about your client. I told you honestly.

Mr. Southard:—I told you honestly.

Witness:—I investigated the case; it proved not to be a case of glanders.

Mr. Southard:—Here is one case where you are very anxious, another where you are staving it off.

Witness:—I am very anxious when I think my duties lead me in that direction.

(Letter dated "Portland, August 8th," was read in evidence as follows:)

Portland, Aug. 8th, 1886.

Dear Gilbert:—I enclose to you some documents that I deemed of sufficient importance to receive my prompt attendance, and went to Bucksport on Wednesday, and met Mr. McAlister, who took me to Mr. Kent's place. The latter is a farmer with a large stock of cows, from which he supplies the city with milk, and he also keeps a bull for public service.

This bull he purchased at Orono, and he is apparently a well animal, with a normal temperature and sound lungs as far as can be tested by percussion, and is about a year old.

He has covered but one cow, and was estopped from further use of him by orders of Mr. McAlister, until my inspection of the animal.

Mr. Kent is a shrewd old man who has carefully read Michener's report, and has it all by heart, especially where he expresses the opinion that no calf from one of those tuberculosed cows at Orono would ever arrive at maturity free from the disease. He also tells me he has a letter from you, advising him to use that bull for public service.

Now, the bull having come from one of the cows we killed, at the College farm, I can hardly see my way clear to concur in that advice, but I have promised Mr. Kent that I would correspond with you at once, and let him know our decision. I called to see Mr. Hatch at Bangor, and found him at the County Convention, trying to get nominated for Senator, so I could not get his ear. What shall we do? Please return the correspondence.

Yours,

Geo. H. Bailey.

Q. You had a conversation with Mr. Gilbert subsequently to your going to Bucksport?

A. Not in relation to the Kent bull. The first notice I ever got was from Mr. McAlister—selectman of the town—ordering me to go there. I wrote Mr. Gilbert and corresponded with him afterwards, not before.

Q. Did you have a conversation respecting your visit down there?

A. I may have had some time since that; I don't know when. I don't know how late after that.

Q. You never understood him to criticise your action in answering the request of the Selectmen?

A. He says in the other letter he wrote me he didn't think it warranted a visit or taking action in it.

Q. Did not you have a conversation afterwards in which he said he did not find any fault with you, personally?

A. I was taken sick afterwards; I won't say that we did not; we had some talk before that.

Q. Just tell what Mr. Gilbert concealed from you?

A. I say that I do not think that he has treated me quite so fairly as I have him. I think those cases reported to him —he should have notified me about them. I think "staving them off" to allow the cattle to get well was the height of indiscretion. If those cattle had pleuro-pneumonia, or the foot-and-mouth disease, in twenty-four hours it would have

gone over the State. I didn't "stave off" this case of glanders. I investigated to see whether it was a case of glanders or not; I did not propose to offer this letter unless you pressed me so hard as you did about the other matter.

(Letters dated Bucksport, Sept. 18, 1886, and Portland, Oct. 7th, 1886, were read, and are as follows:)

Bucksport, Sep. 18, 1886.

Z. A. Gilbert, Esq.

Dear Sir:—Mr. Kent of this town has a bull he purchased at the State College farm and he has been kept away from his other cattle for some time since last March. Dr. Bailey was in our town and looked the bull over and was to have the matter settled, what was to be done with the bull. I enclosed a letter from his wife which explains itself. As Mr. Kent is keeping the animal up at some considerable expense I hope the case will be disposed of one way or the other.

The people in this section feel that the bull ought not to be used owing to the fact that all of the cattle on the farm at the State College were killed, and as this creature was raised from one of the cows that were killed, and also the bull, and the Commissioners made such a report after giving the subject careful consideration, it seems but justice that the bull sold to Mr. Kent by the State ought to be treated the same and killed and not wait until the disease is transmitted to other cattle and then have him and the whole herd killed. I presume you have had the matter carefully considered, and will you please advise at to the result.

Respct. yours,

G. W. McAlister.

Chair. Selectmen.

Portland, Oct. 7th, 1886.

My Dear Sir:—In view of the near approach of your assuming the office of Governor of Maine, together with your well recognized leadership in everything pertaining to our cattle interests, will I trust be deemed sufficient excuse for my intrusion upon your notice at this time, of the constant danger by which we are menaced, in consequence of the recent importations and outbreaks of pleuro-pneumonia at Quebec, and throughout the West, and of which I entertain a most serious apprehension. The State Authorities of Massachusetts are moving promptly in the matters, and I enclose to you a cut from this morning's paper, relating thereto. I also enclose notice of the disappearance of 250 head last Sunday at Chicago. I also send you the October number of the American Veterinary Review, Page 311, with the request that you forward the paper to Hon. Z. A. Gilbert, at North Greene, as soon as you have read it.

You are no doubt aware of the recent prompt disposal by the Canadian Authorities of a valuable herd of Hereford and Angus cattle at Quebec, but I have information that two herds of cattle who have been in the immediate neighborhood of these infected cattle, were allowed to be taken to the Ohio State Fair, where they were advertised last week to be sold at auction upon the Fair Grounds, but the permission to sell was withdrawn, as soon as the managers learned of the outbreak at Quebec. There are also some remnants of tuberculosis, in connection with the College herd at Orono, which in my opinion should be promptly disposed of, and to which I have earnestly called the attention of Governor Robie and his Council, but which for some reason do not seem to receive their co-operation and support. The Attorney General of Massachusetts has decided that the Cattle Commissioners cannot act separately in these matters, and there are other cases recently called to my attention, but which I cannot well communicate in this letter. I hope to receive your co-operation and aid in the enforcement of what little law we have, a subject I deem of vast importance to us all. While I remain,

Sincerely yours.

Geo. H. Bailey, V. S.

Hon. J. R. Bodwell.

Chairman :—Is there any other gentleman present who desires to ask the doctor any question? This is a public hearing and if any gentleman desires to ask any questions for information he is at liberty to do so.

President Fernald said that he knew Dr. Bailey had managed the case very judiciously, carefully and wisely.

Mr. Southard :—He had the co-operation of the trustees and of the Governor and Council.

Chairman :—The doctor evidently understands that he had the co-operation of the trustees, and he has distinctly stated that with one exception he had no fault to find with them whatever. Am I right?

Dr. Bailey :—That is true, sir.

Q. I would like to know if at the time that herd of cattle was killed at Orono you found anything kept back by Mr. Gilbert whatever?

A. No, sir; he acted with the fullest and most hearty co-operation. He never failed to give me all the facts up to the time of the Kent bull. We have acted harmoniously in every instance until we came to that, I except the case of the Kent bull.

TESTIMONY OF M. C. FERNALD.

Q. Has the milk from the College herd been used in the families and boarding-houses on the College farm prior to the herd being destroyed?

A. The milk was not used at the boarding-houses; it was used in Mr. Gowell's family and supplied to one or two families on the farm. The janitor got his milk there and I think the assistant farm superintendent had his milk from the farm; but the other families had not had the milk from the College farm for three or four years. When Mr. Rich was there the milk was supplied to the boarding-houses and to the families on the College premises, but since Mr. Gowell has had charge that has not been the case. It was not used after the nature of the disease was suspected, so far as I know. The use of the milk before the disease was detected had no bad effect upon the persons using it that I ever learned. After it was known that there was trouble in the herd the use of it was abandoned.

TESTIMONY OF MR. GOWELL.

There was a family of small children at the janitor's and also at a farm hand's. The milk was used up to the time of the notification of the Cattle Commissioners, March 5th. Children and adults used the milk up to that time. Quite young children used of the milk. I have not heard of their being sick from it. After the herd was declared diseased, I gave the milk from the better animals to the pigs and that from the poorer ones we threw away. We never discovered there was any difficulty arising from its use, and during all the years past raw skim milk had been used as pig feed. At first it was told by the man who slaughtered the hogs that there was trouble with them, and that statement went out. I went to him. I think I went to him after the slaughter of the cattle, relative to it. He said our hogs were not different from those that he bought from other parties. So there was no foundation for the statement. For the first two

or three years President Fernald's family was supplied with butter from the milk. During '85 up to January first from sixty to seventy pounds of butter a week were made on the place. That was mostly disposed of in Bangor. Sales of butter were made up to the time of notice to the Commissioners, when our suspicions were aroused.

TESTIMONY OF HALL C. BURLEIGH.

Chairman:—Have you any knowledge, Mr. Burleigh, in relation to the facts that we are required to examine into?

Mr. Burleigh:—I do not know that I can throw any light on what has already been said. It would be merely taking up time. I was there when the killing occurred and I looked at all there were of them. Those in the south end I should think were the worst. I did not see those in the other end killed, but came home. I should disagree as to the appearance of the cattle in the barns. I saw them when the Commissioners were first called. I think I could not have stayed in that barn long without discovering disease there.

Chairman:—How would you have discovered it?

Mr. Burleigh:—The first thing that would have attracted my attention would have been the manure that was behind the cattle. That is something I always watch very closely. The dropping was very dry and appeared like that of cattle having a fever. Their condition was very good for a dairy herd of cattle. I went into the barn in the morning. I think Mr. Gowell went up with me in the forenoon. In the afternoon I noticed labor in the breathing and a certain uneasiness among some of the cattle, and my impression is now there were some of them that had not been considered affected. They were in the new barn. Some of them seemed to be laboring very hard and breathing as you will often see them when they are hurried up hill, or something of that kind. I went into the cellar and saw the same state of things in regard to the dropping from the cattle—very dry.

Chairman:—Didn't a good many of these animals look as though they were good for beef?

Mr. Burleigh :—There was one steer that was killed whose meat looked very nice indeed, and if he had not been in that herd, if I had seen him killed on another farm, I should not have hesitated to eat it. He did not appear to have so much about his lungs as the others. Two steers were killed while I was there. The other steer was very much more diseased. One was what we consider a very pretty carcass of beef.

Chairman :—Was it your judgment to kill those cattle?

Mr. Burleigh :—Yes, sir, by all means. I should have thought the Commissioners, Governor Robie and the whole concern that had anything to do with it very remiss in their duty if they had not killed them. I had heard about this disease before, but never saw a case of it that I know of. This stock was mostly Jersey and some Shorthorns. A Shorthorn is what we sometimes call a Durham. I did not notice any Herefords there. I think there was abundant law to take up those bulls and either quarantine or destroy them, as the Commissioners thought fit to do.

TESTIMONY OF MR. GOWELL resumed.

The Jersey Lily did not have a "bad cough" at the time she died. Her lungs were not examined at all. That heifer and Brownie were not examined. The only two that were examined were the two cows that were slaughtered in the spring of '86.

Dr. Bailey :—If you had been present you would have noticed that I had made the modification. He told me afterwards there was a mistake about it. I admitted he was more likely to be right than I. The impression has gone out here, and it has been generally entertained for a day or two, that I did not recognize that disease and did not know it until after I had gone into the field and seen the lung of that cow. Prof. Balentine, will you please state whether that is true or not? I merely ask you to state such facts as you know yourself.

Prof. Balentine :—I will say from remembrance that the first that I heard, Dr. Bailey said he was sure the disease was

tuberculosis, and I am satisfied from what had been told him that he knew what the disease was before he went into the field at all. The first that he said, that I heard, was after he came back from the field. He had not made a thorough examination of the herd at the time he went into the field. As my remembrance of it is, he had examined the Princess Alba on one side and had supposed that he would not find her diseased. That was on the right side. When she was slaughtered that lung proved to be sound. When he came back I asked him to examine the cow again, and he did so on the left side, and as soon as he commenced on her he said, "There is trouble here," and I am thoroughly satisfied that Dr. Bailey understood what he was about there.

Mr. Southard:—You say the right lung was practically unaffected.

Dr. Bailey:—I think he has got that reversed.

Prof. Balentine:—One of the lungs was free when she was slaughtered. No one in my hearing at the first examination questioned Dr. Bailey's professional skill in determining the character of that disease, at the first examination.

(The following papers and correspondence were identified, and read in evidence.)

MAINE COLLEGE FARM.

Superintendent's Office,
Orono, Me., Sept., 7, 1885.

Mr. Kent:

Dear Sir:—I will ship the calf by railroad Wednesday forenoon and he will probably arrive at your station towards night, same day.

Payment received in full.

The sire of this calf is "Ginx of Cream Brook," registered in the "A. J. C. Club."

His dam is the cow "Princess Alba" registered in the "M. S. J. C. Association."

I should like to hear how you are pleased with him when you receive him.

Respectfully,

G. M. Gowell.

Supt.

(Affidavit of Seth W. Kent.)

To whom it may concern: This is to certify that I purchased of Mr. G. M. Gowell, Supt. of the College farm, one bull calf on or about Sept. 7, 1885, and during the month of March my attention was called to the disease among the cattle at said farm and also the action taken to destroy said herd. I being anxious in reference to my own herd of cattle, having some 20 cows and was trying to improve the stock, I wrote Mr. Gilbert, Sec. of the Board, asking his advice as to using the bull for stock purposes, (as the sire was Ginx Cream Brook, registered in the "A. J. C. Club," and the dam is the cow Princess Alba, registered in the M. S. J. C. Association, and were both killed.) I was very anxious to have good authority as to using him. Mr. Gilbert wrote me advising me to keep the bull and use him. I called the attention of the Selectmen of the town of Bucksport to the matter, being very anxious as to the future of my herd, and they were very much opposed to his being used. This was some time in May, 1886. In July, 1886, I gave the municipal officers of Bucksport a written notice that I had good reason to believe that I had a diseased animal in my herd, and soon after Dr. Bailey, in company with the municipal officers, visited my place, and made an examination of the bull, and while he would not pronounce him diseased he was much opposed to his being used; and after some correspondence with Dr. Bailey the bull was killed and the lungs sent to Portland to Dr. Bailey, he sending me twenty dollars to aid in getting him out of the way and having him killed.

Mr. Ferguson visited my place and he advised the killing of the bull and not to be used for stock purposes.

Bucksport, Feb. 1st, 1887.

Seth N. Kent.

I certify that as far as I have had anything to do with the aforesaid animal, the foregoing statement is true.

G. W. McAlister,
Chair. Selectmen.

U. S. Department of Agriculture,
Bureau of Animal Industry.

Washington, D. C., March 18th, 1886.

Hon. M. C. Fernald,
Pres. Me. St. College,
Orono, Maine.

Sir: Your letter of the 12th instant to the Commissioner of Agriculture has been referred to me for reply. I should be very glad to give you any assistance in my power but find it impossible to leave Washington during this season of the year. I have no doubt that Dr. Bailey's diagnosis is correct and I think he will be able to give you all the professional advice that is necessary.

I should advise you to have all animals slaughtered that show symptoms of the disease and to move the others to a different stable, if possible, in any case to have the stable in which the animals have been standing thoroughly cleaned and disinfected.

Very respectfully,
D. E. Salmon.
Chief of Bureau.

Oldtown, Me., March 2d, 1887.

The cow recently killed by W. C. Miller of Bangor, the lungs of which were sent to Augusta, was bred by me and sold to the said Miller two years ago. She was from a cow which I bought of Michael Hanson, then of Palmyra. The bull that sired this cow killed by Mr. Miller was bred by Benj. Stevens of Stetson, and sold to Wm. Smart of Parkman. This diseased cow was in no way connected to Dr. North's herd as has been erroneously stated.

Sanford Stevens.

Portland, Aug. 2, '86.

Dear Gilbert: Yours of yesterday received. Of course I went to Orono, just as I wrote you last Sunday, (and I knew you had not received my letter when you wrote), so not hearing from you to the contrary I went way down there Monday afternoon, and out to Orono in the rain on Tuesday morning to find myself April fooled. I wrote you I had notified Gowell, and he was looking for us both.

I hate to go right back, but I suppose we might as well attend to what we have to now as anytime, but I can hardly see any need of notifying Ferguson, as he went there last week on his "own hook" and staid two days, but Gowell says he cannot see what for! I have a letter from Salmon giving me his recommendations in full, and the only thing he suggests different from what I proposed to do at our first meeting, is in regard to disinfection of the stables. So I can hardly see why we need him. Of course we shall be criticised. We were in the "foot-and-mouth" cases, if *you recollect*, but we made out to live through it, and in the present case, I am ready to take action now, as I shall ever be, and as willing. I have written nothing more for the Home Farm, and am not liable to say anything of which you will not fully approve. I have written the selectmen of Wesley for full particulars of their case, and when I hear from them will decide what to do. I shall leave here *Monday noon* for Orono.

Geo. H. Bailey.

Portland, April 15th, '86.

Dear Gilbert:

We waited for you all the forenoon yesterday, and not until afternoon did I get your letter. Governor Robie still thinks he can get Salmon here and I prepared a request for him to come, which is to be forwarded to

Frye. All agree that we should be criticised if we should recommend the indiscriminate slaughter of the herd. As soon as Salmon is heard from I will notify you, but answer please before *three days*. Shall you be in Augusta the 27th, when the Council meets?

Yours truly,

Geo. H. Bailey.

Portland, 12th, 1886.

Dear Sir: I am in receipt of your letter of the 18th, probably written before you received my second letter written yesterday, or you certainly would not say to me as you do that "we have no evidence that this bull came from any other than sound parentage" as I enclose you Mr. *Gowell's letter* in reply to mine asking what cow was the dam of the young bull at Bucksport. After reading my letter of the 11th if you still adhere to the same opinion I shall abide by it for the present, but I know it will not satisfy the selectmen of Bucksport of whom Mr. McAlister seems to be a very intelligent man, and fully disposed to press this case to a satisfactory conclusion. As to their call on me to attend this case. If "you do not think it warranted a visit from me" how am I to distinguish between what I ought to attend and those I had not? For I have never received a call apparently more in earnest than this one, and one in which I felt myself *it was my duty* to attend when I came to know the calf was from the herd at *Orono*.

His dam now proves to have been "Princess Alba" one of the worst, if not the very worst case at Orono, and her lungs presented all the lesions possible for tuberculosis to assume. This was the case Balentine told you I called a "beautiful case." I think now it is important that *we agree* upon some action to be taken, although if you still adhere to your present position, I can not now see my way clear to do so, but am willing to allow the matter to lie for the present or lay it before the Council for their opinion if you think well of so doing.

We have so far encountered no criticism in our management of the Commission we cannot successfully defend, and as my term of office will probably expire with Governor Robie's "term of office" I would not like to make a mistake now.

I am yours sincerely,

Geo. H. Bailey.

Portland, Oct. 29th, 1886.

Dear Sir: I am in receipt of yours of the 27th, containing four letters, three of which were from Etna and one from Kennebunkport, neither of which were sent for by me as they relate to matters which have been long since settled. If you will refer to my letter again you will notice that I specified three letters, the first from Scribner (which you asked to keep a little longer) the next from Mr. Gowell in relation to Kent's bull, and a postal from Mr. Chase. These are a part of my records, and may be of

service to me. Mr. Bell did call on me on Tuesday, and I showed him McAlister's letter, and while he fully agreed with me that the proposition was a liberal one on Mr. Kent's part, and *ought to be settled*, we were not at all sure we had a "quorum of the board" as, if Mr. Ferguson is a member as he says he is (Governor Robie having continued his commission), we could not be certain whether he would concur with your views or ours, upon a final vote, although he said to me informally he thought every one of the young bulls should be killed or castrated. Consequently no action was taken officially, but another letter from Mr. Kent, requesting immediate action on his case, precipitated action upon my part, and rather than have any more disagreement or vexation about this case (and you still opposing any compromise whatever), I concluded to offer to Mr. McAlister to settle the matter upon my own *private account*, and am just in receipt of his letter of acceptance of my offer, and the bull will be killed at once. This action upon my part will in no way compromise the Commissioners, or commit them to any future action in regard to other cases that may arise similar to Mr. Kent's, after I am no longer a Commissioner. The cost of settling the matter as I have I shall regard of no consequence to me, compared to the result that will be attained, and I shall feel that I have discharged my duty, in the only case connected with the College farm that I have been allowed to know anything about. I can see no good to be accomplished by going over the ground, as regards our difference of opinion upon these particular cases, for they are so far apart that there is no probability that either of us could draw up a report that both of us would sign. Besides if Ferguson is still a member, you will have the legal and proper number (three) still upon the board to make up a majority report. As for my own action about these cases, I am perfectly willing to await what develops and results, as the only vindication I shall need, either at the hands of the College or the State.

As soon as I can go to Orono to inspect the buildings, I will make to you my final report of what I find, as Mr. Gowell writes me the dressing will all be moved from the cellar within a few days.

I am yours truly,

Geo. H. Bailey, V. S.

Majority Report of Commissioners for Maine on Contagious Diseases of Animals.

To the President of the Senate and Speaker of the House of Representatives.

The extensive and disastrous outbreak of tuberculosis at the State College Farm was for the first time brought to my attention during the first week in March, 1886, at which time I received a telegram from Z. A. Gilbert, chairman of the "Board of Cattle Commissioners," to go at once to Orono and inspect the College herd, which at that time numbered over fifty head of thoroughbred Jersey and Short-horn cattle. Arriving at the farm, I for the first time met with President Fernald, Professors Balentine and Jordan, and Mr. G. M. Gowell, the efficient Superintendent, who afforded me every facility to examine the animals, and from whom I received such information and history of their cases as enabled me promptly to come to the conclusion that a large proportion of the animals were affected with tuberculosis, perhaps better known to the public at large as phthisis pulmonalis or consumption. The result of subsequent examinations and consultations with the State and College officials, and finally with Dr. C. B. Michener, who was detailed for this service by the Commissioner of Agriculture at Washington, culminated, as is now well known, in the condemnation and destruction of the whole herd. As this is the first case on record in which an entire herd of anything like this number and value have ever been destroyed as the result of official investigation, and as some most remarkable and interesting features of the disease have developed in tracing its origin and progress, I feel obliged to go at some length into such dry details of individual cases as have a direct bearing upon some animals connected with the College herd, which are now in my opinion a constant menace

to the future cattle interests of Maine. The outbreak at Orono has probably invited more gratuitous criticism and attention from stock owners and the general public than would have attached to any other public or private enterprise, owing in great part to the prominent position to which the State College has attained as a teacher and promoter of scientific advancement and progressive farming in this State; and I believe the Trustees and Faculty of the Institution, as well as the Cattle Commissioners, should challenge and invite the fullest inquiry and investigation into both causes and results, to which the public are justly entitled.

At the time of my first visit I found the buildings in which the cattle were contained were among the best and most commodious I had ever visited, and that every provision for the maintenance of perfect health among its occupants had been fully and amply secured. An abundance of sunlight and pure water, scrupulous cleanliness, sufficient and wholesome nutrition, thorough drainage, and ventilation so perfect that the air was almost as pure inside the barn as out,—all contributed to the uniformly fine appearance of this high-bred herd, which proved so deceptive (upon further investigation) that, had it not been for the persistent and pathognomonic cough by which they one by one betrayed their real condition, I should have much doubted the correctness of my decision. The rough coat and arched spine, the difficult and labored respiration, the sunken eye and pendulous abdomen, with extreme debility and emaciation, were nearly all absent in this herd, the judicious attention to hygiene, and the untiring caretaking of their faithful Superintendent, accounting in a great measure for the slow but sure development of the disease, a circumstance that so long deceived the attendants and College officials themselves as to their true condition. Many of the animals were also pregnant, and it is a well-known fact that increase of the tubercular growth is then held in abeyance, the energies of the nutritive processes of the body being diverted to the nourishment and growth of the fœtus, while af-

ter parturition the system is for a time debilitated, and rapid extension of tubercle is favored. Individual members of the herd were of great excellence, several cows having "butter records" of 16½ pounds per week, while 150 pounds of "gilt-edged" butter was being sold in Bangor market weekly. About ten days before my visit the Jersey cow Pet, No. 40. P. M., fourteen years old, had become so emaciated that she had been killed, and lay frozen in the field adjoining the stables, and this cadaver furnished me with ample opportunity to verify my diagnosis. From this cow I obtained the lungs, and a cross-section of the pulmonary tissue revealed the presence of numerous yellow tubercles, large and small cavities filled with a muco-purulent mass, others with caseous material. The lungs presented the identical lesions afterwards found in most of the animals at Orono, and of the peculiar metamorphosis which tubercles undergo, those of *caseous degeneration* afford the most favorable conditions for infecting the expired air of diseased animals. At the time of my second visit, March 12th, from among ten or twelve cows I had previously ordered isolated from the others, I selected two Jersey cows, Princess Alice, No. 44, P. M., and Princess Alba, No. 27, P. M., (the latter I then regarded as a typical case), and had them destroyed for post-mortem examination. Princess Alba had a temperature of 103 3-5°, marked emaciation, and dullness on percussion over the right lung, while auscultation clearly disclosed humid crackling or gurgling rales. The autopsy revealed an extraordinary amount of disease. The lung, pericardial and pleural membranes were loaded with deposit, which hung like bunches of grapes, exhibiting a perfect case of what is known as "angleberries." In some parts there was scarcely a remnant of proper lung-structure detectable, while others contained large tubercles filled with caseous material and also cavities connecting with bronchia, whose contents had been expectorated or absorbed. The bronchial glands in this case had attained enormous dimensions, the thymous weighing several pounds, and altogether

the lesions were as extensive and varied as in any subsequent autopsy. I shall have occasion to speak particularly of this cow again as the dam of the "Kent bull" of Bucksport. The lungs of Princess Alice were studded with miliary tubercles scattered throughout them, while the bronchial lymphatic glands contained calcified material that grated under the knife when attempting to cut it. Mr. Gowell wrote me on March 20th: "There is not a very marked change in many of the cattle, but in others, particularly those isolated in the stable, the process of 'wearing out' is going on actively, and every day's developments go to sustain my conviction and opinion expressed before notifying the 'Board of Commissioners' *that the entire herd was doomed.* Unpleasant as it was, *I was forced to recognize the truth.*"

On April 6th, the Commissioners met with the Governor and Council, at Orono, when the herd was again inspected and final action recommended at an early date. I then suggested to Governor Robie the propriety of requesting the Hon. Norman J. Colman, Commissioner of Agriculture, at Washington, to send Professor Salmon, or some other expert examiner from his office, to consult and advise with the Cattle Commissioners, as to the proper disposal of so valuable a herd. The request was promptly complied with and Dr. Ch. B. Michener, Professor of Cattle Pathology and Obstetrics at the American Veterinary College of New York was detailed for this service.

How well that service was performed, was the subject of a personal letter from Gov. Robie to Commissioner Colman, in which was conveyed the high appreciation of the State and College officials of the great value of Dr. Michener's timely and professional assistance. Personally I am resting under renewed and lasting obligations, for sound counsel and advice, relieving me in a great measure from the responsibilities devolving upon me as Veterinary Officer of the "Board of Commissioners on Contagious Diseases." Dr. Michener arrived April 21st, and on the 22d and 23d, after a careful and criti-

cal examination of every animal in the herd, it was found necessary to condemn them all, when they were forthwith expeditiously and humanely killed, and the post-mortems, openly made in the presence of the Governor, prominent physicians, stock-owners, reporters and others interested, the autopsies in every instance revealing the fact that the disease had been correctly interpreted, and that every animal presented unmistakable lesions of tuberculosis.

Much unfriendly comment has already been indulged in in regard to these cases by parties who entertained crude and erroneous ideas upon the subject, and it has been stated that too "much science," book farming, concentrated food, "cotton-seed meal," &c., were each or all the cause of their destruction, but having been put in possession of the formula and amount of feed furnished, I am able to state that there is no foundation in fact for any such allegations, and that the true cause lies "far and beyond" all such considerations. In no instance were over three pounds per day of cotton-seed meal furnished to cows giving a full flow of milk, and heifers carrying their first calf (Primiperas) have never received a particle, while the post-mortem appearance of the latter animals *presented fully as severe lesions of tubercles as the former*, and calves which had never received any other nourishment than their mothers' milk were found to be thoroughly diseased. No writer of the period has given to posterity so classical a description of these devastations among animals as Virgil in his "Georgics."

> "Not whirlwinds from the sea so frequent rush,
> Big with storm, as pests mid cattle rage,
> Nor individuals sole disorders seize,
> But, suddenly, whole flocks, with every hope,
> At once, and, from the youngest, all the race."

In my earnest endeavors to trace the origin of the disease among the College herd, I was surprised to find that as long ago as 1876, Mr. J. R. Farrington, who was then Superintendent of the State farm, sold to Mr. Henry Boardman, of

Bangor, two cows that proved a few years later to result in chronic cases of tuberculosis. Mr. Boardman, who for many years has carried on an extensive milk-farm near Bangor, has very kindly furnished me with the details of the purchase and disposal of these cows, so that I am enabled to establish the fact that these were the primary cases developed upon the College farm. Mr. Gowell writes me, under date of January 11th, "I presume you have now sufficient proof to show that the disease was on the farm when Mr. Farrington was here. I have looked in every direction for light previous to 1876, but have been forced to give it up." So it would seem to be settled that the disease has been smouldering in this herd for at least ten years, only to lift its hydra-head the past season, and cause the total destruction of the entire herd. On October 3rd, 1876, Mr. Farrington sold to Mr. Boardman one red grade Jersey cow, five years old, named Susan, for $40.00, and on November 25th, 1876, sold him a red and white grade Durham cow, called Dora, for $50.00. Mr. Boardman tells me '*this latter cow always had a cough, from the time he received her*' until he sold her to a butcher, March 8th, 1879, and when killed was found to be full of tubercles, on the liver and lungs, and on the ribs and plates well up to the throat." Upon Mr. Boardman's attention being called to the matter he refunded the butcher $38.00 of the amount paid him, and the carcass of the cow was sold to "boil out" at "one and a half" cents per pound. Mr. Boardman kept Susan five years, (during which time she failed to breed) when she wasted away and died of consumption, and he had her buried "hide and all," and these are the only cases that ever proved diseased upon his premises, in an experience in dairying extending over many years, in which he has always kept from ten to forty cows. Right here, a very significant fact presents itself, proving conclusively to my mind, that the cows sold to Mr. Boardman were *predisposed to the disease* when they left the College farm, by a letter received from Mr. Gowell, under date of March 20th, 1886, in which he

says, "I have learned of several animals, aside from Mr. Boardman's, *that were sold from the herd six or seven years ago and slaughtered that were found to be far gone with diseased lungs.* These statements have been brought to me by purchasing parties. Last fall I sold a young bull to a neighbor, to-day he tells me the bull has a "stiff neck" and small bunch behind ear. *These are the symptoms of disease shown by our heifers that I told you of.* I told him I would notify you when you came again. Will you not arrange to remain here an additional day and attend to the case? I am anxious about it." Two items of this important statement attract my attention, and these I have underlined. The first :—that several animals aside from Mr. Boardman's sold six or seven years ago "were found far gone with the disease," would carry them back to 1879 and '80, just about the same time Boardman's cow Dora was found to be thoroughly diseased, and *unquestionably from the same source.* The second :—that the young bull sold to his neighbor had a "stiff neck." Mr. Gowell had previously told me of this symptom among some young heifers, which at the time he attributed to feeding out of high troughs, and I had explained to him that it is only in exceptional cases that in the course of this malady alterations are not found in the lymphatic glands of the head, neck or chest, especially in the submaxillary, parotid and thoracic, (which would give young animals the appearance of stiff neck) as well as in the lymphatic glands.

Mr. Farrington remained Superintendent of the State Farm until 1878, when, after serving another year as "Instructor of Agriculture," he received the responsible appointment of Superintendent of the State Reform School, which position he now holds. At the close of 1877, Mr. Farrington turned over to his successor, Mr. Timothy G. Rich, thirty-four animals, comprising seven Short-Horns, eight Ayrshires, nine Jerseys, ten Grades, and his last annual report to the Trustees of the Maine State College becomes so important, in the light of subsequent events, that I give place to his full statement of the names and value of stock then upon the College farm.

Short-Horn cow Cornelia, 11 years old.....	$150 00
" heifer Cornucopia, 3 years old.....	125 00
" " Duchess of Maine, 3 years.....	150 00
" calf Cornucopia, 2nd, 3 months old..	25 00
" bull Napoleon, 3rd, 2 years old.....	150 00
" " Dirigo, 19 months old.....	50 00
" " calf Duke of Maine, 3 months old,	25 00
Ayrshire bull Hiempsal, 4 years old.....	125 00
" cow Olee, 6 years old	200 00
" " Isabel, 7 years old	150 00
" " Olivia, 3 years old	140 00
" " Oleeannee, 2 years old	85 00
" " Oletta, 15 months old	70 00
" heifer calf Olivia, 2nd, 5 months.....	35 00
" " Isabel, 2nd, 3 months old....	35 00
Jersey bull Harry, 2 years old.....	75 00
" " calf Harry, 2nd, 6 months old.....	30 00
" " " Prince Peter, 2nd, 6 months old..	25 00
" cow Hebe, 11 years old	250 00
" " Pride of Lachine, 8 years old	200 00
" heifer Hepsy, 3 years old	200 00
" " Pride of the Island, 17 months old..	65 00
" " Hester Hart, 17 months old.....	75 00
" calf Helen, 10 months old	50 00
Grade Short-Horn heifer Maggie, 3rd, 3 years old,	65 00
" Ayrshire heifer Jennie, 19 months old.....	35 00
" " Gipsey, 2nd, 19 months old,	40 00
" Jersey cow, Maggie, 8 years old	70 00
" " " Topsey, 7 years old	100 00
" " " Gipsey, 5 years old.....	70 00
" " " May, 3 years old.....	65 00
" " heifer Topsey, 2nd, 17 months old..	45 00
" " " Topsey, 3rd, 10 months old..	25 00
One two years' old steer	20 00
Number of animals, 34. Value.....	$3,020 00

Mr. T. G. Rich made his first annual report as Farm Superintendent in 1878, when the number of the herd was stated to be twenty-five, and the value, $1165.00. Mr. Rich's second annual report was in 1879, at which time the herd numbered twenty-seven head, seven of these being calves one year old or less, *and no value is given*. Mr. Rich's third annual report was in 1880, at which time the herd numbered thirty-six, seventeen of which were calves one year old or less, *and no value given*. Mr. Rich's last annual report was in 1881, at which time the herd numbered twenty-eight head, fourteen of them being calves one year old or less, *and no value given*. Mr. Rich's own reports, given almost "verbatim," as I now present them, would leave him as making a most unfavorable showing of his management of farm affairs, were it not as I now understand it, that the Trustees, yielding to the "popular demand" that the hay crop be increased, and the farm be put upon a paying basis, if possible, gave such instructions to Mr. Rich. In pursuance of such demands, Mr. Rich disposed of quite a number of thoroughbred animals, selected by his predecessor, selling them at a great deduction from cost as well as their actual value at the time, and replaced them with cheaper cattle. But the fact still remains that Mr. Rich must have known that he had a "contagious disease" of some kind to contend with, and if he had killed or sold the entire lot, it would have proved a "blessing to the State." He did sell several animals from the herd, (according to Mr. Gowell) that upon *"being slaughtered were found to be far gone with the disease."* He himself killed an Ayrshire in 1880, that he tells me *"coughed and pined away,"* and another at pasture in 1881, that died from an "unknown trouble." He turned over to Mr. Gowell, in 1882, the grade Short-Horn cow Maggie 3rd, afterward killed, who was *coughing when he let her go*; he also turned over Rose 8th, the thoroughbred Short-Horn cow that *failed to breed*, and upon being *slaughtered was found to be badly affected*, and last but not least, he turned over Hepsy and "Helen Hart," (No. 5, Post-mor-

tem report) the latter cow the mother of *two* bulls sold from the farm, now coming two and three years old, and also Helen's calf (No. 6 P. M.) "Helen Hart" was out of "Hepsy Hart" and she out of *Hebe*, a Jersey cow, that *refused to breed* and fell away in flesh in Mr. Rich's hands, and he sold her to a butcher in 1879, for *twenty-two dollars*, which was less than ten per cent of what Mr. Farrington paid for her, he having bought her of Dr. Boutelle in 1874, for *two hundred and fifty dollars*. I am in possession of all the College reports of Farm Superintendent from 1866, for *twenty years* down to Mr. Gowell's last report in 1886, and in but a single instance do I find any mention of the loss of one animal, either by *accident or disease*, excepting that Mr. Farrington, in 1875, reports the loss of the Short-Horn bull Napoleon (sire of Maggie, dam of Maggie 3rd), 5 years old, "who died from an unknown disease that appeared to be an affection of the salivary glands," and in 1877, he lost the Short-Horn cow "Duchess of Lakeside" from gastritis (inflammation of the stomach.)

President Wm. P. Wingate, in his report to the Senate and House of Representatives, in 1881, announced Mr. Rich's resignation and the appointment of Mr. G. M. Gowell, then President of the State Board of Agriculture, and said, "Mr. Gowell is fully in sympathy with the purposes of the College, and has a clear apprehension of its importance as a part of the educational system of the State. He is a progressive and successful farmer, and in matters pertaining to agriculture in Maine is abreast with the best thought and practice of the times. It is believed that he possesses special qualifications for the position." Mr. Gowell's first annual report was in 1882, when the stock was composed of twenty-five cattle, "one pair of oxen, seventeen cows, two bulls, two yearling steers and two heifer calves. Included in the above are the following thoroughbreds: one Short-Horn bull, one year old; one Jersey bull, one year old; three Jersey cows and two Short-Horn cows. The larger part of the herd is a pure cross

between the Jersey and Ayrshire breeds," the Jersey predominating. In 1883, he says, "Earnest efforts have been made to improve the stock, and there are now forty cattle, twenty-four of them being thoroughbred. The Short-Horn herd contains five animals. The A. J. C. C. herd consists of eight, and of 'Maine Jerseys' there are twelve. Among the members of these herds I am free to say there is not an inferior animal. In the breeding of Short-Horns, the aim has been to unite, so far as possible, the qualities of growth, thrift, and flesh with the ability to produce milk. In breeding both classes of Jerseys, constitutional vigor and rich milking powers have been sought for. The remainder of the herd are of a cross between the Jersey and Ayrshire breeds." In 1884, Mr. Gowell's third annual report says, "The herd of cattle consists of forty-two animals, thirty-seven of which are thoroughbred. Of these, five are Short-Horns, nineteen are 'Maine Jerseys,' and thirteen are 'Cattle Club' Jerseys. Among the Jerseys are some large producers, of good breeding, partaking largely of the blood of the great butter families of the world. Most of the cows are young, many not having matured yet. The young animals have mostly been bred upon the farm, and are vigorous, well-developed specimens of their respective breeds. Sales of young bulls to farmers, for breeding, have been frequent, but the heifers have mostly been retained, as the farm is yet under-stocked." In 1885, Mr. Gowell reports, "There are upon the farm forty-six cattle, forty of them being thoroughbred. Of these, eight are Short-Horns, sixteen are 'Maine State' Jerseys, and sixteen are 'Cattle Club' Jerseys. Approved bulls are at the head of these herds, and the young animals produced are of much excellence. Twenty-six cows and heifers are now in milk."

Mr. Gowell's last report, of 1886, has just been published, and his summary says: "The herd numbered fifty-one animals before its destruction. Forty-eight of them were registered thoroughbreds, and the remaining three were cross-bred Jersey-Ayrshires. Of the forty-eight thoroughbreds,

ten were Short-Horns, seventeen were 'Maine State Jerseys,' and twenty-one were 'American Cattle Club Jerseys.' These animals, or the stock from which they were bred, had mostly been selected in different localities, where desirable specimens could be found, and placed here within the last five years. The aim had been to secure the best animals obtainable, and as the result of this selection and breeding the herd had attained a very high degree of excellence." No values are placed upon the herds in any of the years since Mr. Gowell has been Superintendent. The following report of Dr. Michener will be read with interest in this connection:

269 W. 38TH STREET, NEW YORK, April 29, 1886.

To His Excellency, Frederick Robie, Esq., Governor of Maine:

DEAR SIR:—Pursuant to an order from Hon. Norman J. Colman, United States Commissioner of Agriculture, I started on the 19th instant for Orono, Maine, to advise with your State Veterinarian, Dr. George H. Bailey, as to what disposition should be made of the cattle belonging to the State College farm. Arriving there before the State authorities, I had ample time to study carefully the history and surroundings of the herd.

From G. M. Gowell, Superintendent of the farm, I learned that for the past eight or ten years there occurred an occasional death among the cattle, and as nearly as I could judge from his description, these animals were affected with the same disease that prevailed at this examination.

The trouble was evidently a pulmonary one, a more or less persistent cough, irregular or hurried breathing and emaciation being witnessed in all.

I was first led to examine the hygienic surroundings. The barn is a large one and has ample room for the stock. It is well lighted and thoroughly ventilated, the air being surprisingly pure as I entered the building early in the morning. The stalls are kept very clean, as the animals themselves show. The manure is thrown in the basement, but a free current of air prevents any appreciable odor from arising to the stable. The feeding is judicious in every sense, and the food, both grain and hay, is of the best quality.

From the history of the previous cases, and upon examining a few of the cattle that presented the most marked symptoms, I was able to diagnose the disease as tuberculosis, beyond any reasonable doubt.

Upon the arrival of the State authorities it was decided to destroy some of the worst cases for post-mortem purposes. The animals thus selected were some that State Veterinarian Bailey had previously examined and placed by themselves in the horse barn. I will refer to some

of them by name and give the lesions presented. Cow Pansy presented numerous miliary tubercles throughout the left lung, and in the right were masses of tubercular deposits of various sizes, situated chiefly near the apex of the lung. These masses had become cheesy or calcareous.

Hyacinth presented smaller aggregations of grayish white nodules throughout the substance of both lungs.

Flossy—both lungs affected; in the right lung near its center was noticed a large abscess, due to softening and breaking down of tubercular deposits. The left humero-radial, or elbow joint, was considerably enlarged and had given rise to lameness during the past few months. The knee joint of the same leg was first involved, but now appeared healthy. The synovial membrane and extremities of the humerus and radius were in a diseased condition, but presented no calcareous deposits or appearances of rheumatoid arthritis. The prepectoral and brachial lymphatic glands were found to contain much cheesy and calcareous matter.

Cows Edith, Crummie, Mildred, Blanch, and others showed extensive granulations on the costal and pulmonary pleurae, which in some instances firmly united the lungs to the ribs.

Helen Hart, in addition to similar lesions of the thoracic organs, revealed well-developed tubercles in the udder. Some of these had broken down and their contents was discharged into the milk sinuses, and tainted the milk—a fact that had been observed by those in charge for some days.

It does not appear necessary for me to detail the lesions found in individual cases beyond this, except to remark that other organs of the body were frequently involved—liver, intestines, etc. The calves presented mostly diseased conditions of lymphatic glands and intestines; diarrhœa and other digestive disorders being here most marked.

Out of the forty-seven (47) head destroyed, all (four or five calves were not examined, but were killed because of being the offspring of diseased dams, and having occupied the infected barn,) presented symptoms which, as you are probably aware, were accurately interpreted in every instance, even where but very small and deep-seated portions of lung tissue were involved.

The uniformity of these symptoms and pathological lesions must prove to all thinking minds (whether little or nothing is known of the appearance of the disease in question) that there existed in each individual member of the herd one and the same disease.

That this disease is both hereditary and contagious seems also patent from the fact that calves scarcely one month old were plainly affected, and that those animals recently bought and placed with the diseased cattle show upon post-mortem examination the initial lesions of this malady.

In answer to those who contend that this disease was caused by improper feeding, or lack of sufficient ventilation and exercise, it is only necessary to remind you that tuberculosis, like small pox and similar diseases, is a specific malady, one that can only be spread by coming in contact in some way with its special and determined infecting agent.

The assertions that cotton-seed meal had anything to do with the origin or spread of this disease are simply ridiculous.

Taking into consideration, then, the facts that a very large proportion of the herd (all, we might almost say) were affected with a disease communicable not only from animal to animal, but from animal to man; that in the future, death after death would occur yearly; that scarcely by any possibility could calves be raised from any of these cows that would reach maturity free from this pestilence; that animals purchased elsewhere and placed with this herd would (as past experience proves) soon become diseased; and that the barn itself is now infected, and must be left vacant for a considerable period; parts of it (floors, etc.) removed and burned, and a thorough and repeated disinfection be resorted to,—it becomes apparent to all, I think, that the only safe and proper course to pursue was the one advised, i. e., the slaughter of the entire herd.

Some of the meat might have been used as food had it not been for the prejudice that was so generally felt against it. For some time it has been impossible to sell even the butter from these cows, and I was assured by every one likely to know, that under no circumstances could a pound of the meat be disposed of now, or even months later.

The swine on the farm, that had been fed largely on the milk of these cows, were examined, and one pig nearly a year old was killed and carefully examined, but no traces of the tuberculosis could be detected. The butcher who kills the pigs raised on the farm states that in some instances the liver has appeared diseased. In conclusion, I can only recommend that when other animals are purchased, care be taken to buy from the herds where the disease has never existed, and that each animal be examined, at the time of purchase, by your State Veterinarian.

Very respectfully,

CH. B. MICHENER, V. S.,
Inspector Bureau of Animal Industry.

I fully concur with the above report.

GEO. H. BAILEY, D. V. S.,
Commissioner for Maine on Contagious Diseases of Animals.

The buildings have been disinfected through the agency of carbolic acid, sulphuric acid, copperas solution and fumes of burning sulphur. Those parts of the floors upon which animals stood were removed and replaced by new material.

The quarantine was raised by the following communication Nov. 18, 1886:

PORTLAND, NOV. 18, 1886.

To the Trustees of the Maine State College of Agriculture and Mechanic Arts:

This is to certify that on November 10th I visited Orono to inspect the buildings that had contained the Jersey herd destroyed by order of the Cattle Commissioners, and find that all the recommendations and require-

ments prescribed by Dr. Mcheuer and myself have been faithfully complied with, and believe the buildings to be in a safe condition to introduce new stock, as it is possible to make them through the agency of disinfectants and thorough ventilation. The means adopted meet my entire approval.

GEO. H. BAILEY, D. V. S.,
State Veterinary Surgeon.

Mr. Gowell writes to me, under date of December 13th, 1886, in reply to my inquiry, "Mr. Rich turned over to me quite a lot of young steers that I sold within the next few months, excepting one pair that I kept a year or over. He also left some seven or eight cows. The most of them were kept by me during the next year. Four of them were kept until 1884, two were kept until 1885, and one, Helen Hart, (No. 5, P. M.) until last spring. As I have previously told you, *the old Short-Horn cow was coughing in* 1882, *when I came here.* By good feeding she seemingly recovered, at least the cough ceased, and she did choice work for a year or more, when she again failed and was destroyed. No examination was made of her after slaughtering. Another of these cows was Rose 8th, of the Short-Horn Herd Book—a young cow—*she refused to breed* and becoming fat was sold for beef, *and upon being butchered was found badly affected*, as I have before told you." So, to state it plainly, Mr. Gowell received from Mr. Rich in 1882 a "legacy of corruption" that has already cost the State thousands of dollars, when, if at that time he had promptly destroyed this meagre and worthless "band of nondescripts," and thoroughly disinfected his premises, the splendid herd he afterwards so prudently selected and so carefully reared upon the College farm would undoubtedly have been alive and well to-day—alike creditable and profitable to the State—instead of having found a nameless sepulchre upon the banks of the Penobscot. It is but simple justice to Mr. Gowell to say that he purchased only the most approved animals "whenever and wherever" they could be bought to the best advantage, and the "personnel" of the herd at Orono was the best endorsement he could have asked, that they were critically and intelligently selected, but when he had collected

them together and domiciled them with the contaminated mongrels he had of Rich, he led them into the presence of a "pestilence that walketh in darkness, and a destruction that wasteth at noonday." In no instance have I been able to learn of a *single herd or a single town* in Maine, from which these animals were purchased, that down to the present time have ever been affected with tuberculosis, and I am led irresistibly to the conclusion that the disease that finally consumed the entire herd at Orono was generated, developed and confined within the boundaries of the College farm, and if no animals had ever been sold from the herd, we could now report the malady as *completely and effectively stamped out.*

The old cow Hebe, the "Jonah" of the College lot, was purchased from Dr. Boutelle, and I believe the purity and freedom from disease of his herd has never been called in question. Two cows, Juno 2nd and Juliette, came from Briggs & Son, Maple Grove Stock Farm, and their herd are clean and healthy, to my own personal knowledge. Mr. B. F. Briggs writes me from Auburn, "Pet, the dam of Juliette, was sold to a neighbor of ours. She was, to the day of her death, a perfectly healthy and strong cow, and all of her descendants have been, and so have the descendants of Juno 2nd." Several came from Winthrop, and I have never heard of a "Maine State Jersey" having tuberculosis in the town they came from, and it is so with all the others; the "fountain head" was pure until mixed up with the polluted herd at Orono. There is plenty of "food for reflection" in such startling evidences of contagion as these cases afford, which should be well considered by prudent men, in the purchase of animals to increase their herds or to lay the foundation of new ventures in that direction. The evidence all goes to show that the animals purchased by Mr. Gowell were not only *sound* when he bought them, but were from *sound parentage*, and that they were themselves affected by contact with the old members of the College herd, while their produce would have a tri-fold tendency to disease by contagion and heredity and also through the agency of the milk. Outside of these bulls

that have been distributed about the State, there is not a *single case remaining* above ground, that has ever been reported to me, since I have been a member of the Board of State Commissioners. *We have no contagious disease prevailing in our State to-day*, and it is not true that "there are a few towns in Maine where losses by this disease have not occurred." It is a "false alarm" to have that statement go out with the endorsement of the College officials, who must have been furnished their information by some party either *designedly* or who *knew nothing of the facts*. If it were true, however, there would be all the more reason why the Commissioners should be *empowered to stamp it out*. In an official experience for the past five years upon the board, I have never but once had my attention called to what proved to be a case of phthisis, and that was the outbreak last May in a small herd of native cattle at North Waterboro', where an old and diseased cow, purchased in Shapleigh, had been introduced into the herd, and slightly affected a few heifers; one three-year old and the weanling calf from the old cow were destroyed, the buildings disinfected, and all settled at a very small expense to the State. In my private practice I have as yet seen only an isolated case, that of an inbred Jersey heifer, whose sire was her own "full brother," and she was afterwards destroyed. In reference to the Short-Horn cow, Rose 8th, *refusing to breed*, which was also the case with the cow Susan, sold to Mr. Boardman, and the thoroughbred Jersey cow "Hebe," about whom I shall have more to say hereafter, it is a fact well recognized among veterinarians, that a large number of phthisical animals only exceptionally breed, or they remain totally sterile; and this absence of the procreative faculty has been indicated by many authorities, and especially by Roloff, as one of the symptoms of tuberculosis. "When the ovum is infected by the father or mother, it does not become developed, or its developement is of short duration. In such a case, coition will be unfruitful, or if the infection is due to the mother, she will be rendered completely sterile." If the foetus is infected during its development, it usually be-

comes diseased and perishes before birth, being generally expelled from the uterus by abortion.

Having been informed by Mr. Gowell that between the time he became Superintendent and his notice to the Cattle Commissioners, in March last, he had slaughtered five other cows besides Maggie 3rd and Rose 8th, that all presented the same condition of glands and lungs as the cow Pet, I have since learned the first one of them that he caused to be destroyed was the grade Short-Horn cow Maggie 3rd, killed in the autumn of 1884. This cow was bred upon the farm from a cow purchased in Orono, and was about ten years old when killed. She was one of the cows turned over to Mr. Rich by Mr. Farrington in 1878. The next was the thoroughbred Short-Horn cow Rose 8th, slaughtered in 1885. This cow was put upon the farm by Mr. Rich, when she was but a few days old, and was bought with her dam in the town of Stark. The Jersey heifers "Gray Nose" and "Jersey Lily" were also killed in 1885. "Gray Nose" was bred upon the farm and was out of Hyacinthe, one of the condemned cows, (see No. 3, post-mortem report) and at the time of killing was about two and a half years old. Jersey Lily was purchased when about one year old, in Rockland, Me., together with her dam "Princess Alba" (before referred to as the dam of the Kent bull) and was about two years and nine months old when killed. The Jersey heifer Brownie was also killed in 1885. She was bred upon the farm, was two years and three months old when killed, and her glands and lungs were both affected. Her dam was Juliette, (No. 32, P. M. reports). The Jersey cow Betsey was killed in January, 1886. Betsey was bred by the late Samuel Guild of Augusta, and was bought by Mr. Gowell in 1883, and at the same time he offered Mr. Guild a very large price for her dam. Pet was killed February 21st, 1886, about ten days before I was notified of the outbreak upon the farm. Pet was bred in Sagadahoc County, and was bought by Mr. Gowell in 1882.

This summary shows that these seven cows had succumbed to the disease since Mr. Gowell had been in charge and pre-

vious to any notification to the Commissioners, all of which presented the same morbid appearance and lesions as were found in the lungs of Pet (the cow I held the post-mortem on at my first visit), thus establishing the fact beyond all controversy, that they were all the victims of tuberculosis, the entire absence of the characteristic marbled appearance formed by the exudation and consolidation of lymph into the interlobular cellular tissue of the lung disposing entirely of the pre-existing theory of contagious pleuro-pneumonia, of which latter terrible scourge we have never yet had a case in Maine. The State of Maine, however, in common with other New England States, is seriously menaced by the near proximity of this highly contagious disease, the only remedy for which, in my opinion, lies in the swift enactment of such wise provisions of law as shall anticipate emergencies only too likely to arise. There are now no provisions of law whatever to prevent the bringing into the State of cattle affected with either contagious pleuro-pneumonia or tuberculosis, and I believe our only safety depends upon *promptly closing the borders of our State* against every State or Territory in which contagious *diseases are known to exist*. We prohibit the importation of European cattle except under a quarantine of ninety days. For the same reason precisely we should prohibit the movement of cattle out from an infected State or district, except under a quarantine of similar length. Every argument that can be advanced in support of the one is equally valid for the other, and if we allow this plague to reach our State, it will matter little whether it has come from Liverpool or New York: its virulent and deadly effect will be the same. Governor Bodwell struck the "key note" when he said in his inaugural address: "Fuller authority should be given to the State to destroy at once all cattle known to be affected with the disease. The owners will not do the work of destruction themselves on account of the direct loss incurred, and therefore the Government, as a general safeguard to the herd of the State, should assume the task and the cost of instant destruction when the disease is ascertained to exist. One

neglected case, that might have cost the State fifty dollars to destroy, would possibly entail a loss of many thousands of dollars to our cattle growers. It has cost England millions of dollars in her efforts to extirpate the disease, and if the contagion should break out among our vast herds on the Western plains, the loss would be incalculable. Beside guarding our own State by proper enactments on the subject, I recommend that Congress be memorialized to take the utmost care and precaution, through the national power, to prevent the importation and spread of the disease."

The public cannot have forgotten the urgent warning they received by the importation of "Foot and Mouth Disease" at Portland, during the winter of 1883, showing that even the "broad Atlantic" offers no barrier to the approach of bovine scourges from "across the sea," while the alarming increase and concentration of pleuro-pneumonia at Chicago has become of sufficient importance to invoke national legislation. The last census gives the number of cattle in Maine as 334,421, and the total value of live stock as $16,499,376, while the national investment in cattle alone is $1,200,000,000.

There was a direct loss to the State of between three and four thousand dollars by the destruction of the College herd, and an appropriation has been asked for to restock the farm. I believe there are many reasons why this claim should be allowed, and some such improved breeds of cattle purchased as the past experience, the present embarrassments, and the future prosperity of the College demand. The farm has been brought by the present management into a high state of cultivation, and was never so well and thoroughly equipped as now for the safe and convenient handling of its abundant harvests, while the addition during the past year of another barn affords spacious and ample accommodations for sufficient stock to consume their entire crop of hay and grain upon the premises, thus enabling the farm to furnish an abundance of "home-made" fertilizers, which shall always exceed in value those of chemical production, however honestly compounded. There will, moreover, be no need of going outside of Maine

to procure suitable cattle to stock the farm, for the enterprise and forethought of our most prominent stock-raisers have, by careful selection and importation, raised the standard of our beef supply until there is no good and sufficient reason why Maine should not produce all the beef we need, and of superior quality to any we can purchase in the markets of the great West, while the splendid exhibition of cattle at our recent State and New England Fairs, have never been excelled either in "quality or quantity" in this country or Europe. While endeavoring to fully and faithfully present the etiology and termination of the College cases, I believe no better opportunity will ever be afforded me than now to discuss the causes and symptoms of the disease that has obtained so serious a foothold in our State, offering only such testimony as, while instructive and convincing, is also susceptible of the highest proof.

Walley, a very eminent English authority, says, "The insidious nature of tuberculosis has perhaps had much to do with the comparative slowness with which professional and public opinion has been directed to it, but the strides which it has made and the hold which it has gained on our stock render it one of the most important questions affecting the future welbeing of the bovine species. Looking at an individual tubercle we might be led to despise its comparative insignificance, and to ignore its deadly meaning; but when we see thousands upon thousands of these knots existing in the organism of a single animal, a truth is forced upon our minds which we cannot refuse to recognize—that we have to deal with an insidious, implacable and deadly foe; and independently of its ultimate fatality, I think I may with safety say, that no morbid substance known to the pathologist is so protean as tubercle in the number of functional derangements to which it gives rise."

By common consent it seems to be conceded that Jerseys and Short-Horns are most subject to tuberculosis. Animals that are in-bred, of a lymphatic temperament, attenuated

figure, light barrels and narrow chests, are undoubtedly more predisposed to tubercle than those in which conformation may be said to be more perfect. The Ayrshires and Holsteins, are, as a rule, quite free from it, but under the influence of a change of climate they become particularly predisposed. The solid colored and more hardy breeds, such as the Herefords, Sussex and Devons, seem to be peculiarly exempt from disease, and it is claimed that the polled Aberdeenshires never develop it, however closely bred. The bovine tribe, however, is pre-eminently disposed, equally so with man; and next in order is the common rabbit. Pigs are very prone to tubercle, and also poultry. Tubercle is rarely seen in the sheep, cat or dog, and I have never seen a case of it in the horse. Phthisis means a wasting away, sometimes called pining, but of late years the term has been mainly restricted to that species of wasting disease which consists in the occupation of the lungs by tubercular matter. In the bovine species tubercle is remarkable for it enormous deposit in the lungs, although other parts are freely affected.

Tubercle may be confined to a non-vascular, gray, semi-transparent nodule, varying in size, in the lower animals, from a millet seed to that of a hen's egg. The conversion of the gray tubercle to the yellow is the most common retrogressive change. These tubercles, in a majority of cases, sooner or later, soften and liquefy into a condition that admits of their expulsion or escape through the bronchial tubes which communicate with the trachea; there being left in the lung in each case an excavation, a cavity or vomica. These vary greatly in size; as they may also vary in number. They may be no bigger than a pea, or they may be large enough to contain a pint or more of fluid. Opening into these cavities there is always one, and there are generally several, pervious *bronchial tubes*, which seem as if they had been cut off just where they enter the cavity, but you never, or very seldom, find a blood-vessel thus entering into the cavity; occasionally, but of very rare occurrence, a considerable

blood-vessel does get laid open during the formation of a vomica, and then copious and fatal hemmorrhage may ensue. The true reason why bronchial tubes open into these cavities, and blood-vessels do not, is to be found in the natural differences between these two sets of vessels, in respect to their structure. The blood-tubes yield readily to external pressure, and are pushed aside, while the bronchial tubes are neither so easily compressed, nor do they carry any coagulable fluid, but their open mouths remain at a point where the tubercular matter stopped, and afford a channel, through which the same matter, after it has liquefied, finds its way toward the trachea.

According to Niemeyer, tubercular matter, when once deposited, increases in quantity, until at length it liquefies by a sort of fatty degeneration. The tubercular matter becomes soft, breaks down, and is ultimately expelled through the bronchi, trachea and mouth. It is a remarkable and very important fact, that tubercles when they affect the lungs, are not deposited at random, but in the *upper lobes*. It is here also that they first ripen and grow soft, and become ready for expulsion through the bronchi and trachea, and it is here also that we have the largest vomica. These facts have a most important bearing upon a correct diagnosis, in cases that might otherwise be doubtful, for the converse of this is true of common inflammation of the lungs. Pneumonia affects by preference the lower lobes, and there is much practical advantage in knowing these points of contrast.

In health, the lungs of bovines, weighing only between six and seven pounds, are so buoyant that they float upon the water, while with lungs invaded with tubercular formations, they often weigh fifty or sixty pounds, and immediately descend to the bottom when placed in water. The liver is also very apt to undergo remarkable changes. It sometimes enlarges by becoming full of adipose matter which greases the hands and scalpel when it is cut open, the entire gland becoming soft, losing its natural red tint and assuming a pale

fawn color. Sometimes the cut surface of a liver has a whitish and glistening appearance and is then called a waxy liver, and this condition was observed in several members of the Orono herd. Tubercle kills by destroying the structures, and consequently the functions, of organs in which it is deposited.

The symptoms of tuberculosis in cattle, in its earliest stages, are sometimes involved in more or less obscurity. Prominent among these are unthriftiness, with a diminished and capricious appetite. The animals are easily fatigued, and have a weak and hoarse cough, that is almost diagnostic, the skin is sensitive and dry, and the coat staring, the mucous membranes are pale, the digestive organs are weak, and they are prone to tympanitis. There is increase of temperature, with a variable pulse. The milk is deteriorated in quality, being blue and watery, and contains a larger proportion of alkaline salts; but is less rich in nitrogenous matters, and fat and sugar, than in health, proving that assimilation is defective. In herds predisposed to tubercle they often become lame from some unassignable cause, when the post-mortem examination proves that it is due to tubercular inflammation of a joint. Flossy (No. 22, P. M.,) was a marked case of this species of lameness in the College herd. If the animal is compelled to walk quickly there is labored respiration, which becomes so prominent as to assume the abdominal character, if the pleura is invaded by disease. Nymphomania, or excessive sexual desire, is also frequent, but the animal is sterile; as the malady develops, the cough becomes more persistent and easily induced, and accompanied by muco-purulent expectoration. The animals are apathetic and sluggish in their movements. Emaciation proceeds more or less rapidly, extreme debility ensues, the eyes are sunken and brilliant, the mouth is open and drawn back at the angles, the spine is arched and tender, and the breath, as death approaches, becomes cadaverous and fœtid. Percussion gives dullness in some parts of the chest, and in others the normal resonance,

although the members of my profession do not possess equal advantages with human practitioners, of "free and easy" access to the chest wall, owing in great part to the thick skin and hair of animals, as well as the wide distribution of the "serratus magnus" muscle posterior to the scapula—while the sound resulting from the first gentle tap upon or beneath the clavicle in the human patient often only too clearly reveals lesions that seal the fate of a valuable life.

Auscultation reveals an altered respiratory murmur; it is louder in some places than in others, and of a harsh and rushing sound. Instead of the normal vesicular murmur, we find the "dry crackle" which is associated with incipient tubercle, the cavernous or bronchial sounds which occur during the passage of air into or out of a cavity in the lung, and the humid crackling or gurgling rales, which are pathognomonic of advanced tuberculization, and heard during the later stages of nearly all cases of consumption. Large crepitation depends upon the passage of air through liquids, but when pus or liquid matter of any kind is collected in a vomica, which communicates freely with the trachea thorough pervious bronchi, the bubbles produced by the entrance and exit of air will be still more numerous and large; and a sound is then produced which the word gurgling well expresses. Whenever, therefore, we hear gurgling during respiration or during the act of coughing, we conclude we have a cavity. Another constant accompaniment of progressive phthisis is emaciation, and if, without any apparent cause, an animal grows thin and weak, with a quick pulse and labored respiration, these indications are pregnant with meaning that tubercular disease is at work in the lungs, and is consuming life. The detection of the disease is sometimes difficult. It is easy when the tubercles are numerous, large or far advanced; difficult when they are scanty in number, thinly scattered and individually small, and in the latter case would not cause any appreciable deviation from the natural resonance of the chest on percussion, or from the natural smooth, equable rustle of the breathing.

The disease always terminates fatally, if the animal be permitted to linger on, and it dies in a state of extreme marasmus. The International Veterinary Congress, held at Brussels, in 1883, to discuss the Influence of Heredity and Contagion on the Propagation of Tuberculosis, in summing up their labors, arrived at the following conclusions.

1st. Tuberculosis has been observed in all warm-blooded animals submitted to domesticity or deprived of their liberty.

2d. Tuberculosis in animals and mankind presents analogous manifestations, in the living as in the dead creature.

3d. The course and termination of the disease in mankind and animals is the same.

4th. The masses of tubercle, and especially the sputa of the phthisical, produce tuberculosis in animals, when these matters are introduced through the respiratory or digestive apparatus. or through a deep wound. Tuberculosis inoculated from man to animals, may in its turn be transmitted from one animal to another, and always produces tuberculosis.

5th. Tuberculosis of man and of animals is transmitted by heredity.

6th. The disease is contagious in man and animals.

7th. Clinical observations prove the transmission of tuberculosis from animals to man by consumption of the milk of phthisical animals.

8th. Tuberculosis of animals and man is rare in cold climates. It is most frequent in southern countries; the tracings of the geographical propagation of the disease in man and animals is nearly parallel.

9th. It is evidently proved that a pathogenic microbe, having the same morphological and biological characters, exists in the tubercle of man and in that of animals. This organism, whether it be developed in man or animals, may induce tuberculosis when, cultivated in a pure state, it is conveyed to the animal possessing the necessary receptivity. According to Koch, the bacteria of tubercle manifest themselves in the form of threads of extreme tenuity, in length scarcely one-half the diameter of a red blood-corpuscle, and in breadth

at most one-fifth of their length. They are non-motile, without proper motion, and form spores which are developed during the life and in the body of the affected creature. They are never mixed with micrococci or other bacteria in tuberculous centres protected from the air. First and foremost among predisposing causes in the propagation of tuberculosis, among bovines, is its hereditary tendency.

According to Walley, "Hereditary tendency may be divided into direct and indirect: the former when it is transmitted by a sire or dam to its immediate progeny, the latter when only transmitted to the second or third generation—constituting atavism. No predisposing cause with which we are acquainted exercises such a potent influence in the production of tubercle as this: from sire to son, from dam to offspring, from generation to generation—often an unbroken succession—the fatal tendency is transmitted; the more consanguinity is multiplied, the more the tendency is increased, and the greater the virulence of the resulting products. No animal whose history is tainted, even in the slightest degree, or in whose system there exists the least suspicion of tubercle, should be used for breeding purposes." The disease is so insidious in its attacks that, when you think you are all right, it may appear in a grand-child of what was considered a very healthy animal, and outbreaks will occur years after all has been seemingly healthy, or it may lie dormant in an apparently healthy parent only to be regularly and certainly produced in their offspring.

Dr. J. H. Stickney, of Boston, one of our best men, and a graduate of human as well as veterinary medicine, tells me of an interesting case in point in western Massachusetts. A client of his had sold a young bull, with "a long pedigree" at "a long price," and before being delivered the youngster had developed a slight cough. Upon Dr. Stickney's attention being called to the case, he at once pronounced it tuberculosis. The dam of the bull was shown him, and after a critical examination of her, the Doctor failed to discover the slightest

indication of disease about her, but when he came to examine the grand-dam, who had been purchased at one of the "New York sales," he found her lungs and glands to be thoroughly invested with tubercle. This aroused the suspicion of the owner that the animal possessed the hereditary taint when he purchased her in New York, and upon ascertaining from what herd the animal was contributed to the sale, he visited the farm, only to find his suspicions well grounded, and that tuberculous animals were regularly disposed of whenever the primary symptoms became apparent. These men are always on the alert with regard to animals they breed, and are always anxious to dispose of them whenever they show any suspicious or morbid symptoms. In this way "suspects" find their way into sound herds, only to communicate to them the germs of the transmissible diseases with which they are affected.

Professor Law, of Cornell University, in his report to the Department of Agriculture, of the contagious diseases of our domestic animals, says that "twenty, thirty, and even fifty per cent of certain herds that supply New York City with milk are affected with this disease. In some country districts can be shown large herds with ninety per cent subjects of tuberculosis."

Some startling discoveries have also recently been made by the State "board of health" at San Francisco, California.

The "board" accompanied by a veterinary surgeon, inspected ten or a dozen dairies reported to them, and from one of them a cow suffering from consumption was purchased for the purpose of experiment. Dr. E. V. Hopkins, who is regarded as a microscopic specialist of high reputation, was engaged to make examination upon the milk of the consumptive animal. "The analysis was made," explained the doctor, "with a view to discovering whether the bacilli, or the consumptive disease germs, are found in the milk of the diseased animal. If these germs are found in the milk, then the disease is capable of being transmitted to the persons who use the milk. The cow was brought to me on December 1st, I think, and we kept

her about two weeks. I made several experiments during that time, as these will indicate"—exhibiting a box of microscopical glass slides carefully labelled. "I allowed the milk first to stand two days, until the cream had thoroughly risen to the top. One drop of this cream sufficed to prepare four slides. In order to bring the bacilli to view and distinguish them from surrounding matter, it was necessary to strain them." Dr. Hopkins here slipped one of the prepared slides, upon which a drop of the milk had been dried, on his microscope of 1500 magnifying power, and adjusted it for the reporter's eye. The milk presented an almost transparent appearance, and against it as a background there were to be counted a half-dozen reddish lines, perhaps an eighth of an inch long, apparently. "These colored lines which you see," said Dr. Hopkins, "are the disease germs of consumption. Transmitted in the living form to a person or other living being, they are liable to plant the fatal disease. The bacillus is a division of the bacteria, one of the very lowest forms of living vegetable life which exists in the blood, flesh and various forms of animal and vegetable life. According to the most advanced developments of medical science, it is held that all infectious diseases are due to the presence of bacteria—each disease has its representative species of the bacteria. The bacillus is long and tube-like, made up of infinitesimal spores, only made visible by the most powerful microscopes. Thus diphtheria, typhoid fever, leprosy, consumption, cholera and other contagious diseases have their separate germs which, to the eye of one understanding their nature and character, are recognizable and distinguishable one from the other. Other diseases, such as scarlet fever, measles and erysipelas, are due to micrococci, a round-celled form of bacteria. But those you see in the microscope are the disease germ of consumption, and from which the disease is developed. From all of the analysis of the milk from this consumptive cow I have found these bacilli."

"And would the disease be transmitted to those who use the milk merely by the drinking of it?"

"That would depend upon the health and delicacy of the organs of the person who drinks the milk. For children and babies, whose stomachs are yet delicate and susceptible to disease, the transmission cannot be avoided. Any baby who should drink this milk could not avoid being inoculated with consumption. With healthy adults, whose organs are less susceptible, the danger is less, though the germs will attach themselves to any organ which is weak."

"How many dairies have you thus examined?"

"Five, thus far."

"And in the milk of how many did you find the bacilli of consumption?"

"In four. That, of course, is a startling discovery. It is but just, however, to state that I chose dairies which I thought most likely to have diseased cattle."

"Was the milk that you examined taken from any one special cow?"

"No; I took the milk as it was delivered from door to door. The dairy proprietors were informed of the discovery and they have promptly separated the diseased cows from the others, I am informed. Of course a cow may be in the first stages of consumption and have no outward appearances and yet promulgate the germs. There may be only one diseased cow in the dairy. Yet the fact remains that after this cow's milk has been mixed with that of many others of the herd, I find in one drop of the mixture the germs of the deadly disease."

Dr. Hopkins had also prepared microscopical slides with minute portions of liver, blood, udder and lungs of the diseased cow that had been killed. All showed the bacilli, and the liver revealed a perfect mass of germ clusters.

Steele, a prominent English author, says, "Tubercle and cancer are hereditary disorders, and the immature cancer or tubercle elements may have been transmitted from the parent, and have remained in a dormant state, until surrounding conditions become favorable to the display of their full vigor. This view seems to derive support from the fact that just as

in due time each feature of development appears in the progeny as in the parent, so tubercle appears at a fixed age, which is the same in each."

Dr. Krunitz, on heredity, remarks, "After having sustained considerable losses for many years, owing to the employment of phthisical animals for breeding purposes, the owner referred to got rid of the scourge which had so long ravaged his cow-shed, by selling his bulls, and gradually ceasing to breed from cows which, until then, had been used for this purpose." A remarkable case, proving the transmission of the disease from the male parent to progeny is published by Zippelius. "A stock breeder purchased a bull, and with him served ten of his cows. The bull was found to be affected with tuberculosis, and for this reason was killed. All the calves of the ten cows which had been put to this bull had eventually to be slaughtered because of this affection. The first symptoms of the disease in the calves were manifested when they passed to adult age." And so in human statistics it is a fallacy to suppose that youth is considered the harvest time of consumption, or middle age the extreme limit of the period within which the whole crop is garnered, the post-mortem records of many hospitals showing that a large percentage of persons who die over sixty years of age are afflicted with pulmonary consumption; less between the ages of ten and forty, than it is between the ages of forty and seventy. It is said "that forty is the old age of youth, and fifty is the youth of old age." The seeds of disease being sown early, the malady matures later in life. According to abstracts prepared by Goring, on the sanitary condition of animals in Bavaria in 1878, 5052 tuberculous cattle were apportioned as follows:

65 were less than a year old;
551 were from one to three years;
1730 were from three to six years;
2360 were more than six years.

Although it is very rare that tuberculosis commences during fœtal life, yet it is notorious that a tuberculous cow transmits to its descendants a predisposition to the disease. Williams says that "it is not only hereditary but congenital, and I have seen a calf three months old, which had thriven well until within two or three days of its death, filled with caseous, calcareous and gray tubercular tumors. In this calf the whole of the serous membranes were affected, which must have been formed *in utero*. The mother of this calf seemed a healthy animal, but was of spare form and had a capricious appetite. Adam relates an instance from among many others in which the lesions of the disease were observed in a calf which died a few hours after its birth, the mother at the time being affected with tuberculosis. Semmes relates five cases of phthisis which he met with in fœtuses of cattle, and says these cases sufficiently prove that tuberculosis may be developed during the embryonic period, and that it is readily transmitted through heredity. Muller slaughtered a calf derived from a tuberculosed cow. At the autopsy, several nodules were found on the costal and pulmonary pleura, and the lymphatic glands (greatly increased in volume) had undergone caseous degeneration. Muller concluded from these facts that the disease is transmitted from mother to progeny, and that the latter from the moment of birth may possess not only the predisposition, but even present the patent lesions of the malady. Gerlach thought that heredity had so much influence in the propagation of tuberculosis, that it was sufficient to have a few tuberculous bulls in a herd to infect the whole, especially if in-and-in breeding was the rule. George Fleming says that "animals *descended from tuberculous parents inherit a special predisposition to the disease.* As there is every reason to believe that the malady is hereditary, cattle having any tendency to it should not be bred from. We may specially consider, as causes inherent to the development of the predisposition, the ever-increasing mass of connective tissue in improved and improving breeds of cattle and pigs,

more and more specialized for the production of milk and fat. That exaggerated activity of the vegetative life in the absence of proportionate muscular exertion—that fatty degeneration which is met with in most of the tissues of these animals—does it not remind one of hot-house plants?" In human medicine an analogous if not identical opinion has been entertained from the earliest times to the present day, and it is indeed astonishing that in the presence of this evidence the existence of a predisposition to, as well as the hereditary transmission of the malady should not have been accepted without discussion. Niemeyer admits the frequent occurrence of an inherited disposition to pulmonary phthisis, and holds it to be a *cardinal fact*, that the most essential element in the production of phthisis is *constitutional predisposition*. The contagiousness of tuberculosis has been admitted from very remote times by many eminent pathologists, while others have questioned or denied its existence. My experience with the recent cases at Orono has greatly strengthened and confirmed the conclusions to which my teachings and belief had been previously directed, that the disease is both contagious and hereditary.

The Maine State Board of Health, in a concise and instructive circular, recently published, on the Contagious Diseases of Animals, say that tuberculosis or the "Pearl Disease" of cattle is essentially the same disease as human consumption. It is both contagious and hereditary, but contagion, in animals at least, is a greater factor in its propagation than heredity. Of the domestic animals, cattle and swine show the greatest predisposition to tuberculosis; though others are liable to contract the disease when exposed to its infection. Between tuberculosis and pleuro-pneumonia there are many points of resemblance. Both are contagious, the period of incubation in tuberculosis is long, and it may be in pleuro-pneumonia; fever and the lung symptoms are common to both, and the disease in both often assumes a concealed form, dangerous to the remainder of the herd from the difficulty of

its recognition. When either disease is suspected, the determination of its character should be made by the veterinary surgeon. Dr. Salmon, Chief of Bureau of Animal Industry, says, "An animal may be infected by a particle of contagious matter floating in the atmosphere and so small as to be invisible to the naked eye; but in a few days or weeks, when the period of incubation is passed, every drop of blood and every particle of flesh in the infected animal may become as virulent as the original infecting particle, and every breath exhaled is loaded with infectious atoms which carry disease to other subjects. A diseased animal may, therefore, be looked upon as a factory which goes on manufacturing and distributing contagion, day and night, in enormous quantities.

Dr. Blaine, Assistant Physician to the Willard Asylum for the Insane, at Willard, N. Y., has recently contributed to the "Medical Record" a paper on bovine tuberculosis; its communication by ingestion, inhalation and hereditary transmissions; also its dangers to the public health, in which he gives a full account of the sudden outbreak of tuberculosis, whereby the Asylum sustained a loss of nearly two hundred head of valuable Holsteins. Dr. Blaine says, "I now wish to call your attention to certain clinical observations that were made by myself of the herds at the Willard Asylum, extending over a period of two and one-half years. During the fall of 1883 tuberculosis broke out in an acute form in the Asylum herd, which consisted of about one hundred head of milch cows and forty head of young stock, most of which were of Holstein blood, and with the exception of a few head, all were in excellent condition and thought to be in perfect health. During the summer months, however, a number of the cows were noticed coughing, which attracted some attention, but nothing of a serious nature was suspected until late in the fall, when those that had been noticed coughing began to emaciate, presenting in general a very bad appearance; the hair seemed dead, having lost its gloss, standing erect, cleaving from the skin. Their eyes were sunken and presented a heavy appearance. The animals did not move about

and usually lingered behind on going to and from pasture, and if hurried, they seemed exhausted from want of breath. My attention was called to them, and on examination I found in several cases an entire absence of respiratory murmur over the greater portion of either lung, and where the respiratory murmur was perceptible I detected moist rales, and in places the rales had assumed a resonant character, which indicated consolidation. A severe diarrhœa had now developed, which was very offensive, and the milk supply had gradually lessened for several months. Finally it was thought best to kill one of the feebler ones, and ascertain the true nature of the disease.

Case I. The animal chosen for examination was eight years old, of Holstein blood, and one year previously would have weighed 1,200 pounds. On the post-mortem, the animal was found highly tuberculous, and there seemed to be no organ in the body free from the disease. The lungs were voluminous and double their normal weight. They were completely adherent on either side, and the left lung on section seemed to be one mass of tubercular deposit. Small vomica had formed in some places, in other places the deposit was calcified, and in still others, cheesy. The bronchial glands were three to four times their normal size and degenerated. Numerous tubercles the size of hazel-nuts and smaller, were found upon either surface of the diaphragm, and the liver was found at least three times its normal size and contained large masses that would equal in weight several pounds. On cross-section it revealed large cavities filled with a muco-purulent mass. The bowels were covered with tubercles, and in a state of subacute inflammation. All of the abdominal organs were more or less affected, also the milk-bag, which contained several large deposits, some of which were calcified, and others softened and in a semi-purulent state. All the glands throughout the body were enlarged, and in places degenerated.

Case II was that of a Holstein six years old, much emaciated, and suffering from a chronic diarrhœa. No respiratory

murmur was heard over the right side of chest-wall except at the apex. General enlargement of the superficial lymphatic glands, also of the sub-maxillary and thyroid. Post-mortem examination: Lungs completely adherent on either side, and differing in no respect from those in Case No. 1. The lungs, with the heart and deposit intact, were removed and weighed, which weight equalled thirty-nine and one-half pounds. Deducting the weight of the normal lung and heart intact, we find about twenty-four pounds of tubercular deposit. The liver was double its normal size, and on section large quantities of muco-purulent fluid escaped; the mesenteric glands were degenerated, and the bowels were completely studded with tubercles about the size of peas. The milk-bag contained one large deposit between its two lobes which was calcified. The finding of these two animals so badly diseased, there being others that were failing and manifesting similar symptoms, naturally created a great amount of anxiety on the part of the medical superintendent, Dr. Chapin, who requested that I should make an examination of the whole herd. On making such an examination, twenty-four were found manifesting symptoms of the same disease, besides several that were considered questionable. Finding so many diseased, they being the property of the State, it was thought best to seek advice from one of our State veterinarians, as to what means were best to adopt. Professor Law, of Cornell University, was sent for. After making careful examinations of the herd, he reported that twenty-six were diseased, and that he considered several suspicious, as they manifested some symptoms of the disease, although he was unable to detect anything abnormal on auscultation. He advised the killing of all those that were diseased, the isolation of those that were considered doubtful, and a thorough disinfection of the stables. Having in the herd a full-blooded Holstein bull, it was considered quite essential to know if he was affected, although he had not manifested any symptoms of the disease. Upon careful examination nothing abnormal was detected. Professor Law's examinations were made

March 22, 1884. Many of the diseased animals remained in the herd for several weeks, when the herd was again examined by myself. I found those that only a few weeks previous were considered doubtful had now developed positive symptoms of the disease, and still others were found that seemed quite suspicious. The bull, at this time, appeared to be failing in flesh, but manifested no positive symptoms.

On May 22d and 23d twenty-eight of the most advanced cases were killed. On examination all were found affected, but not all to the same degree. The organs principally affected were the serous membranes, the lungs, liver, bowels, and the milk-bag in many cases. A number of them were affected to an equally great degree as the two cases I have already reported. Examination was again made of the herd on June 10th, and others were found manifesting the usual symptoms; the bull was again examined and it was very apparent that he was affected, although he had not manifested any cough, but he was rapidly losing flesh. He was then weighed and was found to weigh 2,456 pounds. He was again weighed on July 10th, and his weight was then 2,290 pounds, and as at this time it was very evident that he was also affected, it was decided to kill him. On post-mortem we found a large deposit in the central portion of the left lung, and numerous small tubercles upon the left pleura. The bronchial glands were greatly enlarged, and on cross section were found calcified. There were many tubercles upon the peritoneum and bowels. The liver in this case seemed free from disease. Upon the glans penis were several small tubercles, and in one place it appeared as though several had coalesced and had broken down, leaving a cicatrix. Had this been ulcerated, one might have thought it a soft chancre.

Leaving the herd at present, I wish to call your attention to the calves that were born during the winter and spring of 1883–84. Writers tell us that it is not an unusual occurrence for animals well advanced in tuberculosis to abort. This seems to be true, as such was the case in this herd. I

observed that eight calves were prematurely born, two of which required assistance at birth, as the mothers were much exhausted. One of the two that was removed was in about the eighth month of gestation. This fœtus on examination was found saturated with tubercles, some of which were as large as peas, and on drawing a knife across them they were found calcified. Tubercles were found in the liver, bowels, diaphragm and chest-wall, there being none observed upon the lungs. The mother of this calf was killed some weeks afterward and was found highly tuberculous, the disease being well advanced to the third stage, or stage of suppuration.

No. 2 was from a diseased mother, also in about the eighth month of gestation. On examination I found the liver, diaphragm and bowels quite thickly studded, but the tubercles were much smaller than in the preceding case. Of the other six prematurely born, I was able to examine only two, as the other four had been destroyed before I was acquainted of the fact. One of the two, however, that I did examine was found to have a tuberculous liver.

During the winters and springs of 1883–84 and 1884–85, fifty-three calves were born to the herd, and each one was examined with reference to the disease. Twenty-nine of the number were found tuberculous in some of the viscera. The greater number of the calves were killed within five weeks after birth, and the whole number before the expiration of four months. I will only call your attention to the most interesting cases. One calf killed at the age of five weeks was found highly tuberculous. The liver was double the normal size and covered with tubercles. On cross section it was found to contain a large vomica, filled with at least one pint of fluid of a muco-purulent character. Tubercles were also found upon the pleural surface of the left lung; also an extensive deposit in the apex of the same lung. The mesenteric glands were enlarged and cheesy. The bowels were thickly studded and in a state of subacute inflammation. This calf had suffered from a severe diarrhœa for several days, and had failed considerably in flesh.

The mother of this calf was killed shortly afterward, and was found badly diseased. Among the organs affected was the milk-bag, which contained a large tuberculous abscess. In this case does it seem possible for the disease to have been acquired wholly after birth? To my mind it does not seem possible that the disease could have developed with sufficient rapidity to produce an abscess of the liver in such a limited time. However, I am of the opinion that the intestinal lesions were produced, to a great extent, from the milk of its mother, as undoubtedly the milk must have contained elements of the disease.

In another calf, seven weeks old, the left lung was adherent to the chest-wall at the apex, where there was a large tubercular deposit. Also there were many small tubercles upon the lungs and in other places. The liver and bowels contained many tubercles of the size of peas, and on cross section were found in a state of cheesy degeneration. In the remaining cases the lesions were not as marked, but the disease was none the less apparent.

You now have the history of the herd up to June, 1884, and we find that nearly one-half of the herd of milch cows has been disposed of, all that were supposed to be diseased having been killed. The remainder of the herd were observed from time to time, and examinations repeated every twenty to thirty days; and upon each examination new cases were discovered, which were immediately removed from the herd, as it was thought they could be fattened and made use of.

The sorting out and feeding continued for several months, and at the time of killing many had not gained at all, while others had taken on considerable flesh; but upon killing only five were found fit for use, and four of these were slightly diseased in some of the viscera.

During the spring of 1885 a number of young heifers, which had been kept upon another portion of the farm, were with calf by the bull killed in June previously. Before putting them with the old herd they were examined, and many

of them were found diseased. It was deemed advisable to kill them. The calves of these heifers were all diseased, *the disease in one calf being traced directly to the bull*, as the mother was found unquestionably healthy. The remainder of the young herd which had been exposed to the disease were put with the remaining portion of the milch cows, and the combined herds now numbered forty head. The examinations were still continued from time to time, during the summer and fall of 1885, and occasionally one was found manifesting the usual symptoms of the disease. This procedure was continued until the spring of 1886, when it was thought advisable to feed the remainder of the herd. During the past summer all were killed except ten, which have been killed during the past month, and in nearly every case disease could be found in some of the viscera, and some were badly diseased, as I will show you from specimens that I have here. The specimen that I wish to show you is very interesting, inasmuch as it shows that one is not able, at all times, to tell whether or not the animal is diseased. You will observe that the disease, in this case, is confined wholly to the bronchial glands, there being no other organs affected—that is, as far as I have been able to determine. Auscultation of the lungs in this case revealed nothing abnormal, but the superficial lymphatic glands were not enlarged, and the animal had manifested a cough. The bronchial gland, in a healthy cow, is about four or five inches long, about one inch wide, and one-half inch in thickness. Here we have a specimen, removed from a Holstein cow nine years old, in which we find the gland is about ten to twelve inches in length and nearly six inches in thickness. This, on section, we shall find in some places calcified, and in others cheesy. I also have other specimens here, removed from another case, in which no disease could be found except in the glands, and these without apparent enlargement.

During the winter of 1883 the Asylum purchased a full-blooded, registered, Holstein bull-calf, from one of the leading breeding firms of this country. This bull was kept from the

herd until old enough for breeding purposes, and then only came in contact with the herd as occasion required. This animal thrived until April last, when I noticed that he began to manifest symptoms of the disease. He was examined at frequent intervals during the summer, and each examination confirmed the previous diagnosis. He was killed on November 16th, last. Previous to being killed he weighed nearly two thousand pounds. On post-mortem I found the left submaxillary gland enlarged and suppurating, the thyroid gland enlarged and calcified, and several deposits in the left lung about the size of walnuts; also tubercles upon the peritoneum and bowels. The liver, in this case, was free from disease. The glands and portions of the lungs I have here for your inspection.

The only possible objection that could be raised regarding the care of these animals was that of ventilation. The stables were kept scrupulously clean, being washed out daily, and there were no cess-pools about the barns or yards. The barns are situated upon a side-hill, thus affording the best possible drainage.

Their food was of the best of hay, corn fodder, bran and vegetables. In the spring of 1884 all of the animals were removed from the barns and put in pasture, and open sheds built for their protection.

During the following winter the animals were confined in the barns only during the time of feeding and milking, they being out during the day and protected at night by sheds open on one side.

Also in the breeding of this herd of stock there was the greatest amount of vigilance exercised in order to avoid in-breeding. Frequent changes were made in the bulls: new cows were bought from time to time of the farmers throughout the country, and these crossed with the Holstein bulls, and at the time of the outbreak of the disease about one-third were animals that had been purchased. In my mind it does not seem possible that the disease, or dyscrasia, had been inherited in all cases. Therefore, if the disease was not

inherited in all cases, it must necessarily have been acquired; and if acquired, through what channel did the disease enter the animals' system?

There appear to be only two channels in which it could have entered, the one by inhalation, the other by ingestion. In order to prove that the disease is communicated by inhalation, we have to resort to experiments, but by ingestion we have many striking examples in which it is plainly shown that the disease is acquired by the use of milk and meat of tuberculous animals. In proof that the disease may be acquired by the ingestion of tuberculous substances, allow me to call your attention to the Asylum herd of swine, which numbered nearly three hundred head. These animals were kept in different yards. In one, the breeding sows; in another, the half-grown pigs; and in the third yard, which was adjoining the slaughter house, were kept the large hogs which were being fattened. The hogs in this latter pen had access to the offal from the slaughter house, where a number of tuberculous cows had been killed. Later in the fall a number of the large fat hogs died suddenly in full strength, and on post-mortem were found highly tuberculous. The disease, however, did not present the same pathological conditions as in the cows. The disease seemed more especially confined to the abdominal viscera and the glandular system, the lungs being rarely affected. In those cases that died suddenly I found a tubercular peritonitis, to which was attributed the cause of death. During the killing season many were found diseased, there being metastatic abscesses in different portions of the body, but more especially in the side; and in the sows the rudiments of the milk-bag were often the seat of abscess. Also the joints were frequently affected, many of the hogs, both large and small, became lame. During the winter a number of them became partially paralyzed in their hind parts. The paralysis progressed, and finally they were unable to use their hind limbs at all, and for several days three of them moved about, walking upon their fore limbs and dragging their hind parts. Still they were fat and

seemed to eat equally as well as the others. Finally they were killed, and on post-mortem the bodies of the vertebræ in different portions of the column were found to have undergone caseous transformation. The cord at these points was softened, and in some cases completely obliterated.

After the killing of all the swine that had access to the offal, and disinfecting the yards, we have since had no more disease in the herd."

There is a remarkable similarity in the symptoms and post-mortem appearances of the Willard herd and that of the State College, and proves conclusively that any other course than that adopted at Orono, in the disposal of their cases, would have been suicidal to the best interests of the State. With the comparative freedom from disease we now enjoy, it would seem like inviting disaster for us to hesitate, or parley longer, to recommend immediate action on the part of the proper authorities, to stamp out every vestige of disease remaining in our State, and in this respect, as in all others, to live up to the proud motto emblazoned on our "State shield" and still continue to "lead the way." Fleming says, "The influence of contagion on the propagation of tuberculosis has been affirmatively solved, for we have furnished ample proof of its hereditary transmission; this transmission being nothing more than the infection of the ovum or fœtus through the medium of the parents. The reality of the infective action of the disease has already been demonstrated as well as its transmissibility from one individual to another in the special case of ascendant or descendant. As there is, however, a difference between the transmission of a disease from the producing animal to the product, on the one hand, and from an individual to another simultaneously existing, on the other hand, we are compelled to draw a distinction between hereditary transmission and contagion, properly speaking; and we cannot forbear from treating, in a special manner, of the conveyance of this disease through actual contact, that is, from one individual to another, both existing at the same time and enjoying life essentially independent of each other. The

morbific principle may arrive in the organism by the respiratory or the digestive tract; the inspired air, the food, or the drink may be the medium; and the contagion may also be transplanted by means of the generative organs (through copulation) or by accidental means, by wounds." Stahl has witnessed tuberculosis develop in five bulls in one stable, which were kept for the service of a commune. These bulls were not related in any way by parentage, and he attributes the outbreak of the disease to the purchase of a tuberculous bull, which, by its presence, infected the others.

Renner reports that a pregnant cow, newly purchased, was placed beside a tuberculous cow. The calf produced by the former was apparently healthy at birth, but five or six weeks afterwards it was attacked by shiverings, fever, fits of coughing and great dyspnæa. The tuberculous cow was killed, and soon after the calf showed evident symptoms of tuberculosis. In 1864, Villemin, with a view to study the infective action of human tuberculosis, made some important experiments that produced a profound sensation in the scientific world, and came to the conclusion that tuberculosis is an infectious and specific malady, capable of being transmitted from men to animals, and from one man to another. A German veterinarian, Albert, contributed a very thoughtful and interesting paper in 1880, on the tuberculosis of cattle as an infective disease, and says, "Although heredity is unquestionably a very important cause in the generation of this disease among cattle, still it does not suffice to explain the great extension which the same acquires among them; especially is it insufficient in answering for the eruption of the disease among cattle in stables where no breeding takes place, or where the young animals are brought in from other farms. In such stables other causes must be brought into action, and these are the transmission of the disease from one animal to another. I have observed that when there is in a stable one individual which contains in its organism the conditions necessary to the extension of the disease—tubercular process in the lungs—the disease extends to the other animals

in the same stable which have been there for a sufficient period." He cites a case on a farm where were kept from "twenty-four to twenty-six head of cattle. In 1864, the owner bought a calf to bring up, the mother of which died a few years later of tuberculosis. This calf developed very poorly for the first two years of its life, and was killed in the fall of 1869. In the course of the following winter, many of the cattle began to cough, and among them, two, A and B, so severely that my services were requested. I found all the animals in an apparently healthy condition; only A and B were noticed to cough. At this time I knew nothing of the breeding, or the phenomena seen in the above mentioned calf, which had been slaughtered.

All the animals on the farm coughed during the winter of 1870–71, at which time the two cows, A and B, began to emaciate so much that it was considered advisable to kill them. The autopsy revealed the general characteristics of tubercular pneumonia, and tuberculosis of other organs. Basing my opinions upon the previously mentioned experience, I made no hesitation in pronouncing all the cattle in this stable that coughed afflicted with tuberculosis, and I advised the owner to get rid of them all." Chauveau has already observed that heifers which feed out of the same trough become tuberculous whenever a phthisical animal is found among them. Grad quotes evidence to prove in the most conclusive manner that not only is the disease communicable by cohabitation of healthy with diseased cattle, but that stalls and stables may become so contaminated by animals suffering from tuberculosis, that they infect sound cattle which afterwards inhabit them, until thoroughly disinfected. Toussaint, Professor at the Toulouse Veterinary School, made numerous experiments to demonstrate the contagiousness of tuberculosis. For these investigations, which required thousands of animals, he employed pigs, rabbits and cats, as the disease is more surely and rapidly developed in them. The fluid expressed from the lungs of a tuberculous cow was that which he employed. He injected into four rabbits ten drops of this fluid, which was nearly

transparent. He afterwards heated the fluid to a temperature of 58 degrees for ten minutes in a water bath, and inoculated four pigs and four rabbits with it. All these animals became tuberculous, and the four which had been inoculated with the heated material perished even more rapidly than the others. Three rabbits were inoculated at the base of the ear, with the transparent mucus that flowed from the nose of a phthisical cow. In about two weeks there appeared a tuberculous nodule at the seat of inoculation, and the lymphatic glands were turnefied. Seventy days after inoculation the rabbits were killed, and in their lungs were found tubercles, the majority of which were gray and some were already undergoing caseation.

That the sputa from people afflicted with tubercular consumption contains elements capable of infection, has been placed beyond all doubt. Experiments made by Dr. Tappeimer, and published in Virchow's Archives, are of great interest. The animals experimented upon were made to breathe for several hours daily in a chamber in the air of which fine particles of phthisical sputem were suspended. The sputem having been mixed with water, the mixture was atomized by a steam atomizer. In all cases the sputa were from persons with caviters (vomica) in their lungs. Dogs alone were employed in the experiments, since they very rarely suffer from tuberculosis. The result was, that of eleven animals experimented on, with one doubtful exception, after a period varying from twenty-five to forty-five days, all, being killed, presented well developed miliary tubercles in both lungs; and in most of the cases tubercles were present to a smaller extent in the kidneys, and in some cases also in the liver and spleen. Dr. Reiche of Berlin sums up his observations on the infectiousness of the breath of persons afflicted with tuberculosis as follows: "In these cases the disease was *transmitted to ten children* by a nurse who had the habit of sucking at and blowing into the mouths of such little ones as were born asphytic. There was no ascertainable disposition to tuberculosis in any of the ten chil-

dren. All these children were brought into the world by the nurse Sanger, between April, 1875, and May, 1876. This nurse suffered from tubercular consumption at the time. In July, 1875, an examination of her lungs revealed cavities in the same, and she raised purulent ichorous sputa. She died from the disease in July, 1876. Nurse Sanger had the habit of removing the mucus from the babies' mouths by means of suction with her own; and in general treated children in a manner which rendered it possible for the expired air from her own lungs to get into theirs by kissing, etc."

From the clinical observations already cited as well as the numerous experiments which have been made, tending, as they do, to establish the infections character of the malady under consideration, it evidently results that tuberculosis is a contagious malady, equal in infectiousness to glanders and contagious pleuro-pneumonia. Inoculation has also demonstrated that the tubercular matter preserves its virulence through three or four removes; and successful inoculations have been made with tubercular matter from a patient who had been dead for thirty-six hours, and with sputa which had been in a dried condition for twenty days.

When we come to consider the transmission of the disease through the use of milk, we reach a point of vital importance to every man, woman and child in the community, and the conviction that the consumption of the milk of phthisical cattle constitutes a veritable danger is gradually penetrating society, and daily gaining ground. The first intimation that some infectious elements were contained in the milk of cows having this disease is due to Gerlach, the most noted of German veterinarians, and late director of the Royal Veterinary Institute at Berlin. Having a cow afflicted with tuberculosis, that still gave milk, it was resolved to use the same to test the question whether the milk from such a cow is capable of producing a similar disease in young animals when fed upon it. The cow was seven or eight years old, much emaciated, respiration difficult, and had a rough, weak cough. After a lapse of three months the cow was killed. The emaciated

condition had gradually increased, the milk-secretion likewise diminishing; although the animal received all the nourishment she could consume. The autopsy disclosed numerous tubercles of various dimensions upon the inner thoracic walls, the diaphragm and mediastinum. The lungs were voluminous and double the normal weight. A healthy, well-nourished calf, eight days old, was fed with the milk from the above-mentioned cow, for a period extending over one and two-thirds months. Neither phenomena indicating the presence of disease, nor disturbance of the nutritive functions were observable. The calf was killed one hundred days after the experimental feeding began, and upon post-mortem, tubercles were found in the lungs, and miliary tubercles were seen in the loose interlobular tissue. The bronchial lymph-glands were much enlarged and inwardly disturbed by many purulent and caseous cavities.

Gerlach says, "There is every reason to prohibit the use of milk from cows affected with tuberculosis, and especially for infants, who mainly rely upon this fluid for their subsistence, and whose powers of absorption are very active."

The milk from a tuberculous cow had been used for some time in a cooked condition, but the cow finally became so bad that it was decided to give the milk to the hogs, but uncooked. The farmer's wife noticed that the young pigs (four or five months old) fed upon this milk did not appear to thrive well, and as, in the course of a few weeks, three died, I was requested to make an examination of the last one. I found the pig much emaciated. The mesenteric glands were enlarged, and found filled with tuberculous mass, with tubercles in the liver. In the course of a few weeks the remaining pigs of the litter also died, and were found tuberculous on being examined.

The following case of transmission of bovine tuberculosis to man is related by Dr. Stang of Amborach: A boy, five years old, apparently strong in constitution and descended from healthy parents, whose progenitors were exempt from hereditary disease, was attacked with scrofula, and died in

four weeks from miliary tuberculosis of the lungs and enormous hypertrophy of the mesenteric glands. When making the autopsy, it was accidentally ascertained that some time before, the parents had to destroy a cow, which, according to the testimony of the veterinary surgeon, was affected with pulmonary phthisis. The animal had been a good milch cow, and for a long time the boy had received a quantity of the milk, immediately after it was drawn.

At the annual meeting of the National Veterinary Association, held in London, in 1883, Dr. Hopkin said: "I had an assistant who came to me from one of the islands on the coast of Scotland. The family from which he was derived was healthy and strong; but when two of his sisters were young, the herd of cattle became affected with tuberculosis. These girls were fed upon the milk of these cattle. The two brothers, who were more fond of whiskey than milk, are still hale and healthy—the sisters are lying in their graves, victims to tuberculosis."

Dr. Frank S. Billings of the University of Nebraska, one of our best pathological specialists, says, "This question of the specific infection of milk from tuberculous cows is no trifling matter: on the contrary, *it is one of life and death.* How many thousand babies are yearly brought up on the bottle with cow's milk? All the fond parents ask is, *that the milk is from one cow.* This guaranteed, they appear to feel perfectly satisfied. No one seems yet to have thought that a trustworthy and expert guarantee of the hygienic condition of the cow giving the milk was necessary. We make great demands, and get terribly excited about the purity of our water supply. We spend millions of dollars to keep the fountains pure and to prevent all foreign admixtures on its passage to us. Is it not as much our duty to examine into the purity of the fountains from which comes our milk supply? We cannot but repeat our assertion that every State board of health should be liberally supplied with funds to be used exclusively for experimental purposes, and in every State there should be a station for such purposes." These cases should

be more than sufficient to call the attention of every reflecting man and woman to the fact that tuberculosis is not only a disease, the disposition to which is transmissible from parent to offspring, both human and animal, but that it is, under certain circumstances, a highly contagious and infectious disease. They tell us in warning words that we must not only be most careful in selecting our partner for life, but in the selection of a nurse for children, and, when necessary, the cow from which we are to give them milk. Our own State board of health says: "Feeding experiments have conclusively shown that tuberculosis may be transmitted by means of the milk and flesh of diseased animals. Therefore prevention has to regard both the danger to other animals and to man. The milk from cows with this disease, even in its earliest stages, or when suspected, should never be used for human food. The flesh should never be used unless the disease is in its earliest stages and is so localized that the tubercular growth can be entirely removed."

Fleming says, "The circumstances which may preserve mankind from the harmful action of the milk are, happily, more easy to realize than those which should completely guarantee us from the danger likely to be incurred from consuming the flesh of tuberculous animals. It is, nevertheless, true that we do not know the special character which would allow us to distinguish, either by the naked eye, or by the aid of chemical or ordinary physical analysis, healthy from infected milk, while, on the other hand, obligatory search for the tubercle bacillus in all milk would be an excessive and impracticable measure. To prohibit the sale of milk of cows presenting symptoms of tubercular phthisis would be without result, the milk not being subjected to sufficient control, so far as its origin is concerned. The recommendation not to use the milk until it has been boiled has more likelihood of being observed, and is more certain of success than that relative to cooking the flesh. Milk is a fluid which heats uniformly, so that we may admit that in boiled milk every specific principle of tuberculosis, as well as the virus, is destroyed. In addition,

the milk from different animals is usually mixed, so that the activity of the virus in virulent milk is in this way attenuated by its commingling with healthy milk. This attenuation may be so great that the mixture is altogether inoffensive. Lastly, it should be recognized that the milk of every tuberculous cow is not fatally charged with the contagious principle of tuberculosis; although we cannot deny that the milk of such cattle should be very infective, if the disease is localized in the udder (mammary glands.) Degive, professor at the Brussels Veterinary School, relates the case of a cow which had the localizations of tuberculosis in the mamma. "A brown cow, of a delicate constitution, but a good milker, was attacked by a violent inflammation of the left half of the udder, which resisted every kind of treatment. The udder increased in size, and the secretion of milk was completely suspended. In a few weeks the cow commenced to cough and to breathe with difficulty—phenomena which were soon complicated with manifestations of fever. The diagnosis was pulmonary inflammation. The animal was killed, and on examination of its body there were found tuberculous nodosities on the pleura, as well as in the udder, where they were in great number." These symptoms conform precisely with those exhibited in the case of "Helen Hart,"(No. 5 P. M.,) and she is the dam of two of the bulls sold from the College farm. It results from the observations collected up to the present time, and from a consideration of the natural condition of things, that the dairies which supply milk warm from the cow, intended to be given directly to children, offer the greatest danger to the public health. In these establishments they do not rear the cows they employ, but buy them, always endeavoring to obtain those which yield the most milk, and these they milk excessively. In regard to the use of the meat, Zundle is of the opinion that, so far as injury or danger from the use of such flesh is concerned, up to the present time only theoretical considerations, based on imperfect experiments which are opposed to the facts derived from close observation, have been invoked. The discovery of Koch, he

adds, shows that the parasite of tuberculosis is only met with in the pathological productions characteristic of this malady, and are not diffused, like certain other of the infectious diseases, throughout the whole of the juices of the body, nor yet of the blood; and it is for these reasons that the bacilli are not found in the flesh. As a result, says this learned principal veterinary surgeon of Alsace Lorraine, it follows that the practice hitherto pursued should be in no way modified, and that, as in the past, only the flesh of wasted and wholly infected animals should be interdicted for food; the utilization of that which is derived from cattle less diseased may be allowed, if it be recommended to consume it only after it has been well cooked. Some Short-Horn steers, slaughtered at Orono, which had been kept for experimental feeding, were as "handsome and wholesome" as any Chicago or eastern beef, and I regarded it as a sacrifice of just so much marketable product, when they were put into the trench and destroyed. These steers had gained a pound and a half a day, from the time they were calves, and the lesions in them were very slight, mostly confined to the maxillary and lymphatic glands.

"Post-Mortem" Notes of College Herd.

Pansy, I. (No. 1.)

Cyst in centre of left lung. Apex affected, right filled with miliary tubercles. Age 8 years. Bred in Bowdoin. Dam, Model. Produce, Mildred, (No. 2, P. M.), Hyacinthe, (No. 3), and a bull calf that was affected and coughed when but three days old.

Mildred, I. (No. 2.)

Adhesions of both lungs to costal pleura, badly affected. Age 5 years. Bred in Bowdoin. Dam, Pansy, (No. 1). Produce, "Mildretta of Orono," (No. 4) and *bull* sold, now coming 3 years old, both bred on College farm.

Hyacinthe, I. (No. 3.)

Both lungs affected. Tubercles in right. Age 4 years. Bred in Bowdoin. Dam, Pansy, (No. 1). Produce, "Gray Nose," (No. 47).

Mildretta of Orono. (No. 4.)

Affected with tubercles. Age 1 year. Dam, Mildred, (No. 2). Bred on College farm.

"*Helen Hart.*" (No. 5.)

Both lungs and mammary glands affected, so that her milk was tainted. Age 8 years. Bred on College farm. Dam, "Hepsy Hart." Grand dam, Hebe. Produce, heifer calf, (No. 6), and two bulls, coming 3 and 4 years old, both bred on College farm.

Helen's Calf. (No. 6.)

Affected with miliary deposits in both lungs. Age 8 months. Dam, "Helen Hart," (No. 5). Bred on College farm.

"*Hesta Hart of Orono.*" (No. 7.)

Affected with tubercles and cough. Age 1 year. Dam, "Hesta Hart." Grand dam, "Hebe." Bred on College farm. "Hesta Hart" died in giving birth to "Hesta Hart of Orono."

"*Hugo Pauline.*" (No. 8.)

Affected with tubercle in right lung size of hen's egg. Age 7 years. Bred on College farm. Dam, "Pride of Lachine," Grand dam, Hebe. "Hugo Pauline" was sold from the herd when one week old, passed through several hands, and was re-purchased by Mr. Gowell in January, 1885.

Collie, I. (No. 9.)

Right lung affected with tubercles. Age 9 years. Bred in Winthrop. Produce, Tinney, (No. 10), and Collie, 2nd, (No. 13).

Tinney, I. (No. 10.)

Both lungs affected with tubercles. Age 7 years. Bred in Winthrop. Dam, Collie, (No. 9). Produce, Eizeletta

(No. 11), Tinetta, (No. 14), Tinney's calf, (No. 15) and bull sold now coming 3 years old.

Eizeletta, I. (No. 11.)

Tubercle (size of hen's egg) in right lung. Left lung affected. Age 5 years. Bred in Winthrop. Dam, Tinney, (No. 10). Produce, Blanch (No. 12) and "bull calf" (No. 16½.)

Blanch. (No. 12.)

Both lungs badly affected. "Grapes" (angle-berries) and abscess in right lung. Age 3 years. Bred on College farm. Dam, Eizeletta, (No. 11). Produce, (No. 16) bull calf, affected, coughed badly and debilitated.

"*Collie, 2nd.*" (No. 13.)

Thyroid and maxillary glands affected. Age 2 years. Bred on College farm. Dam, Collie, (No. 9). No produce.

Tinetta. (No. 14).

Glands affected. Coughed. Age 1 year. Bred on College farm. Dam, Tinney, (No. 10).

"*Tinney's Calf.*" (No. 15.)

Parotid glands affected, coughed badly and emaciated. Age 3 months. Bred on College farm. Dam, Tinney, (No. 10).

"*Blanch's Calf.*" (No. 16.)

Glands affected, stiff neck. Age 9 months. Dam, Blanch, (No. 12). Bred on College farm.

"*Eizeletta's Calf.*" (No. 16½.)

Coughed badly. Age 10 months. Dam, Eizeletta, (No. 11). Bred on College farm.

Highland Belle. (No. 17.)

Badly affected in both lungs and liver. Age 6 years. Bred at Bowdoinham. Purchased in 1882. Produce, Edith, (No. 18) and bull, sold, now coming 3 years old. Bred on the farm.

Edith. (No. 18.)

Both lungs badly affected, and pleural adhesions to ribs. Age 3 years. Dam, Highland Belle, 2nd, (No. 17). Bred on College farm.

"*Belle of West Meadows.*" I. (No. 19.)

Affected with tubercles in both lungs. Age 11 years. Imported in her dam from the Isle of Jersey. Produce, "Maid of West Meadows," (No. 20), and one bull, sold. Bred on College farm.

"*Maid of West Meadows.*" I. (No. 20.)

Affected with tubercles. Age 4 years. Bred in Rockland. Dam, "Belle of West Meadows," (No. 19). Produce, Flossy, (No. 22).

"*Belle of West Meadows' Calf.*" (No. 21.)

Glands affected. Coughed badly. Age 8 months. Dam, "Belle of West Meadows," (No. 19.) Bred on the farm.

Flossy. (No. 22.)

Lame in left shoulder. Right lung greatly affected with large abscess, left lung and bronchial glands also much affected. Age 2 years. Bred on College farm. Dam, "Maid of West Meadows," (No. 20). No produce.

Tulip 4th. I. (No. 23.)

Large tubercle in right lung, both affected. Age 8 years. Bred at Oldtown. Produce, Tulip's heifer calf, (No 24), Berry, (No. 39), and one bull, sold, now coming 4 years old. Bred on College farm.

Tulip's Calf. (No. 24.)

Glands affected, with cough. Age 4 months. Dam, Tulip 4th, (No. 23). Bred on College farm.

Thresa. (No. 25.)

Tubercular deposits in both lungs. Age 3 years. Bred on College farm. Dam, Rose 6th, (No. 48). Produce, heifer calf, (No. 26). Rose 8th was killed in 1885.

"*Thresa's Calf.*" (No. 26.)

Miliary deposit in both lungs. Age 5 months. Dam, Thresa, (No. 25). Bred on the College farm.

"*Princess Alba.*" I. (No. 27.)

Lungs loaded with deposit, angle-berries, large abscess and cavities, with bronchial glands greatly enlarged. Age 8 years. Purchased in Rockland. Produce, Jersey Lily (No. 28), Crummie, (No. 29), and the Kent bull.

"*Jersey Lily.*" I. (No. 28.)

Stiff neck, emaciated and bad cough. Age 2 years and 9 months. Purchased in Rockland. Dam, "Princess Alba," (No. 27). Killed by Mr. Gowell in March, 1885.

Crummie. (No. 29.)

Adhesions to costal pleura on left side, both lungs affected. Age, about 2 years. Dam, "Princess Alba," (No. 27). No produce. Bred on College farm.

Juno 2d. I. (No. 30.)

Sold to Mrs. Stetson of Bangor. Purchased in Auburn in 1883, when 2 years old. Dam, Effie. Produce, Susie, (No. 31) and two bulls, sold, all bred on College farm.

Susie. (No. 31.)

Both lungs affected with miliary deposits. Age 2 years. Dam, Juno 2d, (No. 30). Bred on College farm.

Julette. I. (No. 32.)

Both lungs affected with tubercles, also lymphatic glands. Age 7 years. Purchased in Auburn of Briggs and Son. Dam, Pet. Produce, Brownie, (No. 33).

Brownie. (No. 33.)

Stiff neck, glands enlarged, both lungs affected. Age 2 years and 3 months. Dam, Julette, (No. 32). Bred on College farm. Killed by Mr. Gowell in March, 1885.

"*Gray Nose.*" (No. 34.)

Stiff neck, lungs badly affected, emaciation and cough. Age, 2 years and 6 months. Dam, Hyacinthe, (No. 3). No produce. Bred on College farm. Killed by Mr. Gowell in March, 1885.

Betsey. I. (No. 35.)

One of the worst cases of tubercular formations and abcess at Orono, both lungs affected. Bought by Mr. Gowell

in Augusta, in 1883. Killed in January, 1886. Produce, Nan Lizzie, (No. 36).

"*Nan Lizzie.*" (No. 36.)

Right lung badly affected with tubercles and cavities. Age 2 years. Bred on College farm. No produce.

Clover. I. (No. 37.)

Both lungs affected with tubercles. Age 14 years. Bred in Brunswick. Produce, Clover's Pet, (No. 38) and Hattie, sold 3 years ago when a calf.

"*Clover's Pet.*" (No. 38.)

Slightly affected in left lung, calcareous deposit in bronchial glands. Age 2 years. Dam, Clover, (No. 37). Bred on College farm. Produce, Clover's Pet's calf, (No. 39).

"*Clover's Pet's Calf.*" (No. 39.)

Tubercles in both lungs, bad cough. Age 8 weeks. Dam, Clover's Pet, (No. 38). Bred on College farm.

Pet. I. (No. 40.)

Large tubercles and abscess, both lungs badly affected. Age 14 years. Bred in Bowdoin, and bought by Mr. Gowell in 1882. Produce, Old Pet's calf, (No. 41) and one bull, sold, now coming 4 years old. Killed by Mr. Gowell, Feb. 21st, 1886.

"*Old Pet's Calf.*" (No. 41.)

Lungs affected, bad cough. Age 9 months. Dam, Old Pet, (No. 40). Bred on College farm.

Juno. I. (No. 42.)

Large abscess in right lung. Left generally affected. Age 11 years. Purchased in Rockland. No produce.

Mollie. I. (No. 43.)

Right lung affected with tubercles of the size of a hen's egg. Age 6 years. Bred in Howland. Purchased in 1885.

Princess Alice. I. (No. 44.)

Lungs studded with miliary tubercles, calcification of bronchial lymphatic glands. Age 5½ years. Killed March 11th. Bred in Bowdoin.

Bess Pet. I. (No. 45.)

Both lungs affected. 2 years old. Dam, Bess. Bred on College farm.

Augusta Boy. I. (No. 46.)

Affected with tubercles in both lungs. Age 4 years. Bred in Augusta, and placed in the herd September, 1885.

Maggie 3d. (No. 47.)

Emaciated and coughed badly. Age 12 years. Bred on College farm. Killed by Mr. Gowell in the autumn of 1884.

Rose 8th. (No. 48.)

Short-Horn Herd Book cow. Refused to breed, and was sold to a butcher, and her lungs found badly affected. Bred at Stark, and bought with her dam when but a few days old. Killed by Mr. Gowell. Produce, Thresa, (No. 25).

Berry. (No. 49.)

Thoroughbred Short-Horn steer. Glands affected. Coughed. Age 2 years. Dam, Tulip 4th, (No. 23). Bred on College farm.

Bright. (No. 50.)

Thoroughbred Short-Horn steer. Glands affected, with bad cough. Age 19 months. Purchased when 4 days old.

Roan Heifer. (No. 51.)

Glands affected, and coughed. Age 3 months. Purchased when three days old at Oldtown.

The dams of eleven of the "bulls sold" from the farm are:

"Helen Hart," No. 5, the dam of two.
Collie, No. 9, the dam of one.
Belle of West Meadows, No. 19, the dam of one.
Mildred, No. 2, the dam of one.
Highland Belle, 2nd, No. 17, the dam of one.
Tulip, 4th, No. 23, the dam of one.
Old Pet, No. 40, the dam of one.
Princess Alba, No. 27, the dam of the "Kent bull."
Juno, 2nd, No. 30, the dam of two.

The post-mortem report I furnish above has been the result of considerable labor to prepare, but I believe it will well repay every one interested, to give it a careful perusal, as bearing directly upon the young bulls that have been sold from the College farm. Take the "Hebe" family as an example: I regard Hebe as a typical case, and the real "skeleton in the closet" of the College cases. "Helen Hart," No. 5, is the dam of *two bulls* sold from the farm, now coming 3 and 4 years old. "Helen Hart" was out of Hepsy Hart and she out of Hebe. "Hesta Hart of Orono," No. 7, was out of "Hesta Hart" and she out of Hebe. "Hugo Pauline," No. 8, was out of "Pride of Lachine" and she out of Hebe. "Helen's Calf," No. 6, was out of "Helen Hart," grandam Hebe, and Hebe is the old Jersey cow *that refused to breed*, and which Mr. Rich sold for $22, she having cost the State a few years before $250.00. Reduced to the military tactics of Orono, I should say that "Helen Hart" enlisted at the "beginning of the campaign" in the "infant-ry service," with Mr. Farrington, in 1877, and was turned over (with other "pensioners") at the close of his command in 1878, into the "hospital department" of Mr. Rich, where, after serving through a "hard siege" of four years, together with a lot of "diseased and disabled veterans," she joined the "new recruits" of Mr. Gowell in 1882. As a member of the "full band" she served all "through the war," and was turned over to the State Commissioners in March, 1886, when she was "mustered out," and soon afterwards died from the "effects of a *wound*, contracted while in the "service of the State." She left two "sons of veterans" who are, no doubt, still "willing and anxious" to *serve*, but as the "war is over," I have to recommend that they be put on the "retired list" as soon as the "necessary orders" can be given. Try the "Collie" family by the same test, for *Tinney*, No. 10, is the dam of *one* of *these bulls*, now coming 3 years old. Tinney was out of the old cow Collie, No. 9, Tinetta, No. 14, was out of Tinney, and she out of Collie. Eizeletta, No. 11, was out of Tinney, and she

out of Collie. "Tinney's Calf," No. 15, was out of Tinney, and she out of Collie. Blanch, No. 12, was out of Eizeletta, grandam Tinney. "Blanch's Calf," No. 16, was out of Blanch, great-grandam Tinney. "Eizeletta's Calf," No. 16½, was out of Eizeletta, great-grandam Collie, and Collie 2d, No. 13, was also out of Collie. No. 12, No. 13, No. 14, No. 15, No. 16, No. 16½, and the *bull sold*, were all bred upon the College farm. Look over the post-mortem notes opposite each member and see how you like them. Blanch (one of the very worst cases at Orono), with her dam Eizeletta, her grandam Tinney, and her great-grandam Collie, stood "side by side." Four generations of "Winthrop Jerseys," all splendid animals as far as appearances went, but whose lungs are a "mass of corruption," as were all their produce, together "with their uncles, their cousins and their aunts." Do you wonder, then, that the "warp and woof" of tubercle was woven into the "bone and muscle" of the entire herd, and that they all came honestly by the disease? Take the case of "*Belle of West Meadows*," No. 19, she is the dam of *one bull sold*, now coming 3 years old. "Maid of West Meadows," No. 20, is out of "Belle of West Meadows," "Flossy," No. 22, is out of "Maid of West Meadows," and she out of No. 19. "Belle of West Meadows' Calf," No. 21, is also out of No. 19, and the whole lot are diseased. *Mildred*, No. 2, is the dam of *one bull sold* now coming 3 years old. Mildred is out of Pansy, No. 1. Hyacinthe, No. 3, is out of Pansy, "Mildretta of Orono," No. 4, is out of Mildred and she out of Pansy. "Gray Nose," No. 34, is out of Hyacinthe, and she out of Pansy. "Highland Belle, 2nd," No. 17, is the dam of *one bull sold*, now coming 3 years old. "Highland Belle, 2nd," is also the dam of Edith, No. 18. Both bred on the College farm. A bad lot. "Tulip, 4th," No. 23, is the dam of *one bull sold*, now coming 4 years old. "Tulip's Calf," No. 24, is out of Tulip, 4th, and Berry, No. 49, is also out of Tulip, 4th, all diseased. *Old Pet*, No. 40, is the dam of one *bull* now coming 4 years

old. Old Pet is also the dam of "Pet's Calf," No. 41. Princess Alba, No. 27, is the dam of the Kent bull. "Jersey Lily," No. 28, is out of Princess Alba, and Crumxie, No. 29, is also out of Princess Alba. The "Kent bull" is the only one of these animals from which I have yet had the pleasure of seeing the lungs and glands, and these plainly show the primal formation of the tubercular deposit from different centres, while his dam was "rotten to the core." Last but not least is Juno, 2nd; she is the dam of *two bulls sold* from the farm, now coming 2 and 3 years old. Juno, 2nd, also produced Susie, No. 31, all bred on the College farm. Juno, 2nd, was sold from the farm to Mrs. Stetson of Bangor, and although examined by Dr. Michener last April, who failed to discover any unsoundness at that time, I consider her a dangerous animal to be at large. I also failed to discover any unsoundness about the Kent bull in July, but *four months later* his lungs showed unmistakable lesions of the disease. The above nine cows, excepting Juno, 2nd, were all killed at Orono, and all found thoroughly diseased, and are the dams of *eleven bulls*, all now in service in this State, and it will be noticed that they are each the *dams of from one to four other calves* which we killed at Orono, who were also badly diseased, and still I am told *we have no proof, only a suspicion* that these young bulls (for which the College has received about $350.00) are *themselves diseased*. In the above statement, I have had nothing to say, recollect, about the *sires of the above bulls*, that would surely contribute to and intensify the hereditary taint. In the male, tubercle is also deposited in the generative organs; in the structure of the testicle, producing orchitis; in the tunica vaginalis, producing dropsy (hydrocele), and in the structure of the cord, producing schirrus. What say you, farmers of Maine, do you wish to patronize these bulls, or have them come in contact with your "flocks and herds," or do you think the State of Maine can afford to issue *that kind of stock*, and *then refuse to redeem their depreciated and worthless coupons?* Although it has been my constant endeavor to keep this report within

the strictest limits conformable with what the importance of the subject demands, yet as I approach the close of a document that may appear lengthy and tedious to many readers, I feel that I should fall far short of my duty to others, were I to refuse to comment upon the cause of an apparent delay in pronouncing the "College cases" fully and safely disposed of, which results from the first and only "difference of opinion" with any of my associates, in an experience of five years of earnest and successful labor to free our State from such contagious diseases as, very fortunately for us, have been "few and far between." On July 27th, 1886, I received a legal notice from Mr. G. W. McAlister, one of the municipal officers of Bucksport, to take immediate and official action in reference to one bull purchased in the fall of 1885, by Seth N. Kent, from the herd of the State College at Orono. I went at once to Bucksport and found a yearling bull; while he was apparently well, I advised his being kept apart from other animals, and on no account to be used either for public or private service. As the advice conflicted with that previously given by another member of our Board, I interested myself at once, to have the matter reconciled and disposed of. I wrote to Mr. Gowell on August 7th, to know what cow was the dam of Mr. Kent's bull, and on August 8th, received his reply that "the animal was out of Princess Alba, No. 27, whose lungs and glands were badly affected, she was one of the worst cases at Orono." On August 25th, I again wrote Mr. Gowell, asking him how many bulls had been sold from the College herd, since he had been Superintendent, whose dams we killed, and were known to be diseased. On August 28th I received the following reply:—"Dear Sir: The calf was sold to Mr. Kent last September. It was about four months old at that time. Price paid, $20. Within the last four years *fourteen bulls* and bull calves have been sold from the farm. Eleven of them were bred from cows that we killed. The dams of two others could be regarded with suspicion, as they were taken from the herd because of 'refusal to breed' and un-

known trouble, although examined by Dr. Wilde, post-mortem. These bulls were sold for something like $350. Many of them being but a few days old, explains the low price, together with the desire to benefit the farmers by selling low; 'farmers' prices' our motto. Ten of these bulls were sold previous to 1885—nearly two years ago—and must have been used a great deal already; those sold in 1885 probably have been used limitedly. The Kent bull is the last one that went out." On October 13th, at the request of Mr. Kent, I brought the case before the Governor and Council at Augusta, and also wrote to Dr. Michener, reporting the case, and asking for his opinion. August 19th, I received his letter, dated New York, '86, saying, "Your letter of the 14th is received. I do not see how any one can advise the keeping of said bull for service. It must be remembered that tuberculosis is held to be hereditary, by all the best authorities, both human and veterinary. If this be true, and I believe it to be so unquestionably—then this particular animal is certainly an unsafe sire—or to put it differently, is a sire almost *certain* to propagate the disease. *He should be killed.*" On October 22nd, I received a proposition from Mr. McAlister, who from the first had taken much interest in the matter, saying, "If the State will give $25 the bull shall be disposed of and I will pay the rest of the bill myself. I make this proposition that the future of this community may be safe." This proposition was rejected, and finally, through the united efforts of Mr. McAlister and myself, the bull was killed about November 1st, and the lungs and glands sent to me for examination. I retained a portion and sent the anterior lobe of the right lung to the American Veterinary College of New York. The following is a copy of a letter from Dr. Michener, dated New York, November 19th, 1886:

My Dear Doctor:—Your letter received. I am glad you wrote me concerning this, as it gives me an opportunity to say that by chance I saw a portion of the lung sent to American Veterinary College from the "Kent Bull," (Dr. Liautard told me) a calf of one of the cows of Orono herd. These lungs show *unmistakable lesions of Tuberculosis.* Why don't you hunt up all such bulls and have them destroyed? There can be

but little doubt that they will all sooner or later develop this disease. They will serve to extend it in many herds where their services are required. The Commissioners, and the State Veterinarian more than all—will be, I think, directly responsible for every case of such extension. In the eyes of all veterinarians you will deserve censure if you fail to follow up each animal. They may be yet used for beef. Probably your hands are tied. I think this the case, for I know you well enough to judge that you are not one to avoid a duty, no matter how unpleasant.

(Sd) Ch. B. Michener, D. V. S.,
Chief Inspector of Bureau of Animal Industry,
U. S. Dep't of Agriculture."

These are no "idle words," they are the matured judgment and opinions of a man who is a leader, and a teacher in that humane profession to which I have the honor to belong, and I have been thus particular to offer the correspondence in this case, for the reason that the "Kent bull" is the only one described by Mr. Gowell in his letter of August 28th, that I have yet seen, or of which I have any knowledge of their present whereabouts, but as the proper disposal of all the others pivots on this one case, the position I take can now be fully understood, which is, that *no one of these outcasts should be allowed to cohabit with other animals* or to *propagate their kind*, and that every one of the vagabonds should *be promptly inspected and destroyed*, either for beef or otherwise as circumstances shall develop. It was Shakespeare who said "Diseases desperate grown by desperate appliances are relieved, or not at all." What these animals have inherited they can surely transmit, and by a decree as unchangable as the law of the Medes and Persians, which altereth not, "the iniquities of the fathers shall be visited upon the children unto the third and fourth generations." In conversation recently with Governor Bodwell, he said that he "considered that the animals sold out of the Orono herd, to go into other herds, should have been looked after long ago, and that proper measures are necessary to prevent further spread of the disease." I am told by others who differ with me as to the proper disposal of the outstanding cases at Orono, first, that the law gives the Commissioners no *police powers*

whatever, that only *on appearance of disease* which the municipal authorities fear endangers public interests, they are to call upon us. According to this, no matter how much personal knowledge the Commissioners may have of the presence of any contagious disease, the law says "Hands off" until some owner who does not recognize the disease has notified some town officer who does know the law, that he *suspects* contagion. "To be forewarned is to be forearmed," and if this be true, the sooner the Commissioners are "clothed with power" to act promptly, and to dispense with "red tape" while contagion is being sown broadcast all over our State, the better it will be for the community. The first essential in any attempt to control contagious diseases is the power to enter upon premises and inspect the stock wherever it may be. Without such power the existence of contagious diseases cannot be determined. Owners frequently have no means of determining the nature of a malady from which their animals may be suffering, and oftener still they may be satisfied as to the character of their affliction, but prefer that others should be kept in ignorance of it. With either breeding herds or milk dairies the business of the owner is generally destroyed as soon as the public learns that the animals are affected, and consequently, the endeavor to keep the public in ignorance of it is an effort for self-preservation. The second objection to the issuing of summary orders in these cases is "that we have no *proof* (only a suspicion) *that these College bulls are diseased*." If the facts that I have collected, presented and grouped "around and about" every one of these animals is not deemed a good and sufficient answer to the latter allegation, then I am ready to believe that there is no absurdity so great but that it will find some champion to defend it.

GEO. H. BAILEY, D. V. S., PORTLAND, ME.,

Secretary and Veterinary Surgeon of Board of Commissioners on Contagious Diseases for Maine.

Having been put in possession of all the above facts, we hereby fully concur in the above report.

W. B. Ferguson, } Commissioners for Maine on
Samuel Bell, } Contagious Diseases of Animals.

Ch. B. Michener, D. V. S.,
Professor of Obstetrics, Cattle Pathology, Materia Medica, Therapeutics and Hygiene, American Veterinary College of New York.

Frederick Henry Gerrish, M. D.,
President Maine State Board of Health.

A. G. Young, M. D.,
Secretary State Board of Health.

Portland, Sept. 1st, 1886.

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STATE OF MAINE.

IN SENATE, March 10, 1887.

Reported by Mr. ALLEN, from the Joint Special Committee to Investigate the Cattle Disease, and on his motion laid on the table and ordered printed, together with the testimony which is submitted as part of the report.

C. W. TILDEN,

Secretary.

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