

MAINE STATE LEGISLATURE

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Public Documents of Maine :

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

Public Officers Institutions

FOR THE YEAR

1895

VOLUME I.

AUGUSTA :

BURLEIGH & FLYNT, PRINTERS TO THE STATE.

1895.

REPORT OF COMMISSIONERS
ON
CONTAGIOUS DISEASES
OF
ANIMALS

Under the Law of 1887, Chapter 138, of Public
Laws of Maine

THOMAS DAGGETT, FOXCROFT, ME., *President.*

F. O. BEAL, BANGOR, ME., *Treasurer.*

GEO. H. BAILEY, DEERING, ME., *State Veterinarian*

AUGUSTA
BURLEIGH & FLYNT, PRINTERS TO THE STATE
1895

REPORT.

To His Excellency, the Governor of Maine:

We present our biennial report for the year closing December 31, 1894, together with an account of our expenditures and other proceedings under provisions of the law of 1887, chapter 177, relating to contagious diseases in this State, and as amended in 1892, chapter 194:

The first inspection of the year was ordered at Sangerville January 4th, but no contagious disease was found.

January 5th. Inspection of cattle at Carmel, but no contagious disease was found.

January 9th. Inspection of stable at East Wales and horse affected with glanders was condemned. Appraisal \$50.

January 16th. Inspection of stable at Bradford and horse affected with farcy was condemned. Appraisal \$50.

January 17. Inspection of cattle at West Bangor and cow condemned and appraised \$30.

January 18th. Inspection of cattle at New Sharon, discovered two grade Jersey cows with tuberculosis. Appraisal \$38.

January 19th. Inspection of cattle at Morrill, but no contagious disease was discovered.

January 21st. Inspection of cattle at Spurwink and a grade Jersey cow condemned and appraised at \$15.

January 24th. Inspection of cattle at North Bangor, cow condemned and appraised at \$30.

January 25th. Inspected stable at Garland, but no contagious disease was found.

January 26th. Inspected stable at Sebago Lake, but no contagious disease was found.

January 29th. Inspection of cattle at Mechanic Falls and grade cow was condemned and appraised \$10.

January 31st. Inspection at South Buxton for reported glanders, but no case was found.

February 9th. Glanders was reported at Dayton, but no case was discovered.

February 12th. Glanders was reported at Cape Elizabeth, but no case discovered.

February 15th. Glanders was reported at Milo, but no case was discovered.

February 16th. Inspection of stable at Portland. Horse affected with glanders was condemned and appraised \$50.

February 17th. Glanders was reported by selectmen of Waterboro, but no case was found.

February 19th. Inspection of cattle at Dexter, but no contagious disease was found.

February 20th. Inspection of stable at Clinton, glanders discovered, but no appraisal.

February 21st. Inspection of stable at North Whitefield, horse found with glanders was condemned and appraised at \$50.

February 28th. Inspection of stable at Scarboro Beach, horse found with glanders was condemned and appraised \$28.

March 1st. Glanders was reported at Union Falls, but no case was discovered.

March 5th. Glanders was reported at Portland, but no case was discovered.

March 6th. Glanders was reported at Ellsworth, but no case was discovered.

March 8th. Glanders was reported at North Anson, but no case was discovered.

March 13th. Glanders was reported at Pride's Corner, but no case was discovered.

March 14th. Inspection of cattle at Newport was ordered, but no disease found.

March 15th. Inspection of a stable at Wilton was ordered and a horse found affected with glanders was condemned and appraised at \$50.

March 17th. Inspection of cattle at Norway and herd placed in quarantine.

March 20th. Tuberculosis was reported at Portland, which proved to be emphysema.

March 23d. Glanders was reported at Abbot Village, but no contagious disease found.

March 24th. Inspection at South Gardiner for glanders, but no case was discovered.

March 27th. Inspection of stable at Searsport. Horse affected with glanders was condemned and appraised at \$50.

March 28th. Glanders was reported at North Lebanon, but no case discovered.

March 29th. Inspection of cattle at Veazie, cow condemned and appraised \$25.

March 30th. Glanders was reported at Willimantic, but no case discovered.

March 31st. Glanders was reported at Vassalboro, but no case found.

April 1st. Glanders was reported at Cape Elizabeth, but no case was discovered.

April 3rd. Inspection of stable at Brownville. Horse found with glanders was condemned and appraised \$50.

April 4th. Inspection of cattle at Guilford, cow affected with tuberculosis was condemned and appraised \$25.

April 5th. Inspection of cattle at Mechanic Falls, but no contagious disease discovered.

April 6th. Inspected cattle at Farmington. Horse found with glanders condemned and appraised \$50.

April 11th. Inspected stable at Auburn and found horse affected with farcy. Appraisal \$50.

April 13th. Inspected cattle at Dexter, but found no contagious disease.

April 16th. Inspection of cattle at South Paris, ox found affected with tuberculosis. Appraisal \$50.

April 17th. Inspected cattle at Norway, but found no contagious disease.

April 19th. Inspected cattle at Dover, but found no contagious disease.

April 20th. Inspection of cattle at East Raymond. Cow condemned and appraised \$30.

April 21st. Inspected cattle at North Livermore and found cow with tuberculosis which was condemned and appraised at \$25.

April 22d. Inspection of cattle at Plymouth, but no contagious disease discovered.

April 23d. Inspected cattle at Shapleigh and cow affected with tuberculosis was condemned and appraised at \$11.

April 24th. Inspection of cattle at Farmington Falls, but no contagious disease was found.

April 25th. Inspection of cattle at Livermore, but no contagious disease was found.

April 26th. Inspection of stable at Sabattus, found horse affected with glanders, condemned and appraised at \$40.

April 27th. Glanders was reported at Litchfield Corner, but no disease found.

April 28th. Glanders was reported at Bradford, but no disease discovered.

April 30th. Inspection of cattle was ordered at Brownville, but no contagious disease was discovered.

May 3d. A flock of sheep was inspected at Bradford, but no contagious disease was found among them.

May 4th. Glanders was reported at Cape Elizabeth, but no case discovered.

May 7th. Inspected stable at Falmouth and found horse affected with glanders, condemned and appraised at \$30.

May 8th. Tuberculosis was reported at Scarboro, but no case discovered.

May 10th. Inspection of cattle at North Anson, but no contagious disease was found.

May 11th. Inspected cattle at North Waterboro and found an ox affected with tuberculosis which was condemned and appraised at \$40.

May 12th. Inspection of cattle at Auburn, but no contagious disease discovered.

May 12th. Inspected cattle at Winthrop and found registered cow affected with tuberculosis. Appraisal \$45.

May 13th. Inspection of cattle at Foxcroft, but no contagious disease was found.

May 14th. Glanders was reported at Augusta, but no case was discovered.

May 15th. Inspection of cattle was ordered at Topsfield, but no contagious disease was discovered.

May 17th. Inspected herd of cattle at Bangor and found a cow and heifer with tubereulosis. Appraisal \$40.

May 19th. Inspected cattle at St. Albans, cow condemned and appraised at \$30.

May 21st. Inspected stable at Deering and found horse affected with glanders. Appraisal \$50.

May 26th. Inspected cattle at West Scarboro. Cow condemned and appraised \$30.

May 28th. Inspection of cattle at Glenburn, but no contagious disease was found.

May 31st. Inspected stable at West Auburn, and found horse with glanders which was condemned and appraised at \$50.

June 1st. Inspection of cattle at Atkinson, but no contagious disease was discovered.

June 2d. Inspection of cattle at Minot Center, but no contagious disease found.

June 4th. Inspected the herds of cattle at Mountain View Farm, South Paris, known as the Howland Herds of Massachusetts, registered Jerseys, and condemned five cows and one heifer. Appraisal \$275.

June 7th. Inspection of stable at Bangor, but no contagious disease was found.

June 8th. Inspected stable at Deering and found a case of glanders. Appraisal \$45.

June 9th. Inspected cattle at Litchfield and condemned cow with tuberculosis. Appraisal \$30.

June 11th. Tuberculosis reported at Bar Mills, but no contagious disease discovered.

June 12th. Inspection of cattle was ordered at Skowhegan, but no case discovered.

June 14th. Inspection of cattle was ordered at New Sharon, but no contagious disease was found.

June 16th. Inspection of cattle at Gorham, but no contagious disease was discovered.

June 18th. Inspection of cattle at Richmond Corner, but no disease was found.

June 23d. Inspected cattle at Whitefield and found ox with tuberculosis. Appraisal \$42.50.

June 27th. Inspection of stable at Portland, but no contagious disease was discovered.

June 28th. Inspected herd of cattle at Springvale and found cow with tuberculosis which was condemned and appraised at \$30.

July 1st. Inspected stable at Brewer and found horse affected with glanders. Appraisal \$50.

July 2d. Inspected stable at Cumberland Center and found horse with glanders, but no appraisal was made.

July 6th. Glanders was reported at Richmond, but no case discovered.

July 9th. Inspected stable at Portland and found horse with glanders. Appraisal \$50.

July 17th. Inspected stable at Brunswick and found case of glanders, but no appraisal was made.

July 20th. Inspection of cattle was ordered at Dover, but no disease was discovered.

July 25th. Inspection of cattle at Macworth's Island, but no disease was discovered.

July 26th. Glanders was reported at Portland, but no case was found.

July 27th. Inspected cattle at Winthrop and found cow affected with tuberculosis which was condemned and appraised at \$22.

July 30th. Inspection of cattle at Poland, but no contagious disease was discovered.

July 31st. Inspection of cattle was ordered at Shapleigh, but no contagious disease was found.

August 1st. Inspected cattle at West Falmouth, cow condemned and appraised at \$17.

August 3d. Inspection of cattle was ordered at Belfast, but no contagious disease was found.

August 4th. Inspected cattle at Cape Elizabeth and found cow with tuberculosis. Appraisal \$35.

August 5th. Inspection of cattle was ordered at Willimantic, but no disease was discovered.

August 6th. Inspection of cattle was ordered at West Gardiner, but no disease was discovered.

August 7th. Inspection of cattle was ordered at Harrison, but no disease was discovered.

August 9th. Inspected stable at Augusta and found case of glanders. Appraisal \$50.

August 10th. Inspection of cattle was ordered at Abbot, but no contagious disease found.

August 13th. Glanders was reported at Sebec, but no case was found.

August 15th. Inspected stable at Augusta and found horse with glanders. Appraisal \$30.

August 16th. Inspected stable at North Berwick and found horse with glanders which was condemned and appraised at \$50.

August 18th. Inspection of stable at Berwick discovered case of farcy, but no appraisal was made.

August 23d. Tuberculosis was reported at Corinna, but no case was discovered.

August 25th. Inspected stable at Deering and found case of glanders. Appraisal \$50.

August 28th. Inspected herd of cattle at Caribou, but no disease was found.

August 29th. Inspection of cattle was ordered at Garland, but no disease discovered.

September 1st. Inspected stables at Cooper's Mills and found a case of glanders and a case of farcy. Appraisal \$50 in one case and no appraisal in the other.

September 2d. Inspected stable at Brewer and found case of glanders. Appraisal \$50.

September 8th. Glanders was reported at Norridgewock, but no case was found.

September 10th. Glanders was discovered at Deering, but no appraisal was made.

September 13th. Glanders was reported at Windham, but no case was found.

September 14th. Inspected stable at Portland and found horse affected with glanders. Appraisal \$50.

September 15th. Inspected cattle at Auburn and condemned a cow. Appraisal \$25.

September 17th. Glanders was reported at Standish, but no case was found.

September 19th. Inspected stable at Deering and found horse affected with farcy. Appraisal \$50.

September 20th. Inspected stable at Winter Harbor, and found four horses with glanders. Appraisal \$175.

September 21st. Inspected stable at Steuben and found a case of farcy. Appraisal \$50.

September 22d. Inspected stable at West Gouldsboro and found a horse affected with glanders. Appraisal \$75.

September 24th. Inspected cattle at South Hiram and condemned Jersey cow with tuberculosis. Appraisal \$30.

September 26th. Inspected stable at Farmington and found two horses with glanders. Appraisal \$80.

October 1st. Inspected stable at Deering and found horse with farcy. Appraisal \$50.

October 2d. Inspection of stable at Brunswick, but no contagious disease was found.

October 4th. Inspected stable at North Scarboro and found horse with glanders. Appraisal \$50.

October 5th. Inspected cattle at East Waterford and condemned cow. Appraisal \$25.

October 6th. Inspection of cattle at Hampden, but no contagious disease was found.

October 7th. Inspection of stable at Old Town, but no contagious disease was found.

October 8th. Glanders was reported at Portland, but no case was found.

October 9th. Glanders was reported at Farmington, but no case was found.

October 12th. Glanders was reported at Dexter, but no case was discovered.

October 13th. Inspected stable at Cape Elizabeth and found horse with glanders. Appraisal \$50.

October 16th. Inspected stable at Port Clyde and found horse with glanders. Appraisal \$50.

October 18th. Inspected stable at Winter Harbor and found horse with glanders. Appraisal \$50.

October 19th. Glanders was reported at Lincoln, but no case was found.

October 19th. Inspected stable at Old Town and found case of glanders. Appraisal \$50.

October 20th. Inspected cattle at Hermon and condemned cow. Appraisal \$30.

October 21st. Inspected a stable at Willard and found a case of glanders. Appraisal \$45.

October 22d. Inspected stable at Deering and found a horse with glanders. No appraisal.

October 23d. Inspected stable at Auburn and found case of glanders. Appraisal \$42.50.

October 23d. Inspected stable at New Auburn and found case of glanders. Appraisal \$50.

October 24th. Inspection of cattle was ordered at Fayette and a case of tuberculosis found in a registered cow. Appraisal \$50.

October 25th. Inspection of cattle at Wilton Plantation, but no disease was found.

October 27th. Glanders was reported at Richmond, but no case was found.

October 28th. Glanders was reported at Bangor, but no case was discovered.

October 29th. Inspection of cattle at Belfast and condemned cow. Appraisal \$35.

October 31st. Inspected herd of cattle at Norway in quarantine, and condemned two cows with tuberculosis. Appraisal \$65.

November 1st. Inspected cattle at Starks and condemned a cow. Appraisal \$20.

November 2d. Inspected cattle at Kittery and found an ox with tuberculosis. Appraisal \$50.

November 3d. Glanders was reported at Portland, but no case was found.

November 5th. Glanders was reported at Hampden, but no case was found.

November 6th. Inspected cattle at Peaks Island and condemned a cow. Appraisal \$25.

November 7th. Inspected stable at Benton Falls and found horse with glanders. Appraisal \$20.

November 12th. Inspection of cattle was ordered at Dexter, but no contagious disease.

November 14th. Glanders was reported at Bangor, but no case was discovered.

November 14th. Inspected stable at Portland and found horse with glanders. Appraisal \$40.

November 15th. Glanders was reported at Portland, but no case was discovered.

November 16th. Inspected stable at Palmyra and found a horse with glanders. Appraisal \$24.

November 17th. Inspected stable at St. George and condemned a horse with glanders. No appraisal.

November 20th. Inspected stable at Windsor and found horse with glanders. Appraisal \$50.

November 21st. Inspected stable at Auburn and condemned two horses affected with glanders. Appraisal \$100.

November 22d. Glanders was reported at Topsham, but no case was found.

November 24th. Inspected stable at Lewiston and found a horse with glanders. Appraisal \$50.

November 27th. Inspected stable at Frankfort and found a horse with glanders. Appraisal \$40.

November 30th. Inspection of cattle was ordered at South Hiram, but no disease discovered.

December 1st. Inspection of cattle was ordered at Skowhegan, but no disease was found.

December 5th. Inspection of cattle was ordered at Biddeford, but no disease discovered.

December 7th. Glanders was reported at Saco, but no case was found.

December 8th. Inspected cattle at Otisfield Gore and condemned a cow. Appraisal \$30.

December 10th. Inspection of cattle was ordered at Boothbay Harbor, but no disease was found.

December 11th. Inspection of cattle at Damariscotta, but no contagious disease discovered.

December 12th. Inspected cattle at Skowhegan and condemned a cow. Appraisal \$50.

December 12th. Inspection of cattle at Hermon, but no contagious disease was found.

December 13th. Glanders was reported at Woolwich, but no case discovered.

December 14th. Inspected stable at Portland and condemned a horse with glanders and farcy. Appraisal \$50.

December 15th. Glanders was reported at Brunswick, but no case was found.

December 17th. Glanders was reported at South Lewiston, but no case discovered.

December 18th. Inspected cattle at Etna and condemned a cow. Appraisal \$20.

December 19th. Inspected stable at Georgetown and found a case of glanders. Appraisal \$25.

December 20th. Inspected cattle at Auburn and condemned a cow. Appraisal \$35.

December 20th. Glanders was reported at South Lewiston, but no case was discovered.

December 21st. Inspected stable at Augusta and found a case of farcy. No appraisal.

December 22d. Inspected stable at Farmington and found a case of glanders. No appraisal.

December 23d. Inspection of cattle was ordered at Chester, but no contagious disease was found.

December 24. Inspected stable at Ellsworth and found a case of glanders. Appraisal \$50.

December 25th. Inspected stable at Freeport and found a case of glanders. Appraisal \$50.

December 26th. Inspected cattle at South Hollis and condemned a cow. Appraisal \$20.

December 28th. Inspected stable at Winter Harbor and found a case of glanders which was condemned and appraised at \$28.

December 29th. Glanders was reported at Steuben, but none was discovered.

December 31st. Inspected stable at Sullivan, but no contagious disease was found.

A summary of the whole number of stables and herds of cattle inspected by our commission in 1894 will be found to be two hundred and one, as opposed to one hundred and forty-three in 1893, an excess of fifty-eight cases. Ninety-two herds of cattle were inspected, while the number of stables of horses examined for glanders and farcy was one hundred and eight, which exceeded the number of last year by forty-six, and there is a very apparent cause for these latter inspections which will be given later in the report.

Forty-six head of cattle were condemned and destroyed at an appraisal of \$1,485.50, and sixty-four horses were also condemned and destroyed at an appraisal of \$2,692.50, the total amount of appraisals for the year being \$4,178.

Our quarantine against Massachusetts is still in force, and the recent public and private developments in that State under the workings of their new law (which we publish elsewhere) will render it entirely unnecessary for us to give any new or further reasons for its continuance, the percentage of diseased cattle in that State, given through our Maine Reports for the past five years being no longer

denied either publicly or officially, the cold facts being daily developed all going to show the percentage estimated by us will be largely increased rather than diminished. The chief discussion now going on between the Massachusetts Board and the "Farmers in Convention," shows that while there is no longer any dispute as to the amount of tuberculosis in that state, the amount of appraisal of animals condemned and destroyed is the pivotal question that will come before their present legislature for discussion and decision. Up to the present year the Massachusetts law afforded no compensation whatever for animals destroyed, and section 13 of the Massachusetts law said: "When the commissioners, by an examination of a case of contagious disease among domestic animals, become satisfied that it has been contracted by intention or negligence on the part of the owner, or of a person in his employ, or by his consent, or by the use of food material liable to contain the germs of contagion, they shall cause such animals to be securely isolated at the expense of the owner, or they shall cause them to be killed without appraisal or payment; and in all cases of tuberculosis, farcy or glanders, the commissioner having condemned the animal infected therewith, shall cause such animal to be killed without an appraisal, but may pay the owner of any other person an equitable sum for the killing and burial thereof, and may also pay a reasonable sum for the animal destroyed should a post mortem examination prove that said animal was free from the disease for which it was condemned."

In their report of 1893, the old board of cattle commissioners of the Bay State raised the question of indemnity, and after offering various objections against compensation, say:

"Further very serious objection, and one that experience has always shown to be inseparable from any law which pays indemnity, is that sooner or later the State treasury goes into the business of buying diseased animals that are collected for the purpose not only from within its own borders, but from the herds of neighboring states as well; and one of two things happens,—either the amount of money expended is so large that the law becomes too much of a burden to the tax payers, and has to be abandoned, or else the state maintaining the law has to institute a quarantine against the animals coming in from another state or states, according to the drift of the incoming cattle trade." To which our board replied

in our last report, that "after considering all the objections of the Massachusetts board, we are still of the opinion that any law of non-compensation that seeks to govern or control the contagious diseases of a state, resolves itself into one of self preservation among the very class of men the law seeks to reach, the producers and dealers in diseased milk and meat; so that if an owner has animals in his possession of which he is himself suspicious, his utmost efforts are directed towards concealment of the facts and evasion of the law that affords him no compensation if his animals are condemned.

And we again suggest our belief that the efficacy of the law requires that the owners of diseased animals should not have to run too much counter to their own interests in submitting to the obligations to report. The only means of diminishing their resistance is to establish the principal of a fair compensation in case of slaughter. It is to the principle of mutuality that recourse must be had—a principle which should be applied under the control of the State.

There is one other significant feature in the failure of the old Bay State, to successfully cope with tuberculosis, (under their law of no indemnity,) to which we wish to call attention, that fortifies our opinion that if the same law was in force in this State, and no quarantine against Massachusetts, we should be soon over-run with the disease."

Among other objections to our law of quarantine, the Massachusetts Commissioners had to say in their report of 1893: "Massachusetts is a large distributing center for the cattle trade; animals go from here to all parts of New England and to Europe, and its supplies are drawn from a great variety of sources. Were the State to quarantine against all the sources from which animals with tuberculosis are known to come to us, this valuable trade, which now gives profitable employment to so many, would be ruined. This quarantine, for Massachusetts, is not practicable."

Now that all things have become new, and *no quarantine for Massachusetts, no compensation for cattle, and consequently no progress in exterminating tuberculosis*, has been dispensed with, and that State has adopted all the provisions of law which have had such successful applications and results in Maine,—the chief objection their board has to encounter seems to come from the farmers themselves who complain that they are not receiving *full*

pay instead of *half pay* for cattle condemned, as repeated clippings from Boston papers show.

“Worcester, December 21, 1894. The farmers of Rutland and surrounding towns met at Rutland town hall this afternoon, W. A. Hunter presiding, and J. W. Munroe acted as secretary. Resolutions were adopted demanding full compensation for condemned cattle, vigorously opposing the use of tuberculin as an agent for the detection of the disease, recommending the appraisal of condemned animals by local boards, and pledging the co-operation of the Rutland farmers with the Worcester Milk Association.”

“Westboro, December 20, 1894. A convention of farmers and stock raisers of Worcester county assembled this afternoon in the Westboro town hall. The outcome of the meeting will be that its representatives will be heard from in the halls of legislation the present winter regarding the question of tuberculosis among cattle and its proper treatment judged from a farmer's standpoint.

The call for the meeting, issued by the Westboro Agricultural Society, was a broad one, covering as it did, the city of Marlboro and the towns of Southboro, Westboro, Hopkinton, Northboro, Grafton, Ashland, Upton and Shrewsbury.

Its object as stated, was to discuss the merits of the law covering the work of the State cattle commission and the compensation received by the farmer for stock killed.

State Master Howe of Marlboro in his address stated that he had cautioned the members of the order he represents, the Patrons of Husbandry, not to be intemperate or rash in their remarks about the present manner in which tuberculosis is being officially treated, as, by so doing, the farmers might be the means of defeating the ends so much desired by them. The idea entertained by some of them that the tuberculin test is of no use, and that the present treatment is a ‘fad’ which resulted in the enrichment of a few to the loss of the many, he had officially endeavored to discourage among the patrons with whom he came in contact.

Mr. Howe gave as his own opinion that the tuberculin test is not absolutely accurate, but that it has elements of accuracy in it.

Speaking of the manner in which the state commissioners are proceeding Mr. Howe asked: ‘Are we ready to block their path? If so, we want to be on hand at the next legislature.’

Referring to the killing by the commission of cattle, from the sea coast to the western part of the commonwealth, the speaker strongly argued in favor of full compensation.

In the opinion of the speaker there is not a particle more of tuberculosis in existence in Massachusetts to-day, in proportion to the amount of stock kept, than there was thirty, forty or even fifty years ago; that is, as it is demonstrated by the tuberculin test of 1894. The facts, pure and simple, he said, are that the extended investigation now going on has served to reveal the very large number of cases, showing the remarkable spread of the disease.

Whatever may be claimed in the line of a detriment or a menace to the public health, the state master averred that either milk or meat is rendered entirely innocuous when either is heated to a temperature of 150 degrees. Even with a full value paid for cattle condemned the farmer or stock raiser is not fully remunerated, as there is general injury wrought to his profession, and his customers at once become suspicious of his products. There are losses to him in many ways.

In the matter of appraisals for cattle killed, Mr. Howe thought the governor made an excellent appointment in the selection of C. A. Dennen for the cattle commission, as in his official capacity he had dealt very justly with the farmers, and he had yet to score one failure in this direction.

In closing the speaker referred to the fact that all but one of the present board of cattle commissioners had placed themselves on record as being in favor of the payment of full value for all cattle killed, which he urged his hearers to strive for.

Senator Harvey said he looked upon this question as a very broad and far reaching one, and, as a legislator, desired all the information bearing upon it that is obtainable. The question of sanitation is a very important one, he thought. He desired the views of the farmers of the district.

Speaking of the present methods of treatment, the senator said the intelligent physician of to-day does not need tuberculin, or any other drug, to enable him to make a correct diagnosis of tubercular disease in the human subject. He spoke of the need of more knowledge being possessed by the veterinary surgeons and local inspectors. What is needed in this work is more scientific men.

He seemed to think the present State cattle commission is jumping at conclusions regarding tuberculosis.

Senator Bill urged more correct information being obtained, and spoke of the desirability of the State incorporating a veterinary college, which might prove a very desirable movement. He expressed himself as favoring full compensation for cattle killed.

Both the representatives in the lower branch in the Legislature from the district, who were present, pledged their interest in the matter under discussion.

A petition favoring the measures advocated, was circulated, and very numerous signed."

We have given space in our present report to clippings showing what the real state of public opinion in Massachusetts is, not because we need any commendation for having contributed to such a result, or any defence for having quarantined against Massachusetts in 1892, only that our board has heretofore been so freely criticised and condemned for our official action and reports, we would call attention to their complete "change of base," as the only vindication we shall ever need, that "our cause was just and has finally prevailed."

A single case in point will serve as an example of what our quarantine against Massachusetts means :

On November 23, 1894, the Maine Central Railroad side tracked at Westbrook Junction a car containing three cows that had come over the Boston & Maine Railroad from Beverly, Massachusetts, without any permit from our board as required by us, or any inspection before shipment. The owner and consignee, as well as the Boston & Maine agents were at once notified, but the cattle were allowed to remain in quarantine until December 29th, when they were tested with tuberculin and one of them having re-acted was condemned and destroyed without appraisal, and found upon an autopsy to be *thoroughly diseased*. The other two were shipped to Rockland, as originally billed, advance charges having been paid by order of the Boston & Maine R. R.

Another object lesson in proof of its efficiency was the final inspection and disposal last June of the Jersey herd at "Mountain View Farm," South Paris, where we condemned and paid for six cows, making in all fifteen head paid for by the State out of a herd of twenty animals that had come to us out of one of the largest, and supposed to be soundest herds in Massachusetts, while as

further proof that the most careful selections of high priced registered animals bought in Massachusetts exclusively for breeding purposes were no more exempt from the disease than the very cheapest class of cattle discarded from milch herds around Boston and offered for sale every week in Brighton Market, the two lots of Guernsey and Holstein cows purchased by the Trustees of our State College at Orono to replace the College herd clearly show. Three Guernsey cows and a heifer calf were purchased at Wayland, and four Holstein cows at North Andover, Mass., all of which proved to be diseased, and were condemned and destroyed within the next year after they were purchased. Of the cheap class of cows our own dealers were bringing into Maine by the carload previous to our notice of quarantine, and costing only five to six dollars per head, our board found five diseased cows among the first thirteen examined.

The *Boston Medical and Surgical Journal*, of November 29, 1894, has to say of this class of cattle :

“We hear of a case tried in the police court in Lowell two weeks ago in regard to the purchase of a cow for two dollars, and the subsequent sale of the carcass to a manufacturer of sausages for two dollars and a half, one cent a pound.

Inspectors found the cow was riddled with tuberculosis, and could not have lived a month. The following items are taken from the testimony. The original owner, on being asked if he considered the animal fit for food, said the cow was good. The counsel inquired, ‘Was it a good beef cow?’ ‘No,’ answered the owner, ‘but it was a good “bologna” cow.’ It then appeared that the final purchaser manufactures five thousand pounds of bologna sausage a week, and buys much meat at one cent a pound !

We reproduce a little more of this instructive testimony :

‘Do you buy many cows?’ was asked of the first purchaser.

‘Yes, a good many.’

‘What do you pay for them?’

‘Wall, all prices.’

‘Do you get many for two dollars?’

‘Yes, bologna keows.’

‘What’s a bologna cow?’

‘A thin keow ; a two-dollar keow.’

'Well, where do you get your authority for calling a thin cow a bologna cow?'

'Why, from the keow.'

'Would you sell the carcass of a cow that had died?'

'All keows has got ter die. Ef you kill 'em they die.'

'Well, would you sell the meat of a cow you call a bologna cow to a butcher?'

'Of course, ef he gave me my price. Ef a man wanted to make a beefsteak out of it, it wouldn't be my business.'

'Then you would as soon poison a man with a beefsteak as a bologna sausage; you don't look at the moral aspect?' asked the examiner.

'I don't know what you are talking about.'

The Cattle Commission is evidently at work none too soon.

The state of Massachusetts has undertaken through the Cattle Commission something which has never been undertaken before. The Commission believes the state can be freed from bovine tuberculosis, and can be kept free. The price is a small one to pay for the accomplishment of such an object, which should be of the very first concern to the medical profession. There will undoubtedly be a strong effort made to turn back to the old conditions. We hope the state will persevere in its present course."

The Bay State now realizes, that "diseases desperate grown, by desperate appliances are relieved or not at all," and in organizing such radical measures for the removal have only encountered such opposition as in all great reforms, that it is the first step that is hardest, and that when a substantial advance is once made in the new methods of dealing with the disease, its visible benefits will secure for it the united approval and support of the public and the farming communities. The farmers should realize that a long suffering people have some rights as well as themselves and strive to free their minds of a whole generation of false teachings, under all methods, now that they have a board of commissioners of scientific and business men, who have "the courage of their convictions," and will surely do their duty if they receive sufficient encouragement and support. The subject should be treated as one of gravity—one demanding that full light be thrown upon it whether that light jeopardize private interests or favor them.

The presence of tuberculosis among cows has had its most serious side for those who do not own flocks or herds. The doubt whether tuberculosis may not be introduced into the human system by the use of milk has doubtless enormously lessened the use of this most nourishing, and if from sound animals most healthful food. This decrease in use of milk has necessarily injured old daily interests. It has injured hardly less the interest of all stock breeders, for while this nightmare rested over the country no one could tell where the disease might next spread. Exponents of farm industry have antagonized the testimony of experts to the wide prevalence of bovine tuberculosis and its menace to the human family. There are times that demand unselfishness and patriotism in an industry. Does the presence of tuberculosis in our midst form one of these occasions?

The startling information from Boston that fifteen or more per cent of the cattle from the northern group of the New England states that appeared on her cattle markets were affected by tuberculosis, in addition to previous information, finally withdraws the question from the arena where doubt has the right to be passive and into that demanding action, and action on loftier grounds than individual interests. Where man comes in contact with other organic life, the latter must give way, the right of the former being supreme when his vitality and highest good are at stake. Ours as an industry must take the high ground of the public weal first and agriculture second.

The dogma of personal liberty as opposed to public good is dead, except when it is made to serve the purposes of politicians or demagogues. We must be honest with ourselves and with the public, and if personal frankness tells us that the evidence sustains the claim that tuberculosis is prevalent to a degree inimical to the public good, let us join the effort to hunt out and to root out this disease.

In reference to the fact that fifteen or more per cent. of the cattle concentrating weekly at Brighton market from northern states are affected with tuberculosis, the fact has developed that *not one of these that has been so far sent from Maine has proved to be diseased*, while they have all been submitted to the same searching tests of cattle from neighboring states. Since the 15th of last November when inspection under the new law began, although three cows

taken there by our drovers for sale have been killed as suspects which proved upon a post mortem examination to be *absolutely sound, and their owners were paid full appraisal and compensation.*

These weekly inspections of cattle at Brighton market, while they have no bearing upon the actual percentage of Massachusetts cattle affected with the disease where whole herds throughout the State are being tested and condemned, has a most important bearing as affecting the low percentage of disease among Maine bred cattle, which shows by our present report, as in all previous ones, to be less than one per cent. of our bovine population.

The Massachusetts commissioners have just made their annual report in which they join in the recommendation that the "owner in the future receive full compensation for all neat cattle slaughtered. In doing so they call the attention of the legislature to the fact that while the cattle may be diseased, and should not be allowed to live, and even though the owner shares the burden of the eradication of the disease, he has to submit to the quarantining of his cattle while an inspection and a test are being made, and for this inconvenience, which is in a sense a loss to him, he receives no compensation; and because of this fact there is a strong argument in favor of *full compensation for animals killed.*

In their systematic inspection of all the cattle on the island of Nantucket, this commission found a little less than one per cent. to be affected. This peculiar freedom from the disease is attributed to the generally favorable sanitary condition under which the stock on the island is kept, and the fact that it is mostly home-bred, there having been but few importations from the main land, through which the disease could be introduced.

The experience of the Massachusetts commission in the work brought to them through the local inspectors in cities and towns indicates a much wider prevalence of the disease than appears at Nantucket. The local inspectors are required to examine all the cattle in their districts twice each year, and to report all cases suspected of tuberculosis to the commission. All cases thus reported are tested with tuberculin by the expert agents of the board. Under this system some large herds have been almost entirely destroyed. In each of two herds, one near Boston and the other in the Connecticut river valley, of sixty-five animals each, sixty were killed from each herd, and all showed the disease on autopsy.

In several other large herds fully one-half were taken. In this department of their work the Massachusetts commission has found nearly all the animals condemned to show the disease in very pronounced and advanced forms.

It will be remembered that under the existing law, which has governed the actions of the Board for a year, the farmer is entitled to only one-half compensation. Because of this fact, many of the owners of cattle have felt that they were being compelled to share too great a part of the burden.

There has been a feeling of dissatisfaction since the Board began its work, but with full payment the Board is of the opinion that the farmer will have what he deserves, and the work of the Board will go on without obstacle in the future. Since the work began, the Board reports that more than 10,000 animals have come under its inspection, and considers that it has made great progress. It recommends that the plan adopted be kept up the coming year, and asks the sum of \$212,000."

This brings us to a consideration of what we believe to be of vital importance to our State if we are to continue to maintain that high standard of health we now enjoy in the control of our animal diseases. With \$50,000 *already expended* the past season in Massachusetts (the larger portion of it since October 1st) their commissioners now ask for \$212,000 more to "follow out the lines already established," and to pay full value for all cattle destroyed upon a milk and beef value.

Compare for a moment the above sum with the meagre amount that has heretofore been appropriated in this State to carry on this important work. *Twenty-five hundred dollars a year* is the annual appropriation of Maine and out of that sum there is expected to be paid all the expenses and salary (?) of three commissioners, *and for all horses and cattle condemned and destroyed*, under the provisions of our law.

Two years ago when we made our biennial report a deficiency existed of nearly the amount of the appropriation which was made good by the legislature, but instead of increasing the appropriation we then asked for, (and which the board of agriculture unanimously recommended) the appraisal of all horses and cattle which has since been destroyed was cut down one-half, thus paying practically one-quarter of their value upon the basis of health before infection,

instead of one-half as before that time. No member of our board was consulted upon the wisdom or advisability of that amendment, and we now entertain the same opinion we did then, that it was false economy, and we then said: "We believe this enactment to have been false economy and a mistake, as aside of its not being a fair business proposition towards those who are so unfortunate as to possess diseased animals, we are of opinion that it retards and disables the work of our commission, and reduces our law too near the level of the law of Massachusetts, which provides no indemnity whatever to owners whose deceased animals are condemned and destroyed by order of their cattle commissioners."

Another deficiency \$2,600 now exists, as it did two years ago, and the hardship of it is, that the money has been due all parties for whom we have killed a horse or other animal since last April, many of them needing the money to replace the animals thus condemned, so it results that for the last four months of the first biennial year and the last eight months of the second year, our board was entirely out of funds, and an appeal to the Governor and Council resulted in their authorizing our board to do just what was absolutely necessary and no more to carry on the work until the present legislature convened.

In his annual address Governor Cleaves struck the key-note when he said, "The protection of the live stock of Maine against contagious disease is of great importance, and any neglect of this duty may entail upon the owners very large losses. The appropriation for this purpose for the past few years has been insufficient to meet the expenditures that were necessary to properly guard this interest and fully protect the public health. The sum appropriated having been exhausted in July last, the Governor and Council authorized the commissioners to expend an additional sum of \$1000 in carrying forward their necessary work, which amount has been paid from the treasury.

We are now appropriating large sums of money to protect our fish and game, and certainly we should not neglect to make an adequate appropriation for the protection of our herds and flocks."

The largely increased number of inspections made during 1894 over any previous year, plainly show that the demands upon us are increasing, and we feel that much sanitary work is left undone that should receive more attention from the cattle commission than the

present law and appropriation adequately provide for. The proper disinfection and care of premises out of which diseased animals have been taken should be under State control instead of being left to owners who generally underrate the importance of the work, or neglect altogether to give it their attention.

The humane killing of such animals and their proper disposal afterwards, is open to the same objection and still no provision is made for such work being done under the present law, and no money appropriated for the purpose.

Several cases have come to our knowledge the past year where repeated cases of glanders have been found in stables out of which some horse had been previously condemned and where such horses after being inhumanely killed have been left above ground for fox bait or for dogs to devour, and thus scatter the disease broadcast all over the State.

There is another feature of our oversight of dairy herds that has been heretofore overlooked or underrated, in allowing consumptive people to act as attendants upon milch herds. The recent reports of the Johns Hopkins Hospital prove that the expectoration of a single consumptive patient was about four ounces in twenty-four hours, and that it contained more than four thousand million of bacilli in a single day. The proper disinfection of tuberculous sputum would seem out of the question in barns and stables where phthisical persons have the charge of feeding and milking dairy animals, and it should be remembered that the germs exist in all discharges from tubercular foci and are constantly accumulating to form vast storehouses of dust in which the bacillus retains its vitality for years only to reproduce the disease in the future occupants of the same stable.

Since our last report was issued a very important discovery has become generally adopted in diagnosing tuberculosis in all stages of the disease, by the use of tuberculin. Massachusetts is depending almost wholly upon this agent, and out of three thousand and nine hundred cases recently disposed of in that state only six cases of failure are reported. The system of tuberculous patients being charged with the toxalbumins of the germ of the disease the product of the germ is nothing more or less than tuberculin. The addition of a small amount of artificially prepared tuberculin to that already contained in the system causes a temporary fever, or reaction, in

from two to fourteen hours after the injection. The reaction varies from one to six degrees above the normal temperature. In healthy subjects the quantity of tuberculin injected is so small that the animal is not affected by it. Reports are unanimous in support of this statement. If Maine is to keep abreast of the times some provision should be made for its future use, although there is very little probability that its general adoption will be needed in this State.

Before closing our present report, we would call special attention to the great increase during the past year in the number of horses affected with that loathsome and fatal disease of glanders. In 1893 but twenty-two horses were found affected which were condemned and destroyed at an appraisal of \$995. In 1894 sixty-four have been condemned at an appraisal of \$2,692.50, and the average number destroyed for the past five years is less than fifteen, while the facts of a year ago are reflected in our present report that but a very limited number of the horses destroyed were bred in Maine, the great majority of these being Western horses purchased in the Boston market and brought here by the car load to be disposed of by auction and by private sale. Among those destroyed, nine of the number were not appraised, as not having been owned in Maine the required time under the amended law of 1892, while among cattle all were appraised excepting two against which the same objection existed.

It will be remembered that our Board quarantined this State in 1888 against Texas mustangs, or broncho horses brought into Maine, and sold, to the number of 2,900, during the season of 1887, and among which thirteen cases of glanders were found in a single drove. Since that time no more bronchos have been brought here, but their places have been more than supplied by whole car loads of Western horses, that for various causes are cheaper than ever before, and all of which have been exposed to glanders before coming into Maine, the disease being more prevalent among horses of their class than any other. We believe that some proper restraint other than at present existing, should be placed upon the wholesale introduction of these horses, although a quarantine may not be advisable, as we have honorable dealers in various parts of Maine who are especially fitted up for dealing in workers and business horses of this class for which the demand seems to exceed the supply among Maine bred horses. The present hardship to such

dealers seems to be that outsiders can bring the same class of horses into Maine and sell them by the car load at auction in cities and towns where they pay no rent and no taxes.

Our Commission strongly urged an increased appropriation at the last biennial session of the legislature, and if it should prove that this is the last appeal the present Board will ever make for the same purpose, we ask for our successors in office a decent amount of money to enable them to faithfully and expeditiously carry on the work without being subjected to the annoyances and delays we have encountered for the past five years. It is an absurdity, apparent upon the face of it, that no competent Commission can be appointed who can do the amount of work required in this State, making over two hundred inspections in herds and stables scattered from Kittery to the Aroostook, and from the mountains to the sea, with anything like the present appropriation.

THOMAS DAGGETT,

F. O. BEAL,

GEORGE H. BAILEY, D. V. S.

State Veterinary Surgeon.

Compared with some states in the Union, Massachusetts cannot be called a large cattle raising or cattle holding state. For instance: the state of New York has within its borders no less than 1,000,000 cows, while the state of Massachusetts has never had at any one time more than 250,000.

Nevertheless, Massachusetts has become one of the worst infected and most deplorably situated commonwealths, with reference to the prevalence of disease among its cattle, of any in the Union, and perhaps the percentage of diseased animals among its entire stock of cows is, or was, greater than that of any other state.

When it is considered that, of all the deaths taking place in any one year in this state in the human family, no less than fourteen in every one hundred are directly due to tuberculosis in some form, and that the death rate among cattle in the same commonwealth within the same time was even greater from this cause, the gravity of the situation will be better understood at the outset.

When it is also considered that tuberculosis, either among men or animals, is an easily transmittable disease, and that its transmission is not alone from individual to individual of the same class of animals, but that it may be given by members of the brute family to individuals of the human family, a beginning will be made in a better apprehension of the case.

Also when it is remembered that human life of all ages and conditions is very largely maintained by the flesh or products of cattle, the situation is rendered still more clear.

Although Massachusetts is numerically far behind some of her sister states in the extent of her herds, yet in their makeup she occupies a leading position; and it is fair to state of her position in this regard that she has, perhaps, as large a percentage as any commonwealth of fancy, thoroughbred and graded stocks, and a much larger one than most of the states.

Yet this condition proved to be one of the prime factors in the troubles which investigators found as affecting the existence of the herds in this state. It was soon discovered that tuberculosis was nowhere so prevalent, so virulent or so varied in its possession of individuals or herds as among those varied stocks of "fancy" and blooded animals which were the pride and admiration of almost every county in the commonwealth. The old-fashioned "scrub" and ill-bred cows, so often met with in years past upon farms and

hillsides and in the rocky pastures of every part of the state, were, and are still, relatively free from any evidences of tuberculosis in any of its forms. The patient, long-suffering, and often venerable cow that had faced the storms of a whole generation, throughout winter and summer, upon the bare ground of bleak country or sea-shore situations, that had never had at night anything better than a leaky, loopholed roof over her bony carcass, and that had stood for six or eight months in every year either upon the ground floor or over a cellar which contained the manure deposits of herself and associates for half the year round, was, and is, as free from this disease as one could wish, just as the toughened old tar of a hundred voyages, or the soldier of a half-dozen terms of enlistment on the frontier, show an immunity from disease which the city raised favorite of fortune could never attain, even by an expenditure of all his wealth.

On the other hand, the pampered, well housed and carefully kept cow of the gentleman's herd, the pet of the fancy farmer or progressive experimenter in agricultural pursuits, with which the old Bay State is so familiar—the animal fed upon warm mashes, standing upon a barn floor swept as frequently and as cleanly kept as the kitchen of their houses, with nicely glazed windows carefully adjusted to her continual warmth and contentment—was almost certain to be found a victim in some degree to this disease, and often evidencing the presence of it to an extent that rendered her of little value to herself or mankind, no matter how sleek her coat or plump and symmetrical her appearance; indeed, she was in many instances far worse than a whited sepulchre, full of dead men's bones.

