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MEAT

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AMERICAN MEAT



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AMERICAN MEAT

AND ITS INFLUENCE UPON THE
PUBLIC HEALTH

BY

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PREFACE

THE pages which follow represent the results of a somewhat unusual inquiry. Up to a recent period, the writer regarded the products of American packing-houses with that implicit and unquestioning confidence which so generally prevails in America and England. There had been grave scandals and exposures; but these had ended in rectification of all abuses, and in permanent reforms. The inspection of meat—the oversight of its manufacture into various products—had been confided to a Department of the Federal Government, where it was supposed there could be no temptation to formulate rules that should be contrary to the public health. It was while passing through one of the great meat-producing establishments of Chicago, that the casual remark of an employee suggested further investigations, leading to a revelation of conditions hitherto

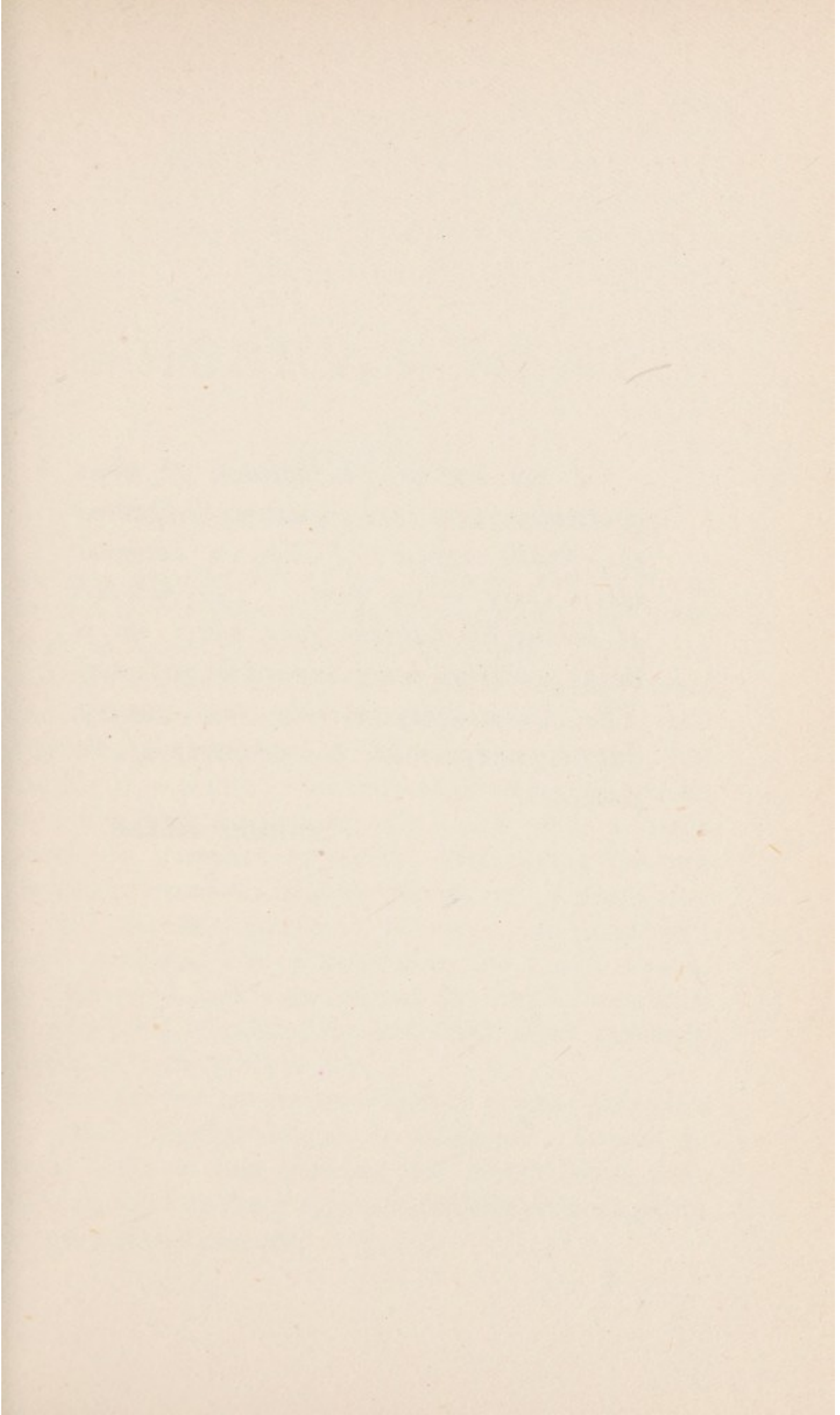
unsuspected, which it is the purpose of these pages to make known.