Investigation followed investigation, with a rapidity born of a constantly increasing interest, induced by the revelations, each more marvellous than the other, which attended their progress. It is not the purpose of this writing to enter upon any description or explanation of the functions of the state cattle commission—its methods, scope or jurisdiction. Neither is it an object here to describe the character of tuberculosis, the various forms and manifestations it assumes in the brute or human family, or the manner in which it affects the health and usefulness of cattle in which it is found. Nor is any analysis or description of tuberculin or the remedies or alleviants proposed by the state or individuals in getting rid

of this disease to be considered here. The only object of this article is to set forth for public apprehension the manner in which the labors of the cattle commission with reference to this disease have been received in every portion of the state; the attitude of the farmers, stock raisers and dairymen with regard to the state enterprise in getting rid of or mitigating this affliction, and the methods and proceedings proposed by the parties, pro and con, with relation to the further prosecution of the war upon it.

It is found, in the first place, that in almost every section of the state, many persons and communities greatly misapprehend the various matters having relation to this crusade, as it may be termed. Some of these do not at all understand the nature of the disease prevailing, or the gravity of the dangers which threaten through its presence; and many are largely ignorant as to the work of the commission, its extent and methods. Others still have accepted grossly erroneous views with reference to what has been done, and what yet remains to be done, and are apprehensive of results unnecessarily severe as likely to come within their own experiences. In consequence of this state of things a great body of partially enlightened people, as well as many very intelligent persons, have arrayed themselves against the further prosecution of the work of the commission, and are disposed to take this position, whose real interests lay in pursuing the opposite course—and who will probably see this fact clearly enough before the present movement ceases.

As to the intelligent people of the state, who are interested in the matter through their ownership of large or small herds of cattle, and their patriotic interest in the public welfare, there is really hardly a dissenting voice in the verdict which is passed upon the work of the commission; and now, as these people have experienced for themselves through dealing with their own animals or with those which come under their notice, the true significance of the crusade is becoming apparent.

Many farmers' clubs, owners of dairy herds, and milk raisers in various sections have declared their purpose of becoming active, when the next legislature is in session, in procuring a repeal of the present laws with relation to this disease and the state's dealings with it; and of largely modifying, if not bringing to an end completely, the work of the cattle commission. Nevertheless, it appears that in most of these instances, these people have arrived

at conclusions not through anything which has happened with relation to their own herds or individual animals, but solely upon hearsay or upon common rumors, purporting to give the results of the commission's work in many places, and stories as to losses borne and hardships inflicted, which really have very little fact to rest upon, so far as the dealings of the commission thus far are concerned.

It is more than likely that as a true knowledge and apprehension of the case prevails more and more throughout the state, and these people discover that their best interests are in the line of doing all that they can and suffering all that they need to in the extermination of this dread disease, they will change their views, or rather, their ideas, upon the subject, and become in the end as enthusiastic for, as they are now obstructive of, the movement in progress.

As an illustration of the feeling of the average farmer and milk raiser in many sections of the state, the following abstract of a letter received by the *Boston Herald* with relation to this movement may serve as an example. The writer is a milk raiser, owning a herd of from twenty to thirty cows, in a section where there are not many herds much larger than that, and where very many of the individual farmers and householders own from one to a half-dozen cows each, upon which they rely very largely in "making both ends meet" in the struggle for existence, and for keeping out of debt. The writer says: "My own place has not yet been visited by the commission, but I can tell you by hearsay what they are doing in other places not far from me. Many of the farmers are afraid of the tuberculin. The medical journals, papers and the local doctors have given the impression that it is not a sure test, and that the well cows are in considerable danger from the use of it. I hear that they have killed quite a number that were not diseased. Butchers of forty or fifty years' practice, who have seen some of the slaughtered cattle, say that cows always have had some trouble with their lungs, and, so far as they know, it did no harm; that is, the cow did not die, was not sick, and even lived to a good old age. The farmers say the same thing. Perhaps the 'vets' (veterinary practitioners) will answer: 'So much the worse for the people who use their milk.' Some of the farmers say: 'We ought to club together and try to stop the killing of so many cattle.' One says: 'I do not believe in it at all—this making my cattle sick to find out

if they are well.' Another says: 'This movement is started to sell the tuberculin.' Another, 'A big job for the "vets" to make money out of the state.' On the other hand, a great many farmers feel that there is no use in resisting 'science'—no use in resisting the state. They do not like it, and think the danger has been overstated and exaggerated; but they do not wish to stand in the way of sanitary progress, and so, unwilling, with much fear and trembling, await the coming of the commission.

I say 'fear and trembling' because many who own cows in this part of the state are poor men. Their cow is their main source of living. The larger part of what they raise on the farm is fed to her, and many have to buy milk feed, either grain or corn, all the year round. Take away their cow and it means lack of food for the children before spring comes. In my own case, take away four or five of my cows and I would have to give up the business (milk raising.) I would say, let the commission be more careful. If it is in doubt about a cow, mark her 'doubtful,' and have her remain upon the farm until they come round again; or, better, perhaps, let the state pay the full value of the cow and then it can have all the doubtful and all the sick ones. Is not Massachusetts inflicting too severe a blow upon a large class of her worthy citizens? Already cows are much higher in the cattle markets. The milk business is an extensive one; ten quarts of milk are now used where one used to be. The doctors are recommending milk very freely for many diseases, and it has become very scarce all over this part of the country. I may be 'beating the air,' for I do not know as the commission are finding many diseased cows in this part of the state; but a blow to the farming community in this section means a blow to many in the 'last ditch.' We have not for some time been able to raise corn, potatoes, etc., with any profit. Hay has been the most profitable thing we could raise. This year the West has deluged us, and the hay must be fed out on the farm. Take away the cows and where are we?"

The above extracts are from the letter of a man, intelligent, progressive and wideawake to his own and his neighbors' interests; but it is evidently the writing of one who has made up his mind in advance in a matter of which he knows little, and who has allowed his apprehensions to interfere sadly with his judgment, while he has paid attention to rumor and gossip upon which he would hardly

bestow a thought had he not been considerably troubled in view of what might result from this movement. Yet his letter, beyond question, reflects the feeling of hundreds, and perhaps thousands, of men in the state similarly situated, and illustrates completely the position of a great body of people at present disposed to array themselves against the laws of the state, and the proceedings of the commission in consequence—at least, in so far that they will bring to bear all that petition and influence can do to bring about a repeal or change in the law and a modification of the acts of the commission.

Precisely along the lines indicated in this letter were the actions of some of the farmers' clubs, taken within the past few weeks, in various parts of the state.

At the regular meeting of the South Bristol Farmers' Club, whose members represent the towns of Dartmouth, Fairhaven, Westport, Acushnet and Mattapoisett, the tuberculosis question came up and was very warmly discussed, some of the most prominent members of the club taking part as it proceeded, and here, as in numerous other places, the opinion was freely expressed that the action of the law in only allowing one-half the value of the cattle slaughtered to be paid to the owner is unjust and oppressive, and that the law should be amended at the earliest possible moment, so that the state shall remunerate the farmers for all cattle thus killed to the full fairly assessed value of each animal destroyed.

In Concord the farmers of Concord, Lincoln and Carlisle gathered in great numbers and gave themselves to the discussion of the same question, and, as it turned out, on precisely the same lines. A petition was presented to this meeting and signed by farmers representing upward of 50,000 head of cattle, and it was to this purpose:

“That, in our opinion, the present amount of indemnity—one-half the sound value—now paid for all tuberculous animals killed by order of the state board of cattle commissioners, is insufficient. We, therefore, petition that a bill be enacted giving the full sound value for all such animals.”

The foregoing record of the action by these clubs is only an echo of what has taken place, or is taking place, in hundreds of instances in various parts of the state with relation to this question. The basis of feeling which it represents will be largely

influential in securing action, if any takes place, with relation to the repeal of the present law and a modification of the work of the commission. But as has been stated in the foregoing, it is exceedingly probable that a better understanding of the matter, and more thorough and comprehensive knowledge of the situation and its merits, the disease that is being fought and the methods by which it is proposed to overcome it, will result in turning all or most of these malcontents into sympathizers with the movement. Already a reaction has begun among these people, and a better recognition of the gravity and significance of the situation has obtained, so that the very persons, or organizations, that at first evinced considerable of bitterness and antagonism against the movement and its characteristics, are now loud in the praises of both, and are found writing and speaking in favor of the most thorough prosecution of the evil, along the lines adopted by the state.

By the evidence outlined in the foregoing it will be seen that the sentiment at present existing among the small farmers and cattle owners of the state is largely due to the apprehension felt by these people regarding the expenses which may be necessarily entailed by the possibly unfavorable results from the examination of their stock or herds, and by the impressions caused among their customers, or within the communities of which they are members, that the product of their cows or dairies is unwholesome in character, or is to be mistrusted because of the unhealthful condition of their stock. Of course these impressions are not altogether groundless. The result has already obtained that in almost every section where cattle have been examined there have been found more or less infected or contaminated animals, rendering it necessary to institute the process of slaughtering and the establishment of a rigid quarantine in every part of the state. These conditions are matters of vivid and present experiences with the farmers and dairy-men, and, of course, are more prominently influential in the forming of conclusions by these classes than they should, or probably will, be, when the whole case is fairly and fully concluded.

The points which perhaps thus far have received less attention from these parties than any others, but which deserve, and will doubtless in the end receive, just consideration, are those in relation to the reaction which is sure to result, as the public becomes more

and better informed, with relation to the quality of the stock from which it is deriving its milk and dairy supplies; and a more perfect knowledge of the disease, the presence of which as generally prevailing has been so well established. The more intelligent milk raisers and dairymen see this point almost at once, and realize to a greater or less degree that with a public thoroughly alarmed as to the dangerous quality of its milk supplies, and the press constantly enlightening it upon all the details of the research, and results which attain, in consequence of the same, it will be far better for them to purify their stock and herds by submitting to the fullest and most thorough investigation and treatment by the state commission, whose every act is given the fullest publicity, so that it will not be long before every customer in the market can estimate with tolerable accuracy as to the quality of the sources from which he receives his supplies. Besides, there is a nervousness and anxiety attendant upon the consciousness that the articles of food which are being furnished by them for the public consumption may be the means of causing widespread disease in the communities which are partakers of their products—a condition of things which no farmer, dealer or conscientious man cares for long to face. Without doubt every individual in the state into whose dealings the sale of milk or dairy products enters will soon perceive that he has abundant reason to “thank his stars” that a way has been provided by which he may purify his stock, and certify to the unblemished quality of his products? with the commonwealth behind him to vouch for his assertions and not only to proclaim, but to prove, his innocence.

But thus far, in the progress of the crusade against diseased animals and their products in the communities of this state, the staunchest advocates of the courses pursued by the authorities of the commonwealth, and the most enthusiastic and zealous actors in the movement made in these directions, have been found among the wealthy class of owners and cattle breeders, the proprietors of the larger milk raising and dairy establishments and the finer and more costly herds of cows of various grades; and it is creditable to the commission and to the intelligence of this commonwealth that the number of this class arrayed on the side of reform is constantly increasing, and promises to embrace in the end nearly every individual whose interests are at all embarked, or who has capital of any amount invested, in the kind of enterprise involved.

Among the earliest to become interested in the investigation of tubercular diseases among cattle in this state, as also among the most earnest champions of the movement for its eradication, were the Burnett Bros., the proprietors and active managers of the celebrated Deerfoot farm, in Southboro.

The Deerfoot establishment is almost ideal in its conception and carrying out. The herd at the Deerfoot is made up of animals bred with the greatest care, selected with reference to the highest points of excellence in many departments, and cared for with a perfection of detail and assiduousness of attention commensurate with the high results desired. It is, perhaps, true, that the cows at the Deerfoot farm have been more carefully housed and fed, and received more thorough attention as regards their comfort, convenience and healthful conditions, than was at the same time the case with thousands of individuals and families of human beings, even among those who were not in the least abjectly poor or unable to command the necessaries of life. To men like the Burnetts, with their fine barns and strains of stock that commanded the admiration of every intelligent witness, and to many others like them existing in this state, who delighted in fine, fancy bred stock, and in the ownership of herds, large and small, of cattle notable for the excellence of their pedigree, the quality of their characteristics and their commercial value as an investment, it at first seemed an idea to be ridiculed that these finely situated and conditioned herds could by any possibility be victims of disease, vile in its character, destructive in its influence, and calculated by its presence not only to vastly lessen the value and promise of the stock, but absolutely to render it a standing menace to the health and well being of the communities in which this stock was found.

But, as the investigation proceeded, this view of things gradually became a most important factor, one after another of these owners of high-priced or fancy animals becoming assured of the true situation, after which it was easy to find them on the side of a movement calculated to reverse, as rapidly as possible, the conditions of things. The Burnetts, for instance, joined hands heartily with Dr. Osgood—who was not then in the employ of the state in this matter, or generally recognized by any authorities as connected with the investigation in an official way—in a most vigorous and rigorous examination as to the presence, nature and possibilities of

tubercular diseases within this state ; and, beginning with their own herds, prosecuted an examination to the last degree searching and thorough along the lines thus suggested. Every animal in the Deerfoot herd was subjected to the most critical tests for the discovery of disease, if any was present, and every known method was brought into requisition by which this investigation could be made absolutely complete.

Besides, the inquiry took the range of an intelligent understanding as to the housing, feeding and care of the animals, the matter of disinfection and purification of the barns and buildings in case disease should be discovered ; in short, every department and bearing of the subject was subjected to the most thorough analysis and enlightenment, the matter of the expense necessitated, or the revolutions in the methods and proceedings involved, not being allowed to influence in the least the energy of the research.

The result was that even the carefully kept, high-priced and most admired herds of these owners were found to be not entirely free from the presence of the disease. Immediate steps were taken, however, to secure its entire eradication from the Deerfoot farm property ; the buildings were fumigated and cleansed to an extent that can hardly be realized by persons at present unfamiliar with the processes used in fighting this trouble, and the surroundings, furnishings and fittings of the barns and houses were almost completely changed in character, although they had been considered before as models in construction and appliances for such establishments. It reveals but a small part of the trouble and expense in time and treasure which these owners assumed upon their battle with this situation, to say that upon the Deerfoot farm alone the expenses for its eradication and the purification and remodelling of the establishment amounted to many thousands of dollars, which was cheerfully paid in consideration of the valuable results attained, and the putting of the stock of these owners and their products upon a basis where none could question their quality or absolute freedom from taint or suspicion.

Largely through the representations and the results of the investigations of these gentlemen, other notable herds and stock in this state were subjected to examination, and when found necessary, to treatment ; and in this way cattle belonging to such representative citizens as Charles F. Choate, J. M. Sears, and others, were

among the earliest to illustrate the value and importance of the crusade inaugurated, as well as the reliability of its methods and results. Very many owners in various sections of the state, including stock or herds of the same grade with those just above referred to, in their ownership, have pursued the same course with regard to the investigations, with, in every case, the same, or similar attendant results; and it is now understood that such men as G. H. Ellis of Weston, J. D. W. French of North Andover, Hon. William Whitney of Holyoke, Mr. Birney of Longmeadow, G. N. Parker of Billerica, Charles W. Norcross of Dedham, W. S. Lincoln of Worcester, Henry Hughes of Milton, J. L. Little of Brookline, A. A. Davenport of Cohasset, and others of like character and influence in all parts of the state, regard the movement as beneficent and in accord with the best interests of communities, and the action of the state in the matter as exceedingly desirable and commendable, and worthy of continuance until the best results shall have been attained.

AS VIEWED BY "GRANGERS."

Members of the State Grange Freely Give Their Opinions.

The meeting of the state grange, Patrons of Husbandry, at Haverhill a few days ago, gave opportunity to secure the opinions of representative practical farmers from various sections of the state on the spread of bovine tuberculosis and the measures that have been adopted by the state for its suppression. The following reports represent, quite fairly, the various lights in which the matter is considered by "the granges."

Mr. S. A. Hickox of Williamstown, who has a dairy of one hundred or more cattle, said there was no more danger now than there had been for years, but the people were just waking up to the danger. The discovery of tuberculin had given the veterinarians their first opportunity to generally detect the disease. He believed that he, with his neighbors, wanted to know if they were spreading disease, and were ready to have proper investigations made. Farmers in his vicinity were doing a legitimate business, and tried to have healthy cattle. In north Berkshire county veterinarians said there was but little of the disease. In the southern part of the county there was probably more. His neighbors felt

kindly toward the cattle commission and were disposed to respect their judgment. They recognized that tuberculosis was a scourge, and were willing to have it dealt with by the state, but they would favor a larger compensation for diseased cattle.

Mr. Calvin L. Hartshorn of Worcester said he had a feeling against the use of tuberculin, but he recognized the necessity of some active measures to stay the disease. More than ten years ago he read a paper before granges and farmers' institutes on tuberculosis, in which he said if there was not a speedy reform in sanitary conditions, feeding and breeding of dairy stock, there would soon come a time when public interference would be necessary. He thought the only way to satisfy the farmers was for the legislature to grant increased compensation for condemned animals. He believed in the members of the cattle commission as competent and honest. The farmers, he said, were only a small per cent of the whole public, and the consumers of dairy products had important rights in this question. He would therefore advise farmers to accept the action of the commission, and try to influence the legislature to increase the rate of compensation.

Mr. N. B. Douglass of Sherborn said he saw no occasion for alarm. The disease had always existed, and probably would continue. Killing affected cattle would not eradicate it as long as mankind had and spread the same disease. He thought the local opinion in his vicinity was against the killing of mildly diseased cattle; eighteen out of twenty mild cases might recover, or at least be profitable cows for years. The present scare was unnecessary, and he felt that it was a wrong for the state to kill cattle promiscuously and pay only half value.

Mr. Elbridge Cushman of Middleboro and Lakefield said he had always favored something like the present action of the commission. He had for a long time known the extent and the danger of the disease, and fully indorsed the work now going on. He hoped the legislature would raise the rate of compensation. He had from time to time killed his own cattle afflicted with the disease, and should do it now much earlier in the progress of the disease, in view of the later and fuller knowledge of the disease.

Mr. W. C. Jewett of Worcester, a well known practical farmer and breeder of Jerseys, said he knew of no feeling among those

who understood the matter, except on the question of compensation.

Mr. Wesley B. Barton of Dalton said the tuberculin test had been applied in his neighborhood to some extent, and the people were inclined to favor it. There was a strong feeling that the present rate of compensation was not just to the cattle owners.

Mr. C. M. Wood of Upton said there was no feeling against the work of the commission in his neighborhood, except that all the farmers wanted full pay for their diseased and condemned cows. The general feeling was that it was high time for the state to act, and that the disease should be eradicated. He knew of no prejudice against tuberculin, and thought his neighbors would be willing that any means should be used that were suggested by scientific and experienced men.

WEST BROOKFIELD.

The West Brookfield farmers held a meeting at the town hall December 21, 1894, to learn something of tuberculosis. There was a large representation from a large circle of towns.

Mr. William E. Patrick presided, and in opening the meeting said the best expert authority had been secured to give information, and he asked for the speakers a candid hearing and acceptance of facts rather than of rumors and mis-statements.

Mr. Patrick introduced Dr. F. H. Osgood, the chairman of the state cattle commission, who read the same paper as at Bridgewater on last Tuesday. In his introduction he asked free inquiry and suggestion, telling the farmers that the commission was quite as anxious to learn from them as they were to hear from the commission. He explained the present development of interest as having resulted from the discovery of an agent by which the presence of tuberculosis could be detected with certainty.

Before this discovery the character and the prevalence of disease were known, but it was impossible to determine its presence until its later stages were reached. This difficulty being removed by the discovery of tuberculin, it was thought wise by the state authorities to make a systematic attempt to control the spread of the disease. This was the basis of the present interest; there was nothing new about the disease, except the means of its detection and the revelation by this agent of a much larger amount of the disease than was before known.

At Dr. Osgood's request the audience asked questions freely during the reading of the paper, and in response to these he described the "reaction" or characteristic rise of temperature resulting from the use of the tuberculin; the process by which tuberculin was produced; the reasons why it was a safe agent and a certain one; a dose sixteen times as large as that used on cattle had been used on guinea pigs with no harmful result, if they were not diseased with tuberculosis.

The statutes gave the commission authority to use tuberculin, in the general provisions, for their action in regard to contagious diseases; they may use such means as their experience and judgment suggest; not every case of contagion would result in disease, but there was especial danger to infants and delicate individuals; favorable conditions for germination were requisite for all germs; the especial danger from tuberculous cows was in the use of milk in its natural state; with meat there was less danger, if it was raised to a temperature of 167 degrees Fahrenheit in cooking.

That tuberculosis was a contagious disease was now generally admitted, he said: nearly all civilized countries recognize this. Its communicability between the bovine and the human races was equally accepted; "hot-house" barns were a predisposing cause as they resulted in debilitated herds, but they could not of themselves produce the disease; any debility furnished a favorable location for the development of the germ.

The erroneous reports of the alleged failures of the tuberculin test at Brighton were explained; all had been from ignorance of the real facts, in some cases the microscope has proved the accuracy of the test; in others the commission had bought and killed cattle that did not react for special purposes; in every case known to the commission, the test had been vindicated.

Dr. Osgood in closing said that if any one desired to know about these matters let him not go to some one who knew less than he did himself, but investigate the matter in a reasonable way, and he would be satisfied. The test was practically certain; the only question for the farmers was that of compensation; if the state desired to subdue tuberculosis it was simply a matter of dollars and cents.

After a recess, during which the Boston delegation was entertained by Hon. E. B. Lynde, the meeting was resumed. The first

exercise was the exhibition of an interesting collection of specimens of the workings of the disease, illustrating its effects in different stages and upon different organs. They were explained by Dr. Osgood and Mr. Herrick of the commission, in response to numerous questions, and as an object lesson the exercise was received with great satisfaction by the large audience.

One specimen, where the only visible evidence of the disease was in the hock joint, was especially interesting, as the disease is not usually looked for there.

The lungs, udder, glands, livers, etc., were a revelation to the spectators, and all got some impressions not altogether pleasant of the probable condition of some of their cattle.

Dr. Osgood explained the necessity of disinfection of stables where the disease has been found. The most effective cleansing agents are chlorine gas and a solution of bi-chloride of mercury. It is entirely practicable to cleanse infected premises, and it must be done if the cleansing of the herds is to be permanently effective. The removal of dust, dirt and cobwebs is the first step in any disinfection.

Dr. Osgood briefly stated the progress already indicated in various states toward the disease, as indicating increasing interest and a general purpose to work energetically to remove it.

AMHERST.

The Hampshire Agricultural Society held a farmers' institute here December 26, 1894, with an unusually large attendance from this and the surrounding towns.

The attraction was a talk on tuberculosis by Dr. F. H. Osgood, chairman of the state cattle commission, the examination of a series of specimens of the appearances of the disease, from seven animals killed here by direction of the commission this morning, and the answering of a great variety of questions touching all phases of the subject.

Prof. William P. Brooks of the State Agricultural College presided.

Dr. Osgood read a brief paper outlining the prevailing conditions—the importance of the dairy interest in the state, the character and prevalence of the disease and the recent prominence given to it from the discovery of a sure means for its detection.

It was not until 1892 that the legislature considered the subject of such importance as to require special legislation, and an act was passed looking to the eradication of the disease.

This was of but little avail until the use of tuberculin was adopted for the discovery of the disease, no other means of detection being possible.

The question of public health is of the greatest importance, and when it is considered that a very large class of diseases in the human family has its origin in tuberculosis meat or milk, the gravity of the situation is apparent.

He described the influence of delicacy of constitution upon predisposition to the disease, and pointed out the importance of the best sanitary conditions in and about the stable, and of care not to weaken constitutions by over-stimulation of animals in any direction. To make a cow simply a milk machine, to produce as much as possible, is short-sighted enterprise.

The symptoms of the disease were described, but the speaker said no physical examination can detect the disease, in most of the cases. Only the microscope, and the inoculation of small animals with matter from suspected animals, have, until recently, been possible for the certain determination of the disease until it was in its far advanced stages.

The recent discovery of tuberculin has made the detection of the disease possible in any of its stages, and upon the work of this agent the present work of the commission is based.

It has been used for about two years with almost universal satisfaction. The process of its production was described. The methods of its use and the impossibility of any harmful result were distinctly stated. The importance of a properly prepared tuberculin and of its handling only by proper persons was earnestly advised, much of the alleged failure of the agent being due to failure to observe proper conditions of administration.

The reading of the paper was followed by a lively questioning of the speaker, in which the following were the principal points brought out: It is most important to remove the mild cases, because in these the germs are most active and the danger of infection is greatest; a proper sanitary condition favors health and ability to repel the disease; there can be no safety except in thorough work in removing diseased animals, and in disinfecting stables where the

disease has been ; the work of inspection and testing of cases is all carefully watched by skilled veterinarians, and no cattle are condemned except upon the decision of the experts of the commission.

There is absolutely no danger of introducing the disease by the inoculation of healthy animals ; the operation has no unfavorable effect upon healthy animals, nor upon the milk during the operation ; in over 7,000 cases in Dr. Osgood's practice only three or four have been questioned ; in these questioned cases there were circumstances of inaccurate observation or of carelessness, which account for the so-called failure ; with proper care in the operation the test is practically infallible ; the bacillus of tuberculosis shows more abundantly in cream than in butter, therefore butter is even more dangerous than milk ; chlorine gas and bi-chloride of mercury are desirable agents for the disinfection of stables ; there is no more danger from tuberculous dairy products to-day than for some time past, but now that an agent is known for the detection of the disease, it is important that it be cleared up ; the condition of things is no more the fault of the farmer than of the consumer, and the state has never given the farmer any protection, and it should bear the cost of the work now in hand ; the producer and the consumer have the same interest, and should bear the burden equally in the general tax ; there is no fear of the work being pushed to the disadvantage of the farmer ; there are more applications than the commission can attend to, without their attempting to force anything.

The meeting was remarkably lively and interesting, and resulted in a general feeling of satisfaction with the work of the commission if only full compensation can be assured.

WORCESTER.

The Worcester Agricultural Society and the Holden Farmers and Mechanics' Club held a joint institute at Holden January 11, 1895, with an unusually large attendance.

At the morning session Joseph S. Perry of Worcester presided, and George L. Clemence of Southbridge read a paper on the proper management of a dairy farm. It was followed by a discussion in which J. L. Ellsworth, J. S. Perry, A. S. Lowell, Calvin L. Hartshorn, J. F. Record, Pliny Sears, H. L. Allen, W. C. Jewett and

C. H. Ellsworth of Worcester and Thomas Harlaw of Boylston were the principal participants.

President Herrick of the Worcester Agricultural Society presided at the afternoon session, which was devoted to tuberculosis. In opening, he called attention to a Worcester newspaper paragraph, in effect that the cattle commission is running about the state trying to defend itself. He said the members of the commission have gone only where they are earnestly called for, and have not responded to a fifth of the calls that have come in.

Dr. F. H. Osgood of the commission was introduced, and in opening his remarks he explained the present interest in the subject of tuberculosis, as growing out of a new possibility of its detection. Of the disease, he said, it is identical with consumption, but is broader than is usually understood. Scrofula, although an indefinite term, more nearly covers the disease. It has been known as a contagious disease for centuries, but its infectious principle was only demonstrated in 1882, when its bacillus was identified by Dr. Robert Koch. That the disease is the same in man and animals, and that it is communicable between man and animal are facts so demonstrated that it is not worth while to combat them. Milk is most likely to carry the contagion, and infants and invalids are its most easy victims.

He explained the methods of contagion among animals as showing the necessity of removing all animals, however slightly infected, if the spread of the disease is to be checked. He said he was sure the feeling against the work of the commission was due to lack of accurate information. In every case where objectors had seen the condition of animals killed for the disease, they had been converted to the idea that it was high time the disease should be checked.

The present interest in regard to the disease began, said Dr. Osgood, some ten years ago, when its prevalence was seen to be increasing, but it has only been within the last two years that there has been any possibility of accurately detecting the disease.

The theory of the communication of the disease between individuals of a herd and from one herd to another, was explained, with illustrations. The recent investigations have largely increased the knowledge of the prevalence of the disease, and the use of tuberculin has revealed a condition of affairs that calls for prompt and radical action.

The action of the legislature, and the appropriation of \$50,000 for the use of the commission, obliged the latter to plan a campaign that should accomplish some real good in the way of educating the public and in controlling the disease. It was certain that nothing could be done on the basis of physical examination, and that nothing but the use of tuberculin could be relied upon to detect the disease. Even in advanced stages no physical examination could determine with accuracy whether an animal had tuberculosis or some other disease.

The method of producing tuberculin was explained, as well as its action when injected into the body of a diseased animal, whereby the presence of the disease is demonstrated. A rise in temperature under the use of tuberculin is not a sufficient test, but there are other characteristics which can be recognized by the expert, and which must be allowed for in making a test. The work of drawing inferences from the results of injection is a delicate one, and this is the reason why tuberculin cannot be wisely placed in the hands of every one for use. The impossibility of causing the disease by the use of tuberculin on a healthy animal was explained. The board has made some 6,900 tests and not one complaint has come from an owner of the ill effect of the injection, except as the disease has been exposed. With all the opposition that the board has met, and the many who have sought for some tangible accusation, it is plain that if tuberculin could do harm to a healthy animal the harm would have been reported from some of these 6,900 animals.

Dr. Osgood asked for free questioning from the audience, and in response to this there was a lively cross-examination, in which the principal points brought out were :

Does tuberculin ever fail? Yes, through inaccurate observation or record, or through carelessness in its application. In 3,900 cases the commission has heard of only six cases where failures were claimed.

Are there authentic cases of the transmission of the disease from cows' milk to the human family? Yes, in great numbers, so that nothing except the wilful inoculation of the milk into the human being could be stronger proof.

Does the disease affect animals other than cattle? Yes, especially swine, but all the smaller animals are short-lived, and the

transmission is usually from the cow to the smaller animals. Clear up the cattle and the smaller animals will not be seriously troubled.

If consumption is contagious, why don't we all have it? Because many people are not predisposed to the disease.

Dr. Osgood explained that the six failures in 3,900 cases of inoculation were in the work of the commission in response to local calls, and excluding the work at Brighton and on Nantucket. At Brighton the work was confronted with exceptional conditions which prevented as much care and accuracy as was desirable. The failures were rare when the observers could and did observe all the precautions known to be desirable.

Can the disease be controlled here without the co-operation of other states? No, but the conditions in all the states are such that action seems imperative. Many states are already acting on Massachusetts lines, and probably within a short time the work will be general. Massachusetts has quarantined herself, and no outside animals can come in except under the tuberculin test.

Has the death rate of consumption increased? No; it has decreased in the last 10 years because of the discovery that it is contagious, and boards of health are taking precautions; sanitary conditions also are being improved; infected premises are more carefully cleaned up.

Can the disease be "stamped" out? Knowledge is constantly accumulating; we have but just found how to recognize the disease. It is certain that it can be largely reduced; it will require more knowledge to reach the last case.

Will "old skates" react under tuberculin? Not always; sometimes an animal has so little fat about her that no rise in her temperature can be accomplished. Such animals should be killed on physical examination without wasting tuberculin on them.

Can milk be made safe for infants' use? Yes, by sterilization at a temperature of 167 degrees, but this may not be thoroughly and constantly done, and it does not do anything toward removing the cause of the disease. Besides sterilization is not practicable as against disease in butter and cheese.

The cross-examination of Dr. Osgood was continued at considerable length, and many of the points above mentioned were gone over again and elaborated.

Hon. E. B. Lynde spoke of the impossibility of any physical examination resulting in any valuable degree of accuracy in

diagnosing the disease. This was the value of tuberculin, that it was a certain diagnostic, even in the incipient stages of the disease. He also urged that the local inspectors be selected wisely, and that they act with discretion.

The meeting was one of the largest and most interesting that has yet been held. The audience was disposed to learn, as Mr. Chamberlain said in moving a vote of thanks to Dr. Osgood and Secretary Sessions :

“Dr. Osgood has told us just what we wanted to know, and has shown us how much of misinformation has been given us for fact.”

The vote was unanimously passed, and the meeting adjourned, a large portion of the audience lingering for another object lesson from the specimens on the platform.

Resolved, In view of the fact that tuberculosis is prevalent in many herds, we believe it to be for the interest of the farmers that a careful and thorough inspection be made of the herds.

Resolved, That it is the sense of this meeting that full value for milk or beef purposes be paid owners of stock destroyed in the hunt for this disease, as it is clearly proved that this disease is found in most cases in animals apparently healthy, and could not be detected by the farmers themselves.

Mr. William R. Sessions, secretary of the state board of agriculture, explained that nothing had been done or was to be done except by the state; if the farmers wanted a better compensation for condemned cattle they should go to the legislature; it was not wise for the cattle owners to get angry and talk about bayonets and the like; they were only a fragment of the whole people, and would be much more likely to get what they wanted if they were reasonable, rather than to go wild over imaginary grievances and misrepresentations.

And in relation to these meetings the *Boston Herald* has to say editorially; “The organization that was formed in Worcester on Monday of those who, it is alleged, propose to do all that they can to repeal the statute authorizing the slaughter of diseased cattle would, perhaps, have had a more hopeful future before it if those who represented it had entertained more reasonable and conservative opinions. It is a matter of regret that any farmer in this state should possess diseased stock, and if this misfortune was one which harmed no one but the farmer—as might some physical

weakness on his part, such as a broken leg or a torpid liver—it would unquestionably be unconstitutional and despotic for the state to undertake to forcibly interfere. But in the vast majority of cases cattle are kept as a food supply for the community, and the one who has them does not keep to himself or even to his family the milk or meat that they furnish; hence, when the latter is diseased it should not be disposed of to innocent and unsuspecting people, and as a defender of the rights of the latter it is the imperative duty of the state to come forward and protect the health and lives of its people.

There is at times a vigorous effort made to punish those who use water as a means of adulterating milk, but if this milk is the product of diseased cows, the water in it that is complained of may be the only part that can be safely used.

It is well known that the germs of tuberculosis are frequently conveyed in the milk and in the meat of diseased animals. It is also known that under favorable circumstances such germs can be carried from one living organism to another, and that their propagation in their new location may cause a fatal sickness. The danger thus recognized, the obvious duty of the state is to put an end to it, for the lives of its millions of people are to be held above any financial consideration, and hence if an organization is formed which has for its purpose the putting an end to the present method of disease extirpation it seems to us it cannot fail to suffer defeat."

The cattle commission killed twenty condemned cows on Ward's wharf yesterday, in the presence of several physicians, a group of medical students and other interested parties.

Tuberculosis was found to be present in every case, and its manifestations in the several organs and in its various stages of development were most interesting and instructive.

One herd of ten animals, headed by a high-priced imported Jersey bull, was especially interesting. The owner was present and said the examination showed that the worst cases were the animals he had relied upon as free from the disease, until the tuberculin test was applied. One young cow, which he had reserved for milk and butter for his own family, because he was most certain of her good health, proved to be the worst case in the herd. He volunteered the examination of his herd, and said he was more than

satisfied with the results of the inspection; he was glad to have his stables rid of such a source of infection and disease.

Mr. William Rankin of Brockton, who has been known as an earnest opponent to the use of tuberculin, was one of the most interesting spectators. He declared that the day's work was a perfect revelation to him, and the certainty with which the incipient stages of the disease were exposed by the new agent was far beyond his expectations.

Some of the recent work of the commission is most interesting in its revelations of the influence of certain conditions on the propagation of the disease.

Two cases in point occurred in one of the cape towns. One rich breeder has a herd of thirty-nine animals, in which not a case of the disease could be found, while his near neighbor had a similar herd, in which nearly every animal was affected.

Both herds were equal in sanitary surroundings and in intelligent care, but the healthy herd had all been raised on the home place, without the introduction of an outside animal during eight or more years, while the diseased herd was made up of frequent purchases, thus inviting infection.

This is only one of numerous illustrations recently brought to light in this state of the fact that the disease propagates only from the presence of or contact with a diseased animal.

The reasons given by the commissioners and their authority is set forth in the following introduction to a circular sent out last night:

To whom it may concern:

The development and spread of tuberculosis among animals have assumed such proportions and constitute so great a menace to the health of the community that the board of cattle commissioners have determined to adopt a fixed policy for the eradication of the disease, in general terms as follows:

1. Quarantine regulations upon cattle entering from without the borders of the commonwealth.

2. Regulation of cattle traffic at Brighton, Watertown and Somerville, which shall include all animals from within and without the commonwealth.

3. Systematic inspection of all herds in the state, beginning at the cape; followed by extermination of diseased animals, disinfection of contaminated premises, and fixed quarantine regulations.

Careful investigations conducted by the board in the use of tuberculin, enabled them to conscientiously add their indorsement to that of all careful investigators who have experimented with it since its discovery in 1891, who agree—

1. That tuberculin is a reliable agent for determining the presence of tuberculosis in cattle.

2. That tuberculin properly prepared and carefully handled can have no injurious effect upon healthy animals.

3. That it is the only known means whereby a positive diagnosis can be made in the early stages of the disease.

In consideration of the above stated facts all the herds in the state will be systematically examined and subjected to the tuberculin test, and for the efficient work of eradicating the disease it is essential that every tuberculous animal, in whatever stage, shall be found and destroyed.

The extermination of the disease from a given herd must be followed by thorough disinfection of contaminated buildings and the careful exclusion of the herd from new sources of infection, each district to remain under quarantine regulations till the state is covered. Such regulations shall allow the entrance or exit of all animals which, after being tested, have been branded with the seal of the commission or until otherwise ordered by the board.

The cost to the state will be more than repaid in dollars and cents from the increased demand and value of the products derived from this source. Sanitarians, as well as all other intelligent people throughout the United States, look to Massachusetts as a state always at the front in all matters of public health and welfare.

The importance of the subject is abundantly demonstrated. The dairymen throughout our eastern states, experienced as all of them are with tuberculosis, are watching and waiting for a market where they can go and be assured of purchasing animals free from tuberculosis.

Every intelligent, thinking man in New England to-day is asking himself the question, "Where can I procure my milk, butter and cheese, with the absolute knowledge that I am not giving to my family the germs of consumption?"

The commission believes it useless to kill animals found in the state affected with this disease, without so regulating the traffic as to prevent the entrance of diseased animals from without, and hav-

ing knowledge of the fact under existing conditions animals affected with the disease are being constantly brought into our state and sold to our farmers, butchers and dairymen, thereby disseminating the contagion. The commission, realizing at the same time the importance of the cattle industry in this commonwealth, have been impelled to adopt the regulation described hereafter, believing that it will not unfavorably affect honest interstate traffic in cattle; that it will so materially increase the value of sound animals, which alone can be sold in Massachusetts, as to more than compensate owners for the loss sustained by seizure of those affected with tuberculosis.

The slower progress of tuberculosis as compared with other infectious diseases has aided in the general indifference with which it has been regarded. In its acute form it often runs its course in a few weeks, but its usual manifestation is of a chronic and dilatory character, often lasting for years.

The disease attacks many of the organs of the body, and often it makes considerable progress in one organ before others are involved. This results in great difficulty in recognizing its presence in its earlier stages, or in identifying it when some difficulty or disease is indicated. Often the disease is well established before any noticeable indication is seen, and as often the symptoms are so varied, as one or another organ is affected, that there can be no certainty of recognizing it.

Cases are frequent where the animal appeared to be in excellent condition in every way and on autopsy extensive and long seated disease of some one or more organs is exposed. In one case a Boston merchant with a thoroughbred herd of one hundred animals, suspected the presence of tuberculosis, and employed a veterinarian to apply the tuberculin test. He had exercised his own best judgment after twenty years of close study of his herd, in the selection of two young cows which he felt sure were free from the disease, and these he had set aside to supply his own family with milk and butter. He was confounded when the tuberculin test pronounced these two animals diseased, and could hardly accept the verdict, but when they were killed with thirteen others, and the autopsy showed them the worst diseased animals in the herd, his astonishment was equalled only by his distress over the peril to which he had unwittingly exposed his family. This is but one of several

similar cases that have occurred in the work of the Massachusetts cattle commission.

On the other hand, cases are of frequent occurrence where careful and experienced owners and the best veterinarians have examined animals that were badly out of condition and might well have been killed on general principles, and have felt sure they were affected by tuberculosis, even when tuberculin said they were not, but found their opinion contradicted by the acts at the autopsy, no traces of the disease being discernible.

Such experiences confirm the general opinions of all experts, that physical examination alone really counts for but little in the discovery of the disease. If physical examination was alone available, the task of eradicating or even of controlling the disease would be a hopeless one.

Especially where the disease attacks the lymphatic glands, its recognition by physical examination is very uncertain, and is certainly much delayed. The affection of the bronchial and mediastinal glands, lying between the lungs, and of the mesenteric glands amid the involutions of the intestines, is similarly concealed, and of doubtful detection. And besides these glands are subject to other diseases of less dangerous character, so that if disease is recognized there, its true character cannot be declared.

In acute cases, and in chronic cases, where the disease involves a large portion of the internal organs, there is usually a feverish condition, loss of flesh, sinking and dullness of the eye, roughness of the coat, rigidity of the skin, and other attendant symptoms of illness, but all these may be present without tuberculosis. They are certain symptoms of illness, but they make no certain declaration of its character.

It is a popular, but unfounded, notion that this disease is only of the lungs, and that a cough is its only certain indication. That the disease is far more reaching in its location has already been stated. That a cough is the certain indication of the disease in cattle, even when the lungs are affected, is also a delusion. All cattle cough more or less when in health, and an observer needs far more than ordinary training to determine with any certainty the difference between a normal cough and the cough of tuberculosis.

The tuberculous cough is described as small, dry and wheezing, or rattling, and may be expected to follow the drinking of cold

water, or unusually violent exercise. A trained observer may sometimes detect the disease, if it is located in the lungs, by tapping on or listening on the walls of the chest, but the anatomy of the animal, the frequent and varying sounds in the stomach and bowels and the pressure of these when distended against the lungs by their contents, so complicate the sounds that no certain conclusion can be reached by these means.

The fact that in tuberculosis the disease often scatters itself in small masses throughout the whole lung tissue, while most other lung diseases involve large masses and finally the whole structure, renders the sounding of the lungs but an uncertain test. Often the nodules are found scattered through the lungs like plums in a pudding, when no information could be secured by tapping or listening.

In advanced cases where the lungs or the glands of the throat are involved, the breathing is sometimes labored, and there is an offensive discharge from the nostrils. When the disease is general throughout the body the animal may curl and writhe, and perhaps cough or groan, if the back is strongly pinched over the shoulders or loins or above the breast bone, or if the ribs are struck sharply by the fist.

Dr. Law says? "In the advanced stages of lung tuberculosis any one can recognize the consumptive animal. It is miserably poor and wastes visibly day by day, the dry coat of hair stands erect, the harsh scurfy skin clings tightly to the bones, the pale eyes are sunken in the sockets, tears run down the cheeks, yellowish, granular, fetid and often gritty discharges flow from the nose, the breathing is hurried and catching, the breath fetid. The cough is weak, painful and easily roused by pinching the back or breast or striking the ribs. Temperature may vary from below normal, 101 degrees to 107 degrees Fahrenheit."

In sucking calves tuberculosis, if received in the milk, shows itself in bowel troubles, with enlargement of the intestinal glands and their filling up with the tuberculous deposits.

In mature animals, when the disease attacks the digestive apparatus its external symptoms are capricious appetite, bloating, scouring, costiveness, colic and even more emaciation than when the lungs alone are involved. The temperature is usually increased as the disease progresses in activity.

When the disease is well established in the sexual organs there is abnormal excitement. The cow is frequently in heat but fails to conceive. There is often a whitish discharge from the vulva, and elevated temperature is frequently observed. The liver is often one of the early seats of infection, and the attendant symptoms are quite like those where the bowels are affected. When the kidneys and bladder are involved there is tenderness of the loins, which may be detected by pinching. There is also, in some cases, frequent urination, and the fluid sometimes shows traces of blood, or of purulent matter.

The glands of the throat are often the first seat of the disease, the infection coming from inhaling or swallowing the dry bacilli floating in the atmosphere. There is a wheezy sound in breathing, and the glands at the base of the tongue and along the throat are enlarged, those on one side usually more than on the other. They may be reduced in size, and much harder than normal, or soft and yielding if handled. A loose cough sometimes attends the throat trouble, with difficult swallowing and a discharge of slime from the mouth.

When the tubercles are located in small masses along the lining of the throat and air passages, there is a harsh and spasmodic cough. When the lungs are first infected it often occurs that the bacilli pass to the mouth with the sputum, and from there are swallowed to infect the intestines.

The udder is usually attacked one quarter at a time, with swelling which may involve the whole gland. The lymphatic glands in the front and rear of the udder are much enlarged and hardened, so as to be readily felt on examination. In some cases the milk shrinks in amount and is thin and watery, but often the disease advances until the whole udder is infiltrated with the products of the disease before any reduction in the amount of milk is observed.

There is a small gland in front of each shoulder blade in a cow, which is often sought for in judging of her milking quality. This is frequently affected, and its enlargement and undue hardness may be easily felt, especially in thin cattle. A similar gland in front of the stifle, which is also sought for by the buyer, may also disclose the presence of the disease by its enlargement. Glands on the sides of the udder and those at the lower part of the channel containing the jugular vein have similar manifestations.

There is a frequent manifestation of the disease about the stifle and hock joints, with hard enlargements, causing lameness. In extreme cases the bone is so diseased as to crumble, and expose itself through the skin.

Although the foregoing presents a formidable array of symptoms, supposedly easily recognized, it must be remembered that all are rarely present in a single case, and usually each is so masked, or so characteristic of some other ailment as to confuse and confound even the expert veterinarian. Beside it must be remembered that the affection of one organ with the disease sooner or later leads to the affection of others. Thus the expectorations from diseased lungs, rising to the mouth, may pass into the stomach and bowels, and these being affected, send the disease to every other organ by means of the circulation.

Drs. Hills and Rich, after full consideration, in preparing their bulletin on the disease, decided that the symptoms are so obscure and variable, except in advanced stages, that it was inadvisable and would be misleading to attempt to give a further description of the symptoms than the following, which is from the special report of the Bureau of Animal Industry of the United States Department of Agriculture on "Diseases of Cattle Feeding :"

"A dry, short, interrupted, hoarse cough, which the sick animals manifest in the morning at feeding time, and still more after somewhat violent exertion. At first these animals may be full-blooded and lay on a considerable amount of fat when well fed. As the disease progresses, they grow thin and show more and more those appearances which indicate diseased nutrition, such as staring, lustreless, disheveled coat, dirty tense skin, which appears very pale in those regions free from hair. The temperature of the skin is below normal. The loss of fat causes sinking of the eyes in their sockets. They appear swimming in water, and their expression is weak. The cough is more frequent, but never or very rarely accompanied with a discharge. The body continues to emaciate even with plenty of food and a good appetite, so that the quantity of milk is small. At times in the early stages of the disease, still more in the later stages, the diseased animals manifest considerable tenderness when pressure is applied to the front or sides of the chest, by coughing, moaning, etc. Often all symptoms are wanting, in spite of the existence of the disease."

January, 1895, four years after the time when the Society for Promoting Agriculture reported the results of their investigations to the legislature, showing the dangers to public health from tuberculosis in cattle, the legislature is deep in a consideration of the subject. How much the spread of this disease would have been stopped if action had been taken in 1891, upon request of the agricultural society, and had not the opposition to such action then developed in the legislature, may never be known. But it is reasonable to suppose that the increase in the mean time has been considerable.

While the Massachusetts authorities were hesitating and delaying, the state of New York recognized the value of the work of the society, and in 1891 practically adopted its recommendations. Since then action has been taken in several other states, based upon the original work of the Massachusetts society, whose public spirit deserves at least this late recognition.

The full report of Prof. Ernst and Dr. Peters, just issued, is a volume of exceeding interest and value, as it is the record of the first scientific matter in hand.

The desire of the committee was to determine whether or not milk derived from tuberculous cows might contain the infectious material of the disease, and in this way become dangerous when used as an article of food.

The question was divided into two parts—whether this infection, if it existed, was confined to cases in which there was actual tuberculosis of the udder, and whether it might exist in cases in which the udder was apparently healthy, but the disease existed in other parts of the body.

On the first part there was little question, but on the second there was a great diversity of opinion, and almost no experimental evidence. It was in this direction, therefore, that work was most carefully undertaken. The work involved a careful and persistent microscopic examination of the milk of such cattle, inoculation and feeding, experiments with such milk, similar investigation of the milk supply of Boston, and the gathering of expert testimony and opinion on the question.

Of thirty-six different animals, whose milk was tested by the microscope 121 times, nineteen positive results of the presence of bacilli were found. That the animals were affected with tuber-

culosis, and that the udders were free from disease was proven by careful post-mortem examinations.

In the inoculation experiments eighty-eight guinea pigs were treated with milk from fifteen cows free from udder disease, and tuberculosis was produced in twelve pigs, fed on the milk of six of the cows.

Of ninety rabbits inoculated from nineteen cows, six rabbits were infected from four of the cows.

In the feeding experiments on forty-eight rabbits, two were infected from the milk of one cow. With twelve pigs, disease was produced in five, with two others suspicions, but not determined, With twenty-one calves, eight were infected. All the cows used were proved to be free from disease in the udder, while it was present elsewhere.

In testing the milk supply of Boston, fifty-six microscopic examinations were made from thirty-three samples; the bacilli were found once. The same milk was used to inoculate twenty-five rabbits, and disease was produced in three.

In the attempt to secure opinions and observations from experts, the result of replies from medical men is tabulated as follows: The question was: "Have you ever seen a case of tuberculosis which it seemed possible to you to trace to a milk supply as a cause?"

Positive, mother to child	8
Positive, cows' milk to child.....	11
Suspicious cases.....	16
Negative, disbelief	9
Negative, simply	893
Negative, out of practice.....	15
Negative, no attention	61
Total of replies.....	1013

Excluding the two last classes, there are 937 replies, of which thirty-five report cases either certain or suspicious. This is 3.7 per cent, which Dr. Ernst says is unexpected and surprising, if one takes into consideration the difficulties surrounding the question.

From fifty-four veterinarians of whom the same question was asked, thirty-one negative answers came, with fourteen positive cases and nine that were considered suspicious. This gives 42.59

per cent of persons who have seen cases which they felt justified in suspecting.

Dr. Ernst concludes his report with a summary of definite conclusions, as follows :

1. While the transmission of tuberculosis by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully.

2. The possibility of milk from tuberculous udders containing the infectious element is undeniable.

3. With the evidence here presented, it is equally undeniable that milk from diseased cows with no appreciable lesion of the udder may, and not infrequently does, contain the bacillus of the disease.

4. Therefore, all such milk should be condemned for good.

NEW HAMPSHIRE EXPERIMENT STATION.

PRESS BULLETIN No. 30—TUBERCULOSIS AND THE TUBERCULIN TESTS.

This bulletin is sent out with a double purpose. On the one hand it has seemed advisable to have the facts concerning the herd of the experiment station accurately stated and publicly proclaimed; and, on the other hand, it seems best, from our experience, to attempt to lay before the people the dangers to which they may be exposed.

As to the one purpose there is this to be said. The people of the state have a right to know just what the facts are when a matter of such general interest arises in a public institution. And in a case like this, an official statement is the more necessary, because groundless rumors fly fast and far, and hasty conclusions find ready speech. It is hardly too much to say that every man dreads to hear of the presence of tuberculosis in his vicinity. And the dread of it sometimes prevents the discovery. There are those, moreover, who would not hesitate to conceal the indications of the disease, because of what seems to them the excessive fear of it in the public mind. And this criminal willingness to conceal probable facts induces suspicion of general concealment. This bulletin, then, is simply to give the facts in the case, without attempting to make much of them or to make little of them.

As to the other purpose, our experience suggests that there may be other cases where disease may be found, even if its presence has not been indicated.

Every parent ought to know, as certainly as is possible, that his children are not exposed to any danger of infection from the milk of a tuberculous cow. Undoubtedly the danger is exaggerated in some minds, as it is underestimated in others. There is no occasion for a panic of fear. Matters are not worse than they have been in the past: they are better. But there is occasion for caution. It is possible to detect, with great accuracy, the presence of the disease. And the owner of even one cow ought not to take the chance of conveying death to his own children or to the children of others.

It should be remembered that it is the child, and the delicate child especially, who is most to be considered. The danger to adults is slight, perhaps infinitesimal. Strong, healthy children, with no hereditary predisposition to this particular disease, may very likely resist the injurious effect of contaminated milk. Indeed there are, beyond a doubt, many diseased animals whose milk would not show a trace of the bacillus tuberculosis, the germ of the disease. But there are still the exceptional cases, the child peculiarly disposed to this disease, and the tuberculous cow whose whose milk is affected. It is always the abnormal case which forces action.

At the risk of unduly alarming the timid, it is still to be said that consumption is not the only disease traceable to the bacillus tuberculosis. Bulletin 40, of the Wisconsin Experiment Station has this statement: "Not until the discoveries of Koch was it known definitely that the wasting disease, consumption of the lungs, cold abscesses, hip joint disease, lupus of the skin and tubercular ulcers of the intestines, were all produced by the growth and activity of the same kind of germ. Not only did he show this to be so, but he proved that similar maladies known under diverse names in different warm blooded animals, as the mammals (cow, sheep, dog, etc.,) and birds were due to the inroads of the same parasitic organism."

As to the spread of the disease, it may be roughly estimated that from five to ten per cent of the cows in the land are tuberculous, the percentage depending largely upon the surroundings. A herd kept in a dark, poorly ventilated, and ill-kept barn is, of course, peculiarly subject to the contagion. The percentage of tuberculous cases is much less among calves, steers, bulls and oxen than among cows. And the danger to men is chiefly from the cows.

A word may be in place as to the meaning of some of the phrases now commonly used, but not always understood. "Bacteria" is the general name for the smallest forms of organic life known. A "bacterium" is a single cell belonging to the lowest form of plant life. A "bacillus" is a bacterium in the shape of a rod, straight or curved. A "spirillum" is a bacterium in the shape of a cork-screw. The germs of tuberculosis are bacteria, of course, are called bacilli from the rod-like shape. Of the many kinds of bacteria already distinguished a few are injurious to health, some

are apparently entirely different, and many are beneficial. In the most approved method of butter making for instance, a "pure culture" of some of the many bacteria which may produce lactic acid is used as a starter, in place of the sour milk formerly used for the same purpose. Any of the forms of "lactic acid bacteria" will turn milk sour; if the milk is soured during a thunder storm, the cause is in the bacteria present, not in the thunder, although the moisture may make the conditions for developing the bacteria more favorable. In the same connection, some kinds of bacteria will give butter an oil taste, others a root taste, others a tallowy taste, while others make the butter mottled in appearance. Milk is not necessarily to be condemned because there are bacteria in it. But if the particular kind of bacteria known as the bacillus tuberculosis is present the milk is not fit for use.

• THE TUBERCULIN TEST.

Tuberculin is the product designed, at the first, for the cure of consumption.

It failed. Now it has demonstrated its marvelous power to disclose the presence of the bacillus tuberculosis in cattle. Tuberculin itself is not a "pure culture" of the bacillus, as is sometimes thought; it is the residue when a pure culture is sterilized. The test by tuberculin is not, therefore, inoculation, for inoculation is injecting a pure culture of the actual germs of the disease. Tuberculin does not produce in the animal a mild form of the disease, heading it off as with back fire. It seems to have a poisonous effect upon the bacilli in the tissues of the animal, producing a slight congestion around the tuberculous bunches, or in other words, where the germs are thickest. This is manifested in a slight rise in the animal's temperature. Until recently the tuberculin was all imported. Now it is supplied by the bureau of animal industry under the department of agriculture.

The method of application is simple. The tuberculin, diluted with some liquid which would be itself disinfectant, is injected under the skin, preferably in the loose folds about the neck. From six to ten hours pass before any important result appears, and the injection is for that reason generally made at night. The normal temperature of the animal having been determined beforehand by a series of observations, or by a single observation if the time is

pressing, it is easy to find, by a series of observations the day after the injection is made, what the rise of temperature is, if there is any.

Opinions differ as to the number of degrees through which the temperature of the animal may rise without demonstrating the presence of tuberculosis. If the temperature rises more than two degrees, the presence of the disease is so probable that the animal should not be passed as healthy. If the temperature does not rise more than one degree, or if it rises more than one degree, and not more than two degrees and fails to maintain the higher temperature for any length of time, it is considered that tuberculosis is not indicated. If, on the contrary, the temperature rises two degrees or more, or if it rises to nearly two degrees and so continues for several hours, tuberculosis is indicated.

In the herd of the college farm the normal temperature was taken from a single observation. This affected the validity of the test only by making it less likely that a doubtful case would escape detection, as a series of preliminary observations would certainly have given a higher normal temperature, and therefore have reduced the maximum rise of temperature after the injection. The tuberculin was injected by F. H. Rich, M. D., V. S. of Burlington, Vt., Monday evening, November 19th. A series of observations taken the next morning revealed the fact that eight animals showed a decided reaction; or in other words, showed a rise of two degrees or more in temperature. They were accordingly condemned. One was immediately killed and a mass of tuberculous matter, as large as one's hand, was found in one lung, while other smaller masses were found in various glands. The cow had not been in perfect health and might reasonably have been regarded with suspicion. The other case was a young bull, apparently perfectly healthy. There was no indication of disease to be found by the ordinary tests of sounding and manipulation. He had been in the herd but four months and had come from a herd which is not regarded as suspicious. The autopsy disclosed small masses in one lung and in the glands of the throat. Under ordinary circumstances, that is, anything but the herd of a public institution, the flesh from this animal should have been considered as wholly harmless. But the presence of the tuberculous germs, almost completely encysted as they were, was indicated by the tuberculin test, and a remarkable test of the test itself was thus afforded.

The official notification was at once sent to Dr. Irving A. Watson of the State Board of Health and of the cattle commission, and the latter investigations were made under his direction, by Dr. Russell, of Nashua.

Thursday, Nov. 22, about half of the whole number in the herd were to have been sold. The discovery of tuberculosis was too late for a sufficient announcement of postponement, and it was determined to take occasion to show those who might be present, by an object lesson, the value of the test. On that day two cows were taken, one which had been condemned by a decided reaction, and one which had satisfactorily passed the test. The design was to see if the test could be trusted in all cases, or, whether or not a cow from an infected herd, passed by the test, would be itself affected with the disease. The condemned cow showed plain indications, masses of yellowish matter in lungs and glands, while the other animal showed no slightest trace of the disease.

The appearance of the calcareous matter may be suggested by a remark overheard from one of the intelligent observers, "I'll tell you what it is," said he, "that cow got some corn meal in her lung, and it hardened there, and that's all there is to it." It is not, perhaps the easiest thing in the world to get some corn meal into the lung of a cow, and have it "harden there." Anyone who has had a particle of food "go down the wrong way" will understand what vigorous means nature takes to eject the foreign substance from the air passage of the throat.

A SECOND TEST.

It is recommended that while one test may result in condemning unmistakably tuberculous animals, a second test of the same kind, adds to the value of the first in deciding doubtful cases. Accordingly arrangements have been made for another test, to be made in about six weeks, in the presence of Dr. Rich and Dr. Russell. Of the animals which pass the test, some will be marketed for beef, some may be kept. Most probably, however, all will be slaughtered, sooner or later, for the sake of the infection in the herd. While the tuberculin test has been sustained, it is still not infallible, and the college farm cannot take even the chances ordinarily permissible. The condemned animals have been separated from the rest of the herd, and will be used for experimental purposes, in order

that we may learn something as to the effects of milk from diseased animals on other animals, etc. But in no case will the milk from one of these cows be mixed with the milk from healthy animals, or used in any way in the dairy. And yet, it is doubtful if the most minute bacteriological investigation, which is to be made, will reveal any bacilli tuberculosis in this milk. For it is to be remembered, as stated above, tuberculous cows do not always, perhaps do not often, give infected milk. The whole danger from the milk is in the fact that now and then a cow does give milk that contains the noxious germ.

There remains the danger from the air. That is real and perhaps supreme. There is as much danger from a tuberculous cow in a herd as from a case of consumption in a family. The promiscuous feeding of a herd of cows increases the danger slightly. Darkness, foul air and general filth increase the danger greatly. But when the worst is known, there is occasion for intelligent caution, but not for unreasoning fear.

For children the milk should be "pasteurized." This term is taken from the name of M. Pasteur, best known for his investigations in hydrophobia. Pasteurization is not sterilization; it does not destroy all the bacteria in milk, but it does destroy those which are dangerous to health, the "pathogenic" bacteria. It consists simply of heating the milk to a temperature of from 160 to 170 degrees, continuing that temperature for about half an hour. If this milk is rapidly cooled it may be kept for at least twenty-four hours, and used with perfect safety so far as injurious germs are concerned. It is necessary, however, that care be taken to keep the pasteurized milk from later infection.

A simple method might be easily adopted. A well cleaned bottle filled with milk may be placed in any common utensil, like the ones used for cooking oatmeal, and water kept gently boiling in the latter vessel for half an hour. If the bottle be then corked, preferable with absorbent cotton, cooled as quickly as possible, say in a common refrigerator, the milk will be as satisfactorily pasteurized as in the expensive apparatus sold in the market. Milk so treated is not affected as it is by boiling, and does not have a cooked taste. A very little care will ensure accurate results, even with the most unpretentious apparatus. I have made some experiments, with the object of finding how milk from suspected

cows might be rendered harmless. With a common double boiler, such as is to be found in every kitchen, it was found that when both chambers were nearly filled with water, and a bottle of milk placed in the inside receptacle, the milk rose to a temperature of 190 degrees. This was too high a temperature, as it is probable that at a temperature of 175 or 180 degrees the milk undergoes decided changes. But by placing a large coffee cup in the outside chamber, so that the inside chamber, resting on the cup, was not in contact with the water outside it, and was heated only by the steam, or the radiated heat, and by reducing the amount of water in the inner chamber, the milk was kept at an even temperature of 160 degrees. This was exactly what was wanted. The range between 190 and 160 degrees represented the possible variations with this commonplace apparatus. The lower the inner chamber is placed in the outer one, the greater degree of heat communicated to the inner, and the higher the temperature of the milk in the bottle. For practical purposes 160 degrees is, upon the whole, the safest. At that temperature there is no coagulation of albumen in the milk, and if the temperature is continued for half an hour the possible germs of tuberculosis need not occasion a moment's uneasiness. At a higher temperature, say 190 degrees, the milk will be changed and rendered less fit for food for children.

For the sake of clearness the following directions are given: Take a common double boiler, such as oatmeal is cooked in; put a coffee cup in the outer part of it, pouring in hot water enough to nearly overflow the cup. Put the inner boiler on the cup, (you will need to fill the cup with water, or it will not stand) and pour into this inner boiler water enough so that the bottle of milk, when it is put in the inner boiler, will be about half immersed. Fill the bottle with milk, leaving it uncorked, and put it in the inner boiler. Let the water boil for forty minutes, and then take the bottle of milk, cork it with a plug of absorbent cotton which may be bought at any apothecary's and put it away in a cool place. If the milk is to be used for a baby it should be put in nursing bottles in the first place. Then if the nipple is thoroughly cleansed with boiling water, the milk will not communicate the bacilli tuberculosis, even if it be from a cow afflicted with the disease.

It will be some time before the experiments contemplated at the experiment station will be completed. When they are satisfactorily completed a regular bulletin will be issued.

It may be well to state here, because this press bulletin may reach some who are not on the mailing list of the station, that it is obligatory with us to publish four bulletins each year, for free distribution. We do not wish to make any discrimination. If you wish for the bulletins, and do not receive them, please send an application, on a postal card, with your address plainly indicated. Then if you do not get the bulletins please let us know. A number of complete sets of bulletins already published by the station are on hand, and will be sent to those who apply for them, so long as they hold out.

LACONIA, N. H.

The Granite State Dairymen's Association held its winter meeting December 28, 1894. The chief topic was tuberculosis, and every dairyman present was of the opinion that measures should be taken immediately to stop the spread of the disease.

After the meeting, W. J. Batchelder of Andover, cattle commissioner and secretary of the state board of agriculture, said: "I think there is but one sentiment among the dairymen and stock raisers in New Hampshire in regard to bovine tuberculous, and that sentiment is in favor of using all reasonable means for its suppression. The state board of cattle commissioners is taking all the action possible under the existing law. The disease is much more prevalent in the southern than in the northern sections of the state.

"The quarantine regulations established by Massachusetts against New Hampshire cattle, and the possible exclusion of milk from our state, render active measures necessary in the interest of our dairy and stock interests.

"The only point on which I hear a diversity of opinion is in the matter of compensation for animals destroyed. This varies from one-half to two-thirds value, with occasionally an opinion in favor of the full value of the animals in state of health. Our present law provides for the payment of one-half the health value."

Alonzo Towle of Freedom, general deputy of the state grange, said the wisest and most practical methods should be taken for the suppression for the disease.

J. M. Connor of Hopkinton, president of the state dairymen's association, said:

"My opinion is that the commission so far has been very judicious, and has avoided creating any undue alarm or excitement.

The commission has gone only where the owners have called for an examination. Where they have killed the cattle their awards have been satisfactory, and there has been no antagonism to their work. It is safe to say that a large share of the animals that have been killed were in counties bordering on Massachusetts, and that the per cent of disease diminishes in going back into the state.

“As a matter of fact, I believe there is undue alarm over this matter. If the sanitary conditions are looked after there will be no trouble. The high pressure feeding and close breeding and barns without proper ventilation should be considered in removing the cause. Farmers in remote sections do not have this trouble.”

Alpha Messers of Vermont, lecturer of the national grange, said :

“I am surprised that farmers in some sections should array themselves against the reasonable efforts which are made to suppress this disease. So far as I know in Vermont there is but little opposition to the law that was passed by the last legislature for the suppression of tuberculosis. There seems to be a general belief in Vermont that the payment of one-half of the appraised value for slaughtered diseased cattle is reasonable. If we look at the suppression of this disease from a sanitary point of view alone, the public would hardly be expected to pay the full value of animals slaughtered, because if a man has a nuisance about his buildings that endangers the health of the community he is called upon to remove the nuisance or pay for its removal.

“In case of cattle slaughtered, the owner gets one-half of the value of the cattle, which is much better than a total loss. The burden of the loss will be hard for some farmers to bear, but in all kinds of business losses will occur, and the state is not expected to recompense the loser, while in this case where the state pays one-half the loss it would seem that there ought to be but little complaint by the farmer.”

J. W. Sanborn of Gilmanton, formerly of the New Hampshire State Agricultural College, said :

“But one course should be pursued by the state, and that is the passage of stringent and quick-acting laws that shall operate on every herd within its borders. The Massachusetts law is wise, and the vigorous action of its cattle commissioners is altogether commendable.

“The payment that should be made to owners of slaughtered stock is a debatable one. The disease, being in herds unknown to

the owner and by no fault of his, and society destroys his stock without his request, and solely for the public good, and as the interests of the state would suffer by seriously crippling small and financially weak holders, the state should take broad ground for compensation of stock, paying not less than one-half to two-thirds value, and would be justified in paying full value."

GERMAN CATTLE PROHIBITION.

An agent of the department of agriculture now in Germany has been looking over the grounds for the German movement against American live cattle and dressed beef and has made a preliminary report. He says the general opinion among the importers of American live cattle and dressed beef is that the German authorities will never recede from the position taken, unless they can be induced to revoke the prohibition order on the condition that German veterinarians be employed to inspect live cattle and dressed beef before loading for transportation to Germany. Directors of the Hamburg-American Packet Company made a proposition to that effect to the German government.

Veterinarians employed at the Hamburg stock yards and slaughter house are rather reluctant to call the disease discovered Texas fever. They are unacquainted with the symptoms and feature of the disease. They concluded the sickness might be from impure water given the sixteen head of cattle infected. An analysis of the water proved this theory was incorrect. The matter was reported to the imperial sanitary department at Berlin and they demanded for inspection the intestines, lungs, liver and heart of one of the diseased animals. Three weeks afterward it was declared by the imperial sanitary department at Berlin that the disease was Texas fever and the prohibition order was issued.

Veterinarians at Hamburg now affirm that according to the diagnosis made at the time of the killing of the diseased animals that the disease corresponds exactly with the description given by the American authorities of Texas fever.

Denmark's following of Germany in prohibiting the importation of American live cattle and dressed beef is looked upon as a move dictated by self-interest. Denmark is hopeful that by excluding American live cattle it may receive permission to transport live stock to the interior of Germany.

Hamburg dealers in cattle and the commissioners in general are making efforts to obtain permission to import live cattle from Canada, there being no Texas fever in the Northern States. They would load them at Halifax. They doubt very much whether the permission will be granted.

The report states that the live cattle sold at Hamburg were of first-class quality and gave excellent satisfaction, with the exception of thirty-two bulls, sixteen of which had to be killed and condemned. The dressed beef was also of first quality.

Dr. Salmon, chief of the bureau of animal industry at Washington, states that none of the information so far obtainable would indicate that the condemned animals were suffering from Texas fever.

CHICAGO, ILL.

January 3, 1895. The dressed beef interests are up in arms over the action of the Belgian government in closing the port of Antwerp against American meat and live stock. The full effect of the move was not realized when it was made; indeed, the report was scarcely credited until private cablegrams to-day confirmed it.

Not only are the Belgian markets closed, it is found, but also the markets of Switzerland and the northern provinces of Austria, all of which were reached through Antwerp.

The three cities which have done the exporting are Chicago, New York and Baltimore. Trade has recently grown to such mammoth proportions that a Hamburg firm lately built five steam ships solely for carrying live cattle and dressed beef.

Every week three or four ships, each carrying \$25,000 worth of beef, cleared for Antwerp. Thus, about \$5,000,000 worth of cattle, alive or dressed, passed into that port every year. The total value of the beef shipped annually from this country to Europe is estimated at not less than \$75,000,000, and some put the figure as high as \$125,000,000.

Nelson Morris, a heavy exporter of both dressed beef and live stock says: "The Belgian government's action is one of the heaviest blows yet dealt to the American cattle interest. It really puts American meat out of continental Europe. There is no question that these embargoes have been caused by the new sugar schedules in the tariff bill just passed."

“The foreign countries make the excuse that they are afraid of diseased meat. That is all stuff. It is retaliation and nothing else. If Congress will restore the old sugar bill, the foreign countries will get over their fear of bad meat I think. All exports to continental Europe are now practically shut off.”

S. W. Allerton, who does a very extensive business in cattle and other live stock thinks this is a more serious matter than the casual observer has any idea of.

“Here we have been canning in this country from 5,000 to 6,000 head of cattle daily,” he explains, “a great part to be shipped to France, Germany and other European countries for the armies and for general use. If this industry is stopped the cattle thus used will be thrown on the general market, overstocking it and bringing loss, and perhaps ruin, to any number of American stock raisers, and to farmers who pay some attention to the raising of cattle.”

Armour & Co. say: “There can be but one explanation of the concerted action of the European governments at the present time, and that is retaliation. As to relief, the proper course is to remove the cause of grievance by changing the sugar schedule in the tariff bill. But this can hardly be expected from the present Congress.

“After all the trouble we had in getting a tariff bill finally settled, it is evident that changes will not be easily made. I anticipate action by the President, however, in one or two directions—either in the way of diplomatic reasoning with Germany and the other countries, to convince them of the unfairness of the position they have taken, or in the way of further retaliation against European products.”

**LAW RELATING TO CONTAGIOUS CATTLE
DISEASES AS AMENDED IN 1889.**

CHAPTER 177.

An Act to Extirpate Contagious Diseases Among Cattle.

Be it enacted by the Senate and House of Representatives in Legislature assembled, as follows :

SECT. 1. That for the purpose of facilitating and encouraging the live stock interests of the State of Maine, and for extirpating all insidious, infectious and contagious diseases, now or that may be among cattle and other live stock, and especially tuberculosis, the governor of the State is hereby authorized and required, immediately after the passage of this act, to appoint a board of cattle commissioners consisting of three persons of known executive ability, who shall be charged with the execution of the provisions of this act, and who shall be known and designated as the State of Maine Cattle Commission, and whose powers and duties shall be those provided for in this act, and whose tenure of office shall be at the option of the governor. The compensation of said commissioners shall be at the rate of three dollars per day during the time they are actually engaged in the discharge of their duties as commissioners. The said commissioners shall respectively take an oath to faithfully perform the duties of their office, and shall immediately organize as such commission by the election of one of their number as president thereof, and proceed forthwith to the discharge of the duties devolved upon them by the provisions of this act.

SECT. 2. That it shall be the duties of the said commissioners to cause investigation to be made as to the existence of tuberculosis, pleuro-pneumonia, foot and mouth disease, and any other infectious or contagious diseases. And such commissioners or their duly

constituted agent, are hereby authorized to enter any premises or places, including stock yards, cars and vessels within any county or part of the State in or at which they have reason to believe there exists any such diseases, and to make search, investigation and inquiry in regard to the existence thereof. Upon the discovery of the existence of any of the said diseases, the said commissioners are hereby authorized to give notice, by publication, of the existence of such disease, and the locality thereof, in such newspapers as they may select, and to notify in writing the officials or agents of any railroad, steamboat or other transportation company, doing business in or through such infected locality, of the existence of such disease; and are hereby authorized and required to establish and maintain such quarantine of animals, places, premises or localities as they may deem necessary to prevent the spread of any such disease, and also to cause the appraisal of the animal or animals affected with the said disease, in accordance with such rules and regulations by them as hereinafter authorized and provided, and also to cause the same to be destroyed, and to pay the owner or owners thereof one-half of their value, as determined upon the basis of health before infection, out of any moneys appropriated by the legislature for that purpose; provided, however, that no appraised value shall be more than two hundred dollars for an animal with pedigree recorded or recordable in the recognized herd-books of the breed in which the animal destroyed may belong, nor more than one hundred dollars for an animal which has no recordable pedigree; provided, further, that in no case shall compensation be allowed for an animal destroyed under the provisions of this act, which may have contracted or been exposed to such disease in a foreign country, or on the high seas, or that may have been brought into this State within one year previous to such animal's showing evidence of such disease; nor shall compensation be allowed to any owner who in person, or by agent, knowingly and wilfully conceals the existence of such disease, or the fact of exposure thereto in animals of which the person making such concealment, by himself or agent, is in whole or part owner.

SECT. 3. That the said commissioners are hereby authorized and required to make record, and publish rules and regulations providing for and regulating the agencies, methods and manner of conducting, and the investigations aforesaid, regarding the existence

of said contagious diseases ; for ascertaining, entering and searching places where such diseased animals are supposed to exist ; for ascertaining what animals are so diseased, or have been exposed to contagious diseases ; for making, reporting and recording descriptions of the said animals so diseased or exposed and destroyed, and for appraising the same, and for making payment therefor ; and to make all other needful rules and regulations which may, in the judgment of the commissioners, be deemed requisite to the full and due execution of the provisions of this act. All such rules and regulations, before they shall become operative, shall be approved by the governor of Maine and thereafter published in such manner as may be provided for in such regulations ; and after such publication said rules and regulations shall have the force and effect of law, so far as the same are not inconsistent with this act and other laws of the state, or United States.

SECT. 4. That any person or persons who shall knowingly and wilfully refuse permission to said commissioners, or either of them, or their duly constituted agent to make, or who knowingly and wilfully obstructs said commissioners, or either of them, or their duly constituted agent in making all necessary examinations of, and as to animals supposed by said commissioners to be diseased as aforesaid, or in destroying the same, or who knowingly attempts to prevent said commissioners, or either of them, or their duly constituted agent from entering upon the premises and other places hereinbefore specified where any of said diseases are by said commissioners supposed to exist, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, or of either of the acts in this section prohibited, shall be punished by fine not exceeding one hundred dollars, or by imprisonment, not exceeding ninety days, or by both fine and imprisonment, at the discretion of the court.

SECT. 5. That any person who is the owner of, or who is possessed of any interest in any animals affected with any of the diseases named in section two of this act, or any person who is agent, common carrier, consignee, or otherwise is charged with any duty in regard to any animal so diseased, or exposed to the contagion of such disease, or any officer or agent charged with any duties under the provisions of this act, who shall knowingly conceal the existence of such contagious disease, or the fact of such exposure to said contagion, and who shall knowingly and wilfully fail, within a reasonable time, to report to the said commissioners their knowledge or

their information in regard to the existence and location of said disease, or of such exposure thereto, shall be deemed guilty of a misdemeanor, and shall be punishable as provided in section four of this act.

SECT. 6. That when the owner of animals, decided under the provisions of this act, by the proper authority, to be diseased, or to have been exposed to contagion, refuses to accept the sum authorized to be paid under the appraisement provided for in this act, it shall be the duty of the commissioners to declare and maintain a rigid quarantine as to the animals decided, as aforesaid, to be diseased or to have been exposed to any contagious or infectious disease, and of the premises or places where said cattle may be found, according to the rules and regulations to be prescribed by said commissioners, approved by the governor, and published as provided in the third section of this act.

SECT. 7. That no person or persons owning or operating any railroad, nor the owner or owners, or masters, of any steam, sailing, or other vessels, within the state, shall receive for transportation, or transport from one part of the state to another part of the state, or to bring from any other state or foreign country any animals affected with any of the diseases named in section two of this act, or that have been exposed to such diseases, especially the disease known as tuberculosis, knowing such animals to be affected, or to have been so exposed nor shall any person or persons, company or corporation, deliver for such transportation to any railroad company, or to the master or owner of any vessel, any animals, knowing them to be affected with, or to have been exposed to, any of said diseases; nor shall any person or persons, company or corporation, drive on foot, or transport in private conveyance, from one part of the state to another part of the state, any animal, knowing the same to be affected with, or to have been exposed to, any of said diseases. Any person or persons violating the provisions of this section, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by fine not exceeding the sum of two hundred dollars, or by imprisonment not exceeding six months, or by both fine and imprisonment.

SECT. 8. That it shall be the duty of the several county attorneys to prosecute all violations of this act, which shall be brought to their notice or knowledge by any person making the complaint

under oath; and the same shall be heard in any supreme judicial court having jurisdiction in the county in which the violation of this act has been committed.

SECT. 9. That the said commissioners are hereby authorized to appoint or elect one of their number as secretary of said board, who shall receive a reasonable compensation for his services during the time in which, under the provisions of this act, the services of the said commissioners shall be required. The said commissioners shall make and preserve a full record of all rules and regulations promulgated under the provisions of this act, of all payments and expenses hereunder incurred, and all other transactions performed by said commissioners in the discharge of their duties as herein provided; and the said commissioners shall, on or before the first Wednesday in January of each year, during their continuance in service, and at other times as they may deem conducive to the public interests, or as they may be required so to by the governor of state, report to said governor full and accurate accounts of their expenditures, and other proceedings under the provisions of this act, and of the condition of said diseases, if any, in the state, to be communicated by him to the legislature. Whenever the functions of said commission shall be suspended or terminated, it shall turn over to the secretary of state, all its books, papers, records, and other effects, taking his receipt therefor, and he shall remain the custodian of the same until such time as the functions of said commission may be restored.

SECT. 10. That the commissioners shall have power, and are hereby authorized to employ skilled veterinarians, and such other agents and employes as they may deem necessary to carry into effect the provisions of this act, and to fix the compensation of the person or persons so employed, and to terminate such employment at their discretion; and they are authorized out of the moneys by this act appropriated, to make such expenditures as may be needed for the actual and necessary traveling expenses of themselves and their said employes, stationery, expense of disinfecting premises, cars and other places, destroying diseased and exposed animals, and paying for the same, and such other expenses and expenditures as they may find to be actually necessary to properly carry into effect the provisions of this act.

SECT. 11. That the moneys appropriated by this act shall be paid over to the secretary of said commission, from time to time, as the

same may be found to be needed, upon requisition made by the said commissioners, and shall be disbursed by the said secretary of said commission only upon vouchers approved by said commissioners or a majority of them. The said secretary shall before entering upon the duties of his office, take an oath to faithfully discharge the duties thereof, and shall enter into a bond to the State of Maine, with sureties to be approved by the treasurer of state, in such sum as he may designate, for the faithful accounting of all moneys received by the said secretary of the commission, under the provisions of this act.

SECT. 12. That for the purpose of carrying into effect the provisions of this act, the sum of five thousand dollars, or so much thereof as may be necessary, is hereby appropriated out of any moneys in the treasury not otherwise appropriated.

SECT. 13. That all acts and parts of acts inconsistent or in conflict with the provisions of this act, be, and the same are hereby repealed.

Approved February 14, 1889.

**LAW RELATING TO CONTAGIOUS CATTLE
DISEASES AS AMENDED IN 1893.**

CHAPTER 194.

**An Act to amend an act entitled "An Act to extirpate
Contagious Diseases Among Cattle."**

*Be it enacted by the Senate and House of Representatives in Legis-
lature assembled, as follows :*

SECT. 1. Section one of chapter one hundred and seventy-seven of public laws of eighteen hundred and eighty-nine, is hereby amended by striking out the words, "and other live stock" in the fourth line, and inserting instead the words 'horses and sheep,' so that said section as amended, shall read as follows :

'SECT. 1. That for the purpose of facilitating and encouraging the live stock interests of Maine, and for extirpating all insidious, infectious and contagious diseases, now or that may be among cattle, horses and sheep, and especially tuberculosis, the governor of the state is hereby authorized and required, immediately after the passage of this act, to appoint a board of cattle commissioners consisting of three persons of known executive ability, who shall be charged with the execution of the provisions of this act, and who shall be known and designated as the State of Maine Cattle Commission, and whose powers and duties shall be those provided for in this act, and whose tenure of office shall be at the option of the governor. The compensation of said commissioners shall be at the rate of three dollars per day during the time they are actually engaged in the discharge of their duties as commissioners. The said commissioners shall respectively take an oath to faithfully perform the duties of their office, and shall immediately organize as such commission by the election of one of their number as presi-

dent thereof, and proceed forthwith to the discharge of the duties devolved upon them by the provisions of this act.'

SECT. 2. Section two of said act is hereby amended by striking out the word "two" in the twenty-ninth line and inserting instead thereof the word 'one;' and by striking out the words "one hundred" in the thirtieth and thirty-first lines and inserting instead thereof the word 'fifty;' also by striking out the word "one" in the thirty-sixth line, and inserting instead thereof the word 'three;' also by inserting after the word "disease" in the thirty-seventh line the words 'and the owner or owners shall furnish satisfactory evidence as to the time such animal or animals shall have been owned in the state,' so that said section two as amended, shall read as follows:

'SECT. 2. That it shall be the duties of the said commissioners to cause investigation to be made as to the existence of tuberculosis, pleuro-pneumonia, foot and mouth disease, and any other infectious or contagious diseases. And such commissioners or their duly constituted agent, are hereby authorized to enter any premises or places, including stock yards, cars and vessels within any county or part of the State in or at which they have reason to believe there exists any such diseases, and to make search, investigation and inquiry in regard to the existence thereof. Upon the discovery of the existence of any of the said diseases, the said commissioners are hereby authorized to give notice, by publication, of the existence of such disease, and the locality thereof, in such newspapers as they may select, and to notify in writing the officials or agents of any railroad, steamboat or other transportation company, doing business in or through such infected locality, of the existence of such disease; and are hereby authorized and required to establish and maintain such quarantine of animals, places, premises or localities as they may deem necessary to prevent the spread of any such disease, and also to cause the appraisal of the animal or animals affected with the said disease, in accordance with such rules and regulations by them as hereinafter authorized and provided, and also to cause the same to be destroyed, and to pay the owner or owners thereof one-half of their value, as determined upon the basis of health before infection, out of any moneys appropriated by the legislature for that purpose; provided, however, that no appraised value shall be more than one hundred dollars for an animal with pedigree recorded or recordable in the recognized herdbooks of the breed in which the animal destroyed may belong, nor

more than fifty dollars for an animal which has no recordable pedigree; provided, further, that in no case shall compensation be allowed for an animal destroyed under the provisions of this act, which may have contracted or been exposed to such disease in a foreign country, or on the high seas, or that may have been brought into this State within three years previous to such animals showing evidence of such disease, and the owner or owners shall furnish satisfactory evidence as to the time such animal or animals shall have been owned in the State; nor shall compensation be allowed to any owner who in person, or by agent, knowingly and wilfully conceals the existence of such disease, or the fact of exposure thereto in animals of which the person making such concealment, by himself or agent, is in whole or part owner.'

Approved March 10, 1893.

NOTICE OF QUARANTINE.

TO WHOM IT MAY CONCERN.

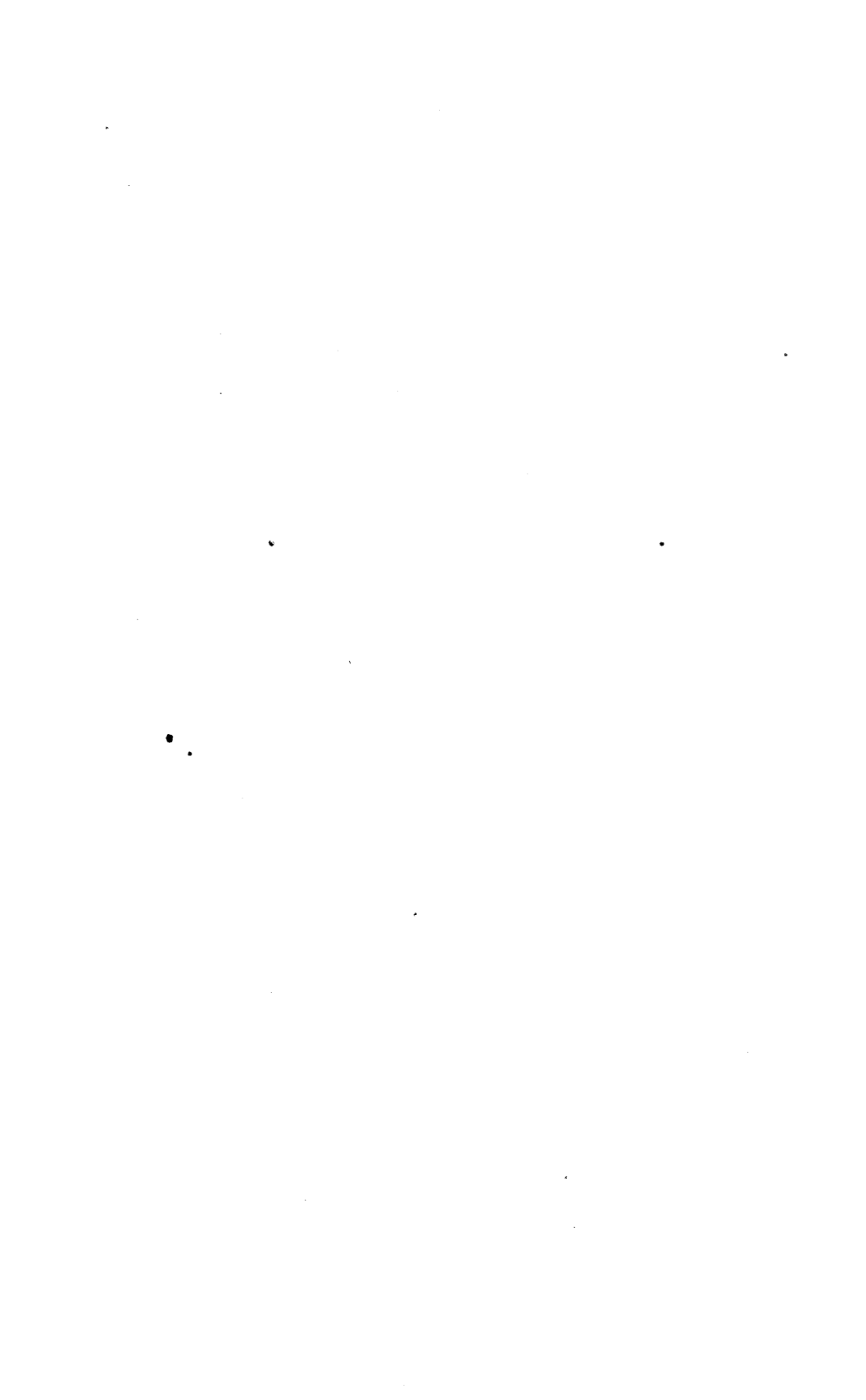
Public notice is hereby given, that in consequence of the prevalence of tuberculosis among Massachusetts cattle, as disclosed by the official reports of their authorities, supplemented by post mortems held in Maine of cattle purchased in that state for dairying and breeding purposes, the Cattle Commissioners of the State of Maine believe that the public health of its citizens and the welfare of this commonwealth demand that a rigid quarantine (against all cows whether in milk or dry, and all bulls for breeding purposes) be maintained on and after January 1, 1892, until further notice, and all such cattle entering the State of Maine thereafter will be subject to quarantine at the owner's expense; provided, however, that the above regulations shall not apply to Western cattle coming through Massachusetts into Maine for the purpose of slaughter.

The attention of all persons is directed to sections 2, 3, 4, 5 and 7, of chapter 138, of the Public Laws of Maine, 1887, applying to cattle affected with contagious diseases, and which will hereafter be rigidly enforced.

[Signed] THOMAS DAGGETT, FOXCROFT, *President.*
F. O. BEAL, BANGOR, *Treasurer.*
GEORGE H. BAILEY, DEERING, *D. V. S.*

A quarantine station will be provided near Morrill's Corner, Deering, where all cattle brought into Maine in violation of the above notice will be kept until discharged, at the expense of the owner or owners; and particular attention is called to the full reprint of the law relating to contagious diseases upon the following pages of this circular-letter, which will be rigidly enforced after this date.

PORTLAND, January 1, 1892.



AN ACT

To Codify and Consolidate the Laws Relating to Contagious Diseases Among Domestic Animals.

[CHAPTER 491, ACTS OF THE YEAR 1894.]

Be it enacted, etc., as follows:

SECTION 1. The mayor and aldermen of cities and the selectmen of towns shall, within thirty days after the passage of this act, and thereafter annually in the month of March, appoint one or more persons to be inspectors of animals and provisions. Each inspector shall be sworn faithfully to discharge the duties of his office, and shall receive a reasonable compensation, to be paid by the city or town for which he has been appointed. Such town and city officers shall have the power to remove any person so appointed by them to be an inspector, and in such case shall immediately appoint another in his place. Every city and town shall, within thirty days after the passage of this act, and thereafter before the first day of April in each year, send to the board of cattle commissioners a true and correct list of the duly appointed and qualified inspectors of animals and provisions appointed under this section, which notice shall give the name and address of each such inspector and his usual business occupation, as far as the same is known.

SECT. 2. Whenever the officers of a city or town refuse or neglect to carry into effect the provisions of section one, such city or town shall be liable to forfeit a sum not exceeding five hundred dollars for each such refusal or neglect, and the board of cattle commissioners shall have the power to appoint one or more persons to be such inspector or inspectors for such city or town. Such

board shall also have have the power to remove any inspector of provisions and animals appointed under the provisions of this act, whenever, in the opinion of said board, such inspector neglects or refuses to be sworn or properly perform the duties of his office, and in such case shall appoint another inspector to serve for the balance of his term. Every inspector of provisions and animals appointed by said board shall be sworn faithfully to discharge the duties of his office and shall receive such compensation, not exceeding the sum of five hundred dollars a year each, as said board shall determine. Such compensation shall be paid by the city or town for which he or they have been appointed.

SECT. 3. Every inspector appointed under the provisions of this act shall carry out and enforce all regulations and orders to him directed by the board of health under the provisions of this act, or by the board of cattle commissioners or any of its members, in the discharge of his or their duties.

SECT. 4. Said inspectors shall make regular and thorough inspections of all neat cattle found within the limits of their several cities and towns. Such inspections shall be made at such times and in such manner as the board of cattle commissioners shall from time to time determine and direct. They shall also make, from time to time, inspections of all other domestic animals within the limits of their several cities and towns, whenever they have knowledge or reason to suspect that such animals are affected with or have been exposed to any contagious disease, and they shall immediately inspect any and all domestic animals whenever directed so to do by the board of cattle commissioners or any of its members.

SECT. 5. Every inspector shall keep a record of all inspections made by him and his doings thereon, and shall make regular returns of all such inspections to the board of cattle commissioners. Such records and returns shall be made in such form and at such times as the board of cattle commissioners shall determine and direct, and said board and the board of health of the city or town for which said inspector is appointed shall have at all times the right to inspect said records and make copies thereof.

SECT. 6. Whenever an inspector is satisfied, upon an examination of any neat cattle, that such cattle are free from contagious disease, he shall deliver to the owner or to the person in charge thereof, a written certificate of their wholesome condition, signed

by him, which certificate shall be in such form as the board of cattle commissioners shall prescribe, and shall cause a copy of said certificate to be entered upon his records.

SECT. 7. When any inspector, upon an examination of any domestic animal, suspects or has reason to believe that such animal is affected with a contagious disease, and whenever any inspector is directed so to do by the board of cattle commissioners or any of its members, or by the board of health of the city or town for which he has been appointed, he shall immediately cause said animal to be quarantined or isolated upon the premises of the owner or of the person in whose charge it is found, or in such other place or enclosure as may be designated by either of such boards or any such commissioner, and shall take such other sanitary measures to prevent the spread of such disease as may be necessary or as shall be prescribed in such order or by any order or regulation issued by the board of cattle commissioners. Such inspector shall also deliver to the owner or person in charge of such animal, or to any person having an interest therein, a written notice or order of quarantine signed by him, which notice or order shall be in such form as the board of cattle commissioners shall prescribe, and he shall cause a copy of said notice to be entered upon his records.

SECT. 8. Such notice or order may be served by an officer authorized to serve civil process, or the same may be delivered by the inspector to the owner or person having such interest therein, or to the person in charge of such animal, or may be left at the last and usual place of abode of such owner or person, or may be posted upon the premises where said animal is quarantined or isolated, and a copy of said notice or order of quarantine, with the return of said officer or inspector thereon that such service has been made, shall be competent evidence in any court that such quarantine has been imposed. Whenever any animal has been quarantined by an inspector under the provisions of this act such animal shall remain in quarantine until the further order of the board of health of the city or town wherein said animal is confined, or of the board of cattle commissioners or any of its members.

SECT. 9. Whenever any inspector has caused any domestic animal to be quarantined, as provided in section eight, he shall immediately give a written notice thereof to the board of health of the city or town where said animal is quarantined, and shall also

immediately send a written notice, together with a copy of the order of quarantine, to the board of cattle commissioners, and shall give such information to no other person.

SECT. 10. Said inspectors may inspect the carcass of all slaughtered animals, and all méats, fish, vegetables, produce, fruits or provisions of all kinds found in said cities or towns, and shall make such inspections thereof as may be ordered by the board of health for the city or town for which they have been appointed. Whenever the carcass of any such animal is, in the opinion of such inspector, diseased or unfit for food, or when such meat, fish, vegetables, produce, fruit or provisions are found, on such inspection, to be tainted, diseased, corrupted, decayed or unwholesome, from any cause, such inspector shall seize the same and cause it or them to be destroyed forthwith, or disposed of otherwise than for food; but if at the time of such seizure the owner of the property so seized notifies in writing the inspector seizing the same that he desires to appeal to the board of health of such city or town, such inspector shall retain the possession of such carcass, meat, fish, vegetables, produce, fruit or provisions so seized, and shall immediately notify such board of health of such appeal, and it shall thereupon be the duty of such board of health or a committee thereof, consisting of not less than two members, to hear the parties or inspect such seized carcass, meat, fish, vegetables, produce, fruit or provisions, and if, in the opinion of said board or said committee, the same is tainted, diseased, corrupted, decayed or unwholesome, they shall order the same to be destroyed forthwith, or to be disposed of otherwise than for food. If said board or committee do not so find they shall order said carcass, meat, fish, vegetables, produce, fruit or provisions to be forthwith returned to the owner thereof. All moneys received by said inspectors or board of health for property disposed of as aforesaid shall, after deducting all expenses incurred by reason of said seizure, be paid to the owner of such property.

SECT. 11. Whenever such inspector seizes or condemns any such carcass or meat by reason of the presence of, or of its being affected with, any contagious disease, he shall immediately notify the board of cattle commissioners, giving the name of the owner or person in whose possession the said meat or carcass was found, the nature of the disease and the disposition made of said meat or carcass.

SECT. 12. Said inspectors may inspect all veal found in said city or town or offered or exposed for sale or kept with the intent to sell therein, and shall make such inspection whenever ordered so to do by the board of health of such city or town, and if said veal is, in the opinion of said inspector, that of a calf killed under four weeks old, he shall seize the same and cause it to be destroyed or disposed of as provided in the preceding section, subject however to the provisions therein contained concerning appeal and the disposal of moneys.

SECT. 13. For the purpose of inspecting or examining any animal, carcass, meat, fish, vegetables, produce, fruit or provisions of any kind under the provisions of this act, any inspector, duly qualified, may enter into any building or buildings, or any part thereof, enclosure or enclosures, or other place where any such animal, carcass, meat, fish, vegetables, produce, fruit or provisions of any kind are stored or kept, or exposed for slaughter or sale, and may examine or inspect the same. Any person who prevents, obstructs or interferes with any such inspector or other person having the power and authority conferred upon inspectors under this section, in the performance of any of his duties as provided herein, or who shall hinder, obstruct or interfere with his making any such inspection or examination, or who shall secrete or remove any animal, carcass, meat, fish, vegetables, fruit or provisions of any kind, for the purpose of preventing the same from being inspected or examined under the provisions of this act, shall be subject to a fine not exceeding one hundred dollars, or to imprisonment in jail not more than sixty days, or by both such fine and imprisonment.

SECT. 14. When complaint is made on oath to any police, district or municipal court, or any magistrate authorized to issue warrants in criminal cases, that the complainant believes that any diseased animal or carcass, or any tainted, diseased, corrupted, decayed or unwholesome meat, fish, vegetables, produce, fruit or provisions of any kind, or any veal of a calf killed under four weeks old, are kept or concealed in a particular building or place with the intent to kill, sell or offer for sale for food, the same or any product thereof, the court or magistrate, if satisfied there is reasonable cause for such belief, shall issue a warrant to search for such animals or articles, and all such warrants shall be directed and executed as provided in section three of chapter two hundred

and twelve of the Public Statutes. If, upon hearing, said court or magistrate determines that any such diseased animal or carcass, or any such tainted, diseased, corrupted, decayed or unwholesome article, or any of them, were kept or concealed for any of the purposes aforesaid, the same shall be destroyed or disposed of by an inspector appointed hereunder, or by any officer designated by the court or magistrate, and such disposal shall be in accordance with the provisions of section ten of this act. If the court or magistrate does not so determine, said animals or articles shall be returned to the owner.

SECT. 15. Whoever knowingly sells or offers or exposes for sale, or has in his possession with the intent to sell, for food, any diseased animal, or any product thereof, or any tainted, diseased, corrupted, decayed or unwholesome carcass, meat, fish, vegetables, produce, fruit or provisions of any kind, or the veal of a calf killed under four weeks old, shall be punished by imprisonment in jail not exceeding sixty days, or by a fine of not exceeding one hundred dollars, or by both such fine and imprisonment.

SECT. 16. The board of health for the city or town where any animal or property has been condemned under the provisions of sections ten and twelve of this act, may cause to be published in two newspapers published in the county in which said property was found, a description of the place where such condemned property was found, and the name of every person in whose possession the same was found, and may also cause to be published the name of every person convicted of an offence under section fifteen of this act.

SECT. 17. The proprietor or proprietors of every slaughter house, canning, salting, smoking or rendering establishment, and of every establishment used for the manufacture of sausages or chopped meat of any kind, engaged in the slaughter of cattle, the carcass or any of the meat or product of which is to be sold or used for food, shall within thirty days after the passage of this act, and thereafter annually in the month of April make application to the mayor and aldermen of the city or the selectmen of the town where such slaughter house or establishment is located, for a license to carry on such business. Such application shall be in writing, signed by one or more of the owners thereof, or by one or more of the persons carrying on such business; if such owner or the person

carrying on such business be a corporation, then by some officer thereof thereto duly authorized. Such application shall give the name in full and address of all the owners or persons carrying on said business, the location of the slaughter house or establishment where said business is to be conducted, shall state the estimated number of cattle to be slaughtered per week, the day or days of the week upon which it is intended to slaughter the same, and the nature of the product or products thereof to be sold or used for food. Every such application shall be sworn to before a justice of the peace.

SECT. 18. The mayor and aldermen of cities and the selectmen of towns, or such other board of officers as they shall designate, may annually issue to persons applying therefor licenses to carry on the business of slaughtering cattle, and there shall be paid to such city or town for every such license, by the person or persons obtaining the same, a fee of one dollar. Every such license shall name the person or persons licensed to conduct such business, the building or establishment where the same is to be carried on, and such license shall continue until the first day of May of the year next ensuing, or until sooner forfeited or rendered void. The board or officer of every city or town authorized to issue licenses hereby, shall keep a record of all applications for licenses under section seventeen, and shall record therein every license issued by him or them, and such records shall be competent evidence in any court of the issue of any such license.

SECT. 19. No person or persons licensed under the preceding section shall slaughter or cause or authorize to be slaughtered at such slaughter house or establishment, except in the presence of an inspector, any cattle on any day or days other than those specified in the application for such license, except that such licensee may at any time change the day or days for slaughtering such cattle, by giving at least seven days' written notice of such change to the board or person authorized to issue licenses under the provisions of section eighteen; and such board or person shall immediately give written notice of such change to all inspectors appointed by such city or town.

SECT. 20. It shall be the duty of the inspectors of animals and provisions of the several cities and towns, or when there is more than one inspector appointed for any such city or town, and any one of them has been duly selected and ordered so to do by the

board of health of such city or town, then of such inspector so selected and ordered, to be present at all licensed slaughter houses or establishments upon the day or days designated for slaughter in the application for such license, or at such other day or days as may be designated, under the provisions of section nineteen, and there carefully examine at the time of slaughter the carcasses of all cattle slaughtered thereat. And it shall be the duty of such inspectors also to examine at the time of slaughter any and all cattle slaughtered as provided in section twenty-one of this act, whenever notified so to do by the person slaughtering the same. Such inspection shall be made in such manner and under such rules and regulations as the board of cattle commissioners may from time to time determine and direct. Whenever, in the opinion of any inspector, any of said carcasses are diseased or any meat or product thereof is diseased, corrupted, unwholesome or unfit for food, he shall seize the same and cause it to be destroyed, as provided in section ten of this act, subject however to the provisions therein contained concerning appeal and the disposal of money.

SECT. 21. None of the provisions of sections seventeen, eighteen, nineteen and twenty of this act shall apply to the slaughter from time to time by any person not engaged in such business, as provided in section seventeen, of one or more of his own cattle, when the same are slaughtered upon his own premises other than a slaughter house or establishment mentioned in section seventeen, but such persons shall cause such carcass to be inspected at the time of slaughter, by an inspector of animals and provisions appointed under the provisions of this act, unless said animal has been duly inspected under the provisions of this act, within six months prior to such slaughter and a certificate of health has been delivered to the owner or person in charge thereof, as provided in section six.

SECT. 22. Any person violating any of the provisions of sections eighteen, nineteen, twenty and twenty-one, or who, being engaged in the business of slaughtering cattle, shall slaughter any cattle or shall knowingly authorize or cause the same to be slaughtered with the intent of selling the carcass or any of the meat or product thereof for food, without first having applied for and obtained a license, as provided in sections seventeen and eighteen, or who, having obtained such license, slaughters or knowingly

authorizes or causes to be slaughtered any cattle without causing the carcass thereof to be inspected as provided in section twenty, or who sells or authorizes or causes to be sold any carcass, meat or product of any cattle, knowing that such carcass or the carcass from which such meat or product was obtained had not been inspected according to the provisions of sections twenty or twenty-one of this act, or who slaughters or knowingly authorizes or causes to be slaughtered any cattle upon his own premises other than a slaughter house or establishment mentioned in section seventeen, without causing the carcass of such animal to be inspected except as provided in section twenty-one, or who sells, or authorizes or causes to be sold, the carcass or any meat or product thereof, of any such animal slaughtered upon his own premises, knowing that the same has not been inspected as provided in section twenty-one, shall be punished by a fine not exceeding five hundred dollars or by imprisonment in jail for not exceeding sixty days or by both such fine and imprisonment.

SECT. 23. The conviction under section twenty-two of this act of any person licensed under the provisions of section eighteen shall itself render void the license to such person which is in force at the time of such conviction, and no new license shall be granted to such person for the balance of such term.

SECT. 24. The boards of health of cities and towns may take all measures necessary or expedient to suppress or prevent the spread or introduction of any contagious disease among the animals of their respective cities and towns, and the immediate vicinity thereof, and for that purpose they may regulate or prohibit the passage from, to or through their respective cities and towns, or from place to place within the same, of any animal or animals, and may prohibit their departure from any building or enclosure, or exclude any such therefrom, and they may arrest or detain, at the cost of the owner or owners, any animal or animals found passing, contrary to such regulation or prohibition, or found to be within such prohibited enclosure, and may take all other necessary measures to enforce such regulations or prohibitions.

SECT. 25. Such boards may from time to time make regulations in writing for their respective cities and towns for any of the purposes named in the preceding section. Such regulations may be general or may be restricted to particular animals, places, districts, persons or class of persons. Such regulations shall be spread upon

the records of their respective cities and towns and shall be published therein in such manner as may be provided in such regulations. A certified copy of all such regulations shall be immediately sent to the board of cattle commissioners.

SECT. 26. Said boards, in case of the existence of any contagious disease among domestic animals within the limits of their several cities and towns, and whenever directed so to do by the board of cattle commissioners or any of its members, shall cause the animals which are, or which they have good reason to believe are, infected with any contagious disease, or which are designated in such order, to be quarantined, secured, collected or isolated in some suitable place or places within the limits of such city or town, and shall immediately give written notice thereof to the board of cattle commissioners. When any such animal or animals are quarantined, collected or isolated upon the premises of the owner or person found in the possession thereof, written notice of such quarantine or isolation shall be given to such owner or person and be served, returned and recorded in the same manner and with the same force and effect as is provided in sections seven and eight of this act.

SECT. 27. When any animals are quarantined, collected or isolated under the provisions of this act, upon the premises of the owner or of the person in possession thereof at the time such quarantine is imposed, the expense thereof shall be paid by such owner or person in possession, and when taken from such premises such expense shall be paid by the city or town wherein the animal is kept and four-fifths of such payment, when certified by the treasurer of the city or town and approved by the board of cattle commissioners, shall be refunded by the commonwealth.

SECT. 28. For all purposes named in this act the boards of health of the several cities and towns shall have the same power and authority to appoint officers, agents and assistants as are provided in sections ten and sixteen of chapter eighty of the Public Statutes; and when so appointed such officers, agents and assistants shall be subject to all the provisions of law applicable to those appointed under the provisions of said sections. In the absence of any such appointment the inspectors appointed under sections one and two of this act shall be the agents of such boards for all purposes designated in this act.

SECT. 29. Every person, except the members of the board of cattle commissioners, who has knowledge of or has good reason to suspect the existence of any contagious disease among any species of domestic animals within the limits of this Commonwealth, or that any domestic animal is affected with any such contagious disease, whether such knowledge is obtained by personal examination or otherwise, shall immediately give written notice thereof to the board of health of the city or town where such diseased animal or animals are kept, and for failure so to do shall be punished by a fine not exceeding five hundred dollars, or by imprisonment in jail not exceeding one year.

SECT. 30. Upon the receipt of such notice from any person other than a duly appointed inspector of animals and provisions for such city or town, such board of health shall forthwith cause such animal to be inspected by an inspector, or by a competent veterinarian appointed by them for that purpose, and if upon such inspection such board or such inspector suspects or has reason to believe that contagion exists he or they shall proceed according to the provisions of sections seven, eight, nine and twenty-six of this act.

SECT. 31. A city or town whose officers refuse or neglect to carry into effect the provisions of sections twenty-four, twenty-five, twenty-six and thirty of this act shall forfeit a sum not exceeding five hundred dollars for each day's neglect.

SECT. 32. All fines and forfeitures imposed upon cities or towns under sections two and thirty-one may be recovered by complaint or indictment to the use of the Commonwealth, or the same may be recovered in an action of tort, in the name of the board of cattle commissioners, to the use of the Commonwealth, and such complaint, indictment or action may be maintained in any county.

SECT. 33. The boards of health of cities and towns, when in their judgment it is necessary to carry into effect the provisions of this act may, within the limits of their respective cities and towns, take and hold for a term not exceeding one year, any land without buildings, other than barns or stables, thereon, upon which to enclose, quarantine and isolate any animals. They shall cause the damage sustained by any person in consequence of such taking and holding, to be appraised by the assessors of the city or town wherein the land so taken is situated, and shall further, within thirty days after any such taking, cause to be entered upon the

records of such city or town a description of such land sufficiently accurate for identification, together with the amount of the damages so appraised. The amount of said appraisement shall be paid by such city or town, in such sums and at such times as the board of health may order. Any person aggrieved by such appraisement or order may, by an action of contract commenced at any time within three months after such taking, recover of the city or town wherein the land lies, reasonable compensation for the damages so sustained by him. If upon trial, the damages are increased beyond such appraisement, exclusive of interest, he shall recover his costs; otherwise, he shall pay costs. The Commonwealth shall reimburse to such city or town four-fifths of the amount of such appraisal or judgment paid by such city or town when certified by the treasurer of the city or town paying the same.

SECT. 34. Every animal quarantined or isolated by order of the board of cattle commissioners or any of its members, or by any board of health or inspector, in accordance with the provisions of this act, shall, during the continuance of such quarantine or isolation, be deemed to be affected with a contagious disease. Any person who shall knowingly break or authorize or cause to be broken any quarantine imposed under the provisions of this act, or who shall knowingly remove, authorize or cause to be removed from any building, place or enclosure where the same is quarantined or isolated, any animal contrary to such order of quarantine or isolation, or who shall knowingly place or cause or authorize to be placed any other animal or animals within a building, place or enclosure where any animal or animals are quarantined, or in contact therewith, contrary to any order or notice of quarantine, or who shall knowingly conceal, sell, remove or transport, or knowingly cause or authorize to be concealed, sold, removed or transported, any animal, knowing or having reasonable cause to believe that such animal is affected with a contagious disease, or who shall knowingly authorize or permit any such animal to go at large upon any way, street or highway within the limits of this Commonwealth, or who shall knowingly bring or authorize or permit to be brought from any other country, state, district or territory into this Commonwealth, any animal that is affected with or has been exposed to any contagious disease, or who shall disobey any lawful order or regulation of any board of health or of any inspector in the discharge of his or their duty under the provisions of this act, shall be

punished by a fine not exceeding five hundred dollars or by imprisonment not exceeding one year, or by both such fine and imprisonment.

SECT. 35. Every person who kills or causes to be killed, with the consent of the owner or person in possession thereof, any animal under suspicion that the same is affected with or has been exposed to a contagious disease, and who, upon the inspection of the carcass thereof, finds or is of the opinion that the same is affected with a contagious disease, shall notify such owner or person in possession thereof of the existence of such disease, and shall also immediately notify the board of cattle commissioners of the same and of the place where the animal was found, the name of the owner or owners, or person or persons in possession thereof, and of the disposal made of such carcass. Any person violating the provisions of this section shall be subject to the same penalties as are provided in section fifteen of this act.

SECT. 36. The board of cattle commissioners created by chapter three hundred and seventy-eight of the acts of the year eighteen hundred and eighty-five shall hereafter consist of not more than five members, and the governor, with the advice and consent of the council, shall appoint two additional commissioners, one for the term of two years and one for the term of three years, and upon the expiration of the term of office of any of said commissioners shall hereafter appoint a successor or successors for the term of three years. Said additional commissioners shall be subject to the provisions of said chapter three hundred and seventy-eight, so far as the same are applicable.

SECT. 37. Contagious diseases under the provisions of this act shall include glanders, farcy, contagious pleuro-pneumonia, tuberculosis, Texas fever, foot-and-mouth disease, rinderpest, hog cholera and rabies.

SECT. 38. The board of cattle commissioners shall have power to make from time to time orders and regulations concerning the extirpation, prevention and suppression of contagious diseases among domestic animals, or concerning the destruction, care and treatment of animals affected with, or which have been exposed to, any contagious disease. They shall further have, throughout the Commonwealth all the power and authority herein conferred upon boards of health by sections twenty-four, twenty-five, twenty-six and thirty-three of this act.

SECT. 39. The board of cattle commissioners shall from time to time make orders and regulations concerning the inspection and examination of animals, and the carcasses, meat and product thereof, concerning the quarantine, killing, burial and disposal of animals or carcasses affected with or which have been exposed to contagious disease, and concerning the cleansing and disinfecting of districts, buildings or places where such contagion exists or has existed. Such board shall further from time to time make and prescribe forms of records of inspectors, certificates of examinations, notices and orders of quarantine, orders for killing and burial, and all returns to be made by inspectors and boards of health which are required or provided for under the provisions of this act.

SECT. 40. All orders and regulations made by the board of cattle commissioners under the provisions of this act shall be spread upon the records of such board, and a copy thereof shall be sent to each city or town to which the regulation or order applies, and shall be published by such board, or by the city or town to which they are directed, in such manner as such orders and regulations shall prescribe, or such orders or regulations may be directed to boards of health or inspectors; and in such case a copy of the same shall be mailed to the board of health of every city or town included in such order, or to every known inspector appointed for the same. All orders and regulations made by the board of cattle commissioners under the provisions of this act shall supersede those made by the boards of health under sections twenty-four, twenty-five and twenty-six hereof.

SECT. 41. The board of cattle commissioners may establish hospitals or quarantines, with proper accommodations, wherein, under prescribed regulations, animals by such commissioners selected may be confined and treated, for the purpose of determining the varying characteristics of and the methods by which a specific contagion may be disseminated or destroyed, and they may direct boards of health and inspectors to enforce and carry into effect all such regulations as may from time to time be made for that end.

SECT. 42. The boards of health for the several cities and towns, and every inspector of animals and provisions appointed under the provisions of this act, shall carry out and enforce all lawful regulations, orders and directions of the board of cattle commissioners or any of its members, to them or him directed, and any such

officer or inspector who refuses or neglects to carry out the same shall be punished by a fine not exceeding five hundred dollars for every such offence.

SECT. 43. The board of cattle commissioners shall have the power and authority to appoint from time to time such officers, agents and assistants as are necessary or expedient to carry out the purposes of this act and to remove any and all of the same. All such officers, agents and assistants shall have the power and authority conferred upon inspectors under the provisions of sections thirteen and fifty-seven hereof, and shall receive such compensation as such board shall determine.

SECT. 44. Each member of the board of cattle commissioners shall have throughout the Commonwealth all the power and authority conferred upon boards of health under section twenty-six of this act, and all the power and authority conferred upon inspectors of animals and provisions under sections four, six, seven, eight, ten, twelve, thirteen and twenty of this act: *provided, however*, that no appeal from any act done by any of said commissioners shall lie to the board of health, as provided in said sections ten, twelve and twenty. Each such commissioner shall have the same power and authority to quarantine or isolate animals which have been exposed to a contagious disease, when in his judgment it is necessary or expedient so to do. Whenever any animal is quarantined or isolated by order of any of said commissioners such quarantine or isolation shall continue until the further order of such commissioner of the board of cattle commissioners.

SECT. 45. When the board of cattle commissioners or any of its members, by an examination of a case of contagious disease among domestic animals, becomes satisfied that the public good requires it, such board or commissioner shall cause such animal or animals affected therewith to be securely isolated at the expense of the owner, or shall cause it or them to be killed without appraisal or payment. Such order of killing shall be in writing and may be directed to the board of health, inspector or other person, and shall contain such direction as to the examination and disposal of the carcass, and the cleansing and disinfecting of the premises where such animal was condemned, as such board or commission shall deem expedient. A reasonable sum may be paid out of the treasury of the Commonwealth for the expense of such killing and burial.

If it shall subsequently appear, upon post mortem examination or otherwise, that such animal was free from the disease for which it was condemned, a reasonable sum therefor shall be paid to the owner thereof by the Commonwealth: *provided, however*, that whenever any cattle afflicted with the disease of tuberculosis are killed under the provisions of this section, one-half of the value thereof at the time of slaughter for food or milk purposes and without taking into consideration the existence of such disease, shall be paid to the owner thereof out of the treasury of the Commonwealth if such animal has been within the state six months continuously prior to its being killed, provided such person shall not have, prior thereto, wilfully concealed the existence of tuberculosis or by act or wilful neglect contributed to the spread of such disease.

SECT. 46. If the owner and the commissioner condemning the animal as affected with tuberculosis, under the provisions of section forty-five, cannot agree as to the value of the animal so condemned, the question of such value shall be determined by three arbitrators, one to be selected by such commissioner, one to be selected by the owner and the third to be selected by the two arbitrators first selected. Such board shall be sworn faithfully to discharge the duties of their office and shall determine the value of such animal according to the provisions of section forty-five, and one-half of the value so determined shall be paid to the owner, as provided in said section. Any person aggrieved by the doings under the provisions of section forty-five or by the award of such arbitrators may petition the Superior Court for the county where such animal was killed, or for the county of Suffolk, to have his damage assessed and paid. Such petition shall be against the board of cattle commissioners and a copy thereof shall be served upon one of the commissioners, in the same manner as is provided for the service of other civil process. Such petition shall be filed in the clerk's office of the superior court for such county within thirty days after the killing of such animal or animals. Such petition shall be subject to the provisions of section sixty-nine of chapter one hundred and sixty-seven of the Public Statutes, and a trial may be had thereon at the bar of the court, in the same manner as other civil cases are tried. If upon such trial it shall be determined that such animal was not affected with the disease for which it was condemned, reasonable compensation may be recovered therefor, and if the petitioner recover damages in excess of the amount previously

awarded him by the arbitrators or allowed him by the commissioner he shall recover his costs; otherwise, he shall pay costs. The damages, costs and expenses incurred by the commissioners in defending any such action shall be paid by the Commonwealth, out of the fund appropriated for the cattle commissioners.

SECT. 47. Any person who fails to comply with a regulation made or an order given by the board of cattle commissioners or any of its members, in the discharge of his or their duty, shall be punished by a fine not exceeding five hundred dollars, or by imprisonment not exceeding one year.

SECT. 48. Prosecutions under sections thirteen, twenty-nine, thirty-four, thirty-five, forty-two and forty-seven of this act shall be instituted and maintained in the county where the offence was committed.

SECT. 49. The commissioners may examine under oath all persons believed to possess knowledge of material facts concerning the existence or dissemination or danger of dissemination of contagious disease among domestic animals; and for this purpose shall have all the powers vested in justices of the peace to take depositions and to compel witnesses to attend and testify by chapter one hundred and sixty-nine of the Public Statutes. All costs and expenses incurred in procuring the attendance of such witnesses shall be allowed and paid to the commissioners from the treasury of the Commonwealth, upon being certified to and approved by the state auditor.

SECT. 50. When any animal or animals are killed by order of the board of cattle commissioners or any of its members, the carcass or carcasses thereof may be inspected by such board or commissioner, or by a competent person by them or him appointed, and if found entirely free from disease and in a wholesome condition for food, the same may be sold by them or him or by their or his order, and the proceeds of such sale shall be applied in payment of the value of said animal or animals.

SECT. 51. The board of cattle commissioners shall keep a full record of their doings and report the same to the legislature on or before the tenth day of January in each year, unless sooner required by the governor; and an abstract of the same shall be printed in the annual report of the state board of agriculture.

SECT. 52. The board of cattle commissioners may appoint a clerk to keep the record of their doings, who shall receive such

compensation, not exceeding the sum of five hundred dollars a year, as they shall determine.

SECT. 53. When animals are transported within this state from localities beyond its boundary lines, which localities the board of cattle commissioners deem to be infected, such animals may be seized and quarantined by the commissioners at the expense of the owners or consignees thereof, so long as the public safety may require; and if, in their judgment, it is necessary to secure that safety, they may cause such animals to be killed without appraisal or payment for the same.

SECT. 54. No Texan, Mexican, Cherokee, Indian or other cattle, which the cattle commissioners decide may spread contagious disease, shall be driven on the streets of any city, town or village, or on any road in this Commonwealth, nor shall they be driven outside the stock yards connected with any railway in this Commonwealth contrary to any order of the board of cattle commissioners.

SECT. 55. In all stock yards within this Commonwealth said Texan, Mexican, Cherokee, Indian or other cattle, which the cattle commissioners decide may spread contagious disease, shall be kept in different pens from those in which other cattle are kept.

SECT. 56. Any person or persons violating any of the provisions of the two preceding sections shall be punished by a fine of not less than twenty nor more than one hundred dollars.

SECT. 57. Every cattle commissioner, member of a board of health, or inspector, shall have power to call on sheriffs, constables and police officers to assist him or them in the discharge of the duties provided for in this act, and it is hereby made the duty of sheriffs, constables and police officers to assist such commissioner, member or inspector, when requested so to do, and he or they shall have the same powers and protection as peace officers while engaged in the discharge of his or their duties.

SECT. 58. Courts of equity in term time or vacation may, by injunction or other proper order, upon application of the board of cattle commissioners, enforce or restrain violations of the provisions of this act.

SECT. 59. Chapter fifty-eight of the Public Statutes, chapter two hundred and fifty-two of the acts of the year eighteen hundred and eighty-seven, chapters one hundred and ninety-five and four hundred

and thirty-two of the acts of the year eighteen hundred and ninety-two, chapter three hundred and six of the acts of the year eighteen hundred and ninety-three, and all other acts or parts of acts inconsistent herewith, are hereby repealed; *provided, however*, that nothing herein contained shall affect any prosecution, action or proceeding begun or pending, any penalty incurred, or any order or regulation issued, under any of said acts before this act takes effect; and *provided, further*, that all inspectors and agents appointed under any of such acts shall continue to hold office during the term for which they were appointed, unless sooner removed as provided by law, but they shall be subject to all the provisions of this act.

SECT. 60. The total expense incurred under the provisions of this act during the current year, including compensation for animals destroyed, shall not exceed fifty thousand dollars.

SECT. 61. This act shall take effect upon its passage.

Approved June 20, 1894.

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF CATTLE COMMISSIONERS,
52 Village Street, Boston, November 20, 1894.

To whom it may concern:

The development and spread of tuberculosis among animals have assumed such proportions and constitute so great a menace to the health of the community that the Board of Cattle Commissioners have determined to adopt a fixed policy for the eradication of the disease, in general terms as follows:—

1st. Quarantine regulations upon cattle entering from without the borders of the Commonwealth.

2d. Regulation of cattle traffic at Brighton, Watertown and Somerville, which shall include all animals from within and without the Commonwealth.

3d. Systematic inspection of all herds in the State, beginning at the Cape; followed by extermination of diseased animals, disinfection of contaminated premises, and fixed quarantine regulations.

Careful investigations conducted by the Board in the use of tuberculin enable them to conscientiously add their endorsement to that of all careful investigators who have experimented with it since its discovery in 1891, who agree—

1st. That tuberculin is a reliable agent for determining the presence of tuberculosis in cattle.

2d. That tuberculin properly prepared and carefully handled can have no injurious effect upon healthy animals.

3d. That it is the only known means whereby a positive diagnosis can be made in the early stages of the disease.

In consideration of the above stated facts all the herds in the State will be systematically examined and subjected to the tuberculin test; and for the efficient work of eradicating the disease it

is essential that every tuberculous animal in whatever stage shall be found and destroyed.

The extermination of the disease from a given herd must be followed by thorough disinfection of contaminated buildings and the careful exclusion of the herd from new sources of infection, each district to remain under quarantine regulations till the State is covered. Such regulations shall allow the entrance or exit of all animals which, after being tested, have been branded with the seal of the commission, or until otherwise ordered by the Board.

The cost to the State will be more than repaid in dollars and cents from the increased demand and value of the products derived from this source. Sanitarians, as well as all other intelligent people throughout the United States, look to Massachusetts as a State always at the front in all matters of public health and welfare.

The importance of the subject is abundantly demonstrated. The dairymen throughout our eastern States, experienced as all of them are with tuberculosis, are watching and waiting for a market where they can go and be assured of purchasing animals free from tuberculosis.

Every intelligent, thinking man in New England to-day is asking himself the question, "Where can I procure my milk, butter and cheese, with the absolute knowledge that I am not giving to my family the germs of consumption?"

The Commission believe it useless to kill animals found in the State affected with this disease, without so regulating the traffic as to prevent the entrance of diseased animals from without, and having knowledge of the fact that under existing conditions animals affected with the disease are being constantly brought into our State and sold to our farmers, butchers and dairymen, thereby disseminating the contagion. The Commission realizing at the same time the importance of the cattle industry in this Commonwealth, have been impelled to adopt the regulation described hereafter, believing that it will not unfavorably affect honest interstate traffic in cattle; that it will so materially increase the value of sound animals, which alone can be sold in Massachusetts, as to more than compensate owners for the loss sustained by seizure of those affected with tuberculosis.

The Commission having thus set forth the reason for their action, hope to enlist the cordial sympathy and co-operation of the com-

munity, whose vital interests are so much involved in the eradication of tuberculosis from our neat cattle.

During the past year, the Legislature of this Commonwealth passed an act codifying and extending the law in relation to contagious disease among domestic animals, being chapter 491 of the Acts of 1894, and the Commission desires to call especial attention in this connection to sections 37, 38, 39, 40, 45, 53, 34 and 47.

Now, therefore, the Board of Cattle Commissioners by virtue of the power and authority conferred upon them by law, and especially by the sections above mentioned, and for the purpose of accomplishing the objects herein stated, have adopted the following order for the purpose of regulating the importation of cattle within this state and the quarantine and examination thereof.

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF CATTLE COMMISSIONERS,
52 Village St., Boston, Nov. 20, 1894.

GENERAL ORDER NO. 3.

First. All the states and territories of the United States, the District of Columbia, Canada, Great Britain, and all other localities without the limits of this Commonwealth, are hereby declared infected districts.

Second. It is hereby ordered that all neat cattle brought within the limits of this Commonwealth from any of said localities on or after November 26, 1894, are hereby made subject to quarantine until they have been inspected and released by this Board or one of its members thereto duly authorized.

Third. Except as hereinafter provided no such neat cattle shall be unloaded, except in case of accident, for any purpose whatsoever within this Commonwealth, at any place or places other than at such quarantine stations as are herein designated, or which may hereafter from time to time be designated by this Board, unless upon written permit signed by the Board of Cattle Commissioners or one of its members.

Fourth. The Union stock yards at Watertown; the Boston & Albany stock yards at Brighton and the premises of the New Eng-

land Dressed Beef and Wool Company in Somerville, are hereby designated as quarantine stations.

Fifth. All neat cattle entered at any quarantine station, except as hereinafter provided, are hereby declared quarantined, and shall so remain, at the expense of the owner or consignee, for a period of not less than twenty-four hours, or until they are released by the Board of Cattle Commissioners, or one of its members, during which time they shall be subjected to the tuberculin test. This test shall be made only by the Board of Cattle Commissioners or one of its members, or a duly authorized agent thereof, and without expense to the owner.

Sixth. Every such animal which, in the opinion of this Board or any of its members, is affected with tuberculosis, will be condemned and slaughtered as provided in Sections 45 and 53 of said Chapter 491 of the Acts of 1894.

Seventh. All animals which upon such inspection shall be adjudged free from tuberculosis and other contagious disease shall be branded with the seal of the commission. This brand will be placed upon the right hip; and all neat cattle so branded shall be free to all markets in this Commonwealth.

Eighth. All neat cattle passing through this Commonwealth, consigned from points without its limits, for exportation from this State will not be examined as herein provided, but such animals shall remain in quarantine until transported without the limits of the Commonwealth.

Ninth. All neat cattle brought within this Commonwealth consigned directly to the Brighton Abattoir for slaughter shall be confined by themselves for identification, and shall not be released except after an examination as above provided, or for immediate slaughter.

Tenth. It shall be the duty of every person or persons, corporation or corporations, desiring to drive or cause to be driven any neat cattle into this State from any point without its limits, to notify in writing the Board of Cattle Commissioners of his, their or its intention so to do, which notice shall state the town or city within this Commonwealth through which it is the intention to enter, and the time when the drove will arrive within such city or town. After crossing the border all such cattle are hereby declared quarantined upon premises which shall be defined

in the permit, within the limits of such city or town, at the expense of the owner or consignee, and shall there remain until they been examined; and released or condemned by this Board, or one of its members. No neat cattle shall be driven within this State from any point without its limits, except as herein provided.

Eleventh. No person shall sell or offer for sale, or have in his possession, except under quarantine, within the stock yards in Brighton, Watertown or Somerville, any neat cattle which are not branded as provided for in section 7, except as provided in sections 8 and 9 of this order.

Twelfth. It is further ordered that a copy of this order shall be sent to each city and town throughout the Commonwealth, and that every town shall cause a copy thereof to be posted in two or more conspicuous places within its limits, and shall cause a copy of the same to be published once a week for three successive weeks in a newspaper published therein, or if no newspaper be published within the limits of said town, then in a newspaper published within said county; and that each such city shall cause a copy of the same to be published twice a week for three successive weeks in a newspaper published within its limits.

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF CATTLE COMMISSIONERS,
52 Village Street, Boston, November 20, 1894.

To the Boards of Health and all Owners of Neat Cattle in the Counties of Nantucket, Dukes and Barnstable:

The development and spread of tuberculosis among animals have assumed such proportions and constitute so great a menace to the health of the community that the Board of Cattle Commissioners have determined to adopt a fixed policy for its eradication from our neat cattle; and your especial attention is hereby called to sections 37, 38, 24, 39, 40, 45, 46, 34 and 47 of Chapter 491 of the Acts of 1894.

Under the provisions of this act, and as a part of a general plan for exterminating the disease in the State, the Board proposes to undertake a systematic inspection of all herds in the State, by districts hereafter to be designated, beginning at Cape Cod, with a district comprising the counties of Nantucket, Dukes and Barnstable.

The plan of operation will be the examination of all cattle in the district by the tuberculin test, followed by the termination of all diseased animals, disinfection of contaminated premises, and fixed quarantine regulations.

The extermination of the disease from a given herd must be followed by thorough disinfection of contaminated buildings and the careful exclusion of the herd from new sources of infection. Each district is to remain under quarantine regulations until the whole State is covered. Regulations will be made to allow the entrance or exit of all animals which after being tested, have been branded with the seal of the Commission.

It is believed that the cost to the individual of carrying out the regulations hereinafter set forth, will be more than repaid by the

security afforded him in purchasing cattle, and by the increased demand for, and value of, the products derived therefrom, without considering the removal of this source of danger to the health of himself and family.

When the fact is taken into consideration that the average ratio of deaths from tuberculosis in the human family is fourteen per cent., or one death in eight of the total mortality, and that tuberculosis is a preventable disease, the importance of the subject will be fully appreciated.

Having thus briefly set forth some of the reasons for their action, and hoping to enlist the cordial sympathy and co-operation of the community whose vital interests are so much involved in the eradication of tuberculosis in our neat cattle, the Board of Cattle Commissioners hereby promulgate the following order:—

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF CATTLE COMMISSIONERS,
52 Village St., Boston, November 20, 1894.

GENERAL ORDER NO. 5.

Under and by virtue of authority in us vested by law, and especially under sections 24, 38 and 39 of chapter 491 of the Acts of the year 1894, you are hereby notified that in the opinion of this Board all neat cattle throughout said counties have been exposed to tuberculosis, a contagious disease under said Act and that in order to suppress and prevent the spread or further introduction of said disease, it is necessary that all such cattle should be quarantined and tested with tuberculin. Therefore the following regulations have been adopted:—

First. From November 25, 1894, until such time as they shall have been released by this Board or one of its members, all neat cattle in Nantucket County are hereby ordered quarantined upon the premises of their owners.

Second. After November 25, no neat cattle (including calves) will be allowed to enter said county unless such neat cattle have been branded with the seal of the Commission.

Third. All neat cattle within such limits will be subjected to the tuberculin test. This test shall be made only by the Board of

Cattle Commissioners or one of its members, or a duly authorized agent thereof.

Fourth. Every such animal, which in the opinion of this Board or any of its members, is affected with tuberculosis, will be condemned and killed, and such compensation will be paid therefor as is provided in section 45 of said chapter 491 of the Acts of 1894.

Fifth. All animals which shall be adjudged free from tuberculosis and other contagious diseases will be branded with said seal.

Sixth. All neat cattle branded as herein specified shall be free to all markets in this Commonwealth.

Seventh. All premises upon which tuberculous animals have been discovered shall be thoroughly disinfected as directed by this Board.

Eighth. It is further ordered that a copy of this order shall be sent to each town in the counties of Nantucket, Dukes and Barnstable, and shall be published, by each town therein, by causing a copy thereof to be posted in some conspicuous place within its limits, and by publishing a copy thereof once a week for three successive weeks in a newspaper published in said town, or if there is no such paper published therein, then in a newspaper published within the county within which said town is situated.

Ninth. Boards of health will see that all orders of this Board regarding the disinfection of premises are enforced within twenty-four hours after the receipt of the same.

This order shall take effect upon the twenty-fifth day of November, 1894.

FREDERICK H. OSGOOD, *Chairman,*
CHARLES P. LYMAN, *Secretary,*
MAURICE O'CONNELL,
LEANDER F. HERRICK,
CHARLES A. DENNEN,
Board of Cattle Commissioners.