It will be noted that frequent references are made to the "Meat Trust." The term is here used, not to indicate a business entity of any kind, but simply an influence which proceeds from the financial interests involved. Fifty years ago, in America, men spoke of the "Slave power" as controlling the Government of the United States. In like manner, we refer to the Meat Trust. Of any such financial combination or organisation we have no evidence. But some power exists, capable of making its influence felt regarding everything that touches this trade in flesh. Some power has been able to prevent the total condemnation of diseased animals for food purposes. Some powerful influence induced Congress to place the cost of inspecting meat, not upon the producers, but upon the people of the United States. Some influence caused the regulations governing meat inspection to be always more favourable to sordid interests than to public welfare. This malign influence we designate the Meat Trust. The final analysis regarding its origin we leave to others.

It is certain that the conclusions brought forward in these chapters will be disputed by those whose financial interests are in any way concerned. Regret will be expressed because of the publicity given to methods of meat inspection which hitherto have eluded observation and criticism. Distinguished experts will be brought forward to assure us that in their judgment no danger to health is likely to result from the acts herein condemned. But one point is impregnable. In the face of evidence here produced, it is impossible to deny the practices which the Regulations of the United States Department of Agriculture explicitly sanction and permit. Are such permissions in perfect accord with public sentiment in England and America? That is the problem which we here put to the test.

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“I am not of the opinion of those gentlemen who are against disturbing the public repose; I like a clamour when there is an abuse. The fire-bell at midnight disturbs your sleep, but it keeps you from being burned in your bed. The hue-and-cry alarms the country, but it preserves all the property of the province.”

EDMUND BURKE.

AMERICAN MEAT

CHAPTER I

THE PACKING-HOUSE OF TO-DAY

DURING the early part of the year 1906, the world was startled by revolting disclosures concerning the stock-yards and great packing-houses of Chicago. By special investigators sent out by the President of the United States, it was shown that the methods of handling and preparing food-products were not only uncleanly, but dangerous to health; that some of these establishments were not kept even reasonably clean; that a traffic existed in questionable meats; that among the employees tuberculosis existed entirely out of proportion to their number, and that, in short, the conditions there prevalent were a menace to the public health. The financial losses occasioned by these revelations were beyond computation, and their effect probably continues to the present day.

What are the conditions which at present prevail in the great slaughter-houses of Chicago? It was to obtain light on this question that several visits were made to some of the largest establishments engaged in the preparation of meat.

In the first place, one is impressed by the courtesy with which the inquiring visitor is received. He will perhaps note a sensitiveness regarding the past criticism to which the meat-packers were subjected, and an evident desire to minimise the more revolting accusations. The fact that the great slaughtering establishments have been open to visitors for the past thirty years will be dwelt on, with insistent assertion, as proof that evils so terrible could not have existed, or they would not have escaped the public eye. Attention, perhaps, will be specially directed to the cleanliness now so generally observed in the preparation of animal food-products, and to the Government inspection of whatever is designed to enter our food-supply.

Inasmuch as former complaints were chiefly directed to the uncleanness of the packing establishments, one could hardly expect other than decidedly improved conditions at the present day. In this respect, there would seem to be little to criticise. Some of the wooden buildings have been far too long in use; but aside from this, money would seem to have been freely spent upon all practicable improvements tending to insure cleanliness in the handling of meat. In one large establishment the floors of rooms intended for the reception of beef recently dressed were of hard wood, highly polished, and lightly strewn with clean sawdust. Personal cleanliness on the part of the workers is required; printed signs on the walls in English, Polish, and other languages, inform workmen that the white outer garments which they are required to wear will be laundered daily, at the expense of the establishment, and must therefore be regularly changed.

Particular attention seems to be directed to the manufacture of sausage, an article chiefly composed of pork, and of which some millions of pounds are annually sent from Chicago to all parts of the world. In the various operations incident to the preparation of this article, there would seem to be little occasion for present criticism. The workers, mostly women and girls, were dressed in clean white gowns; the rooms were well lighted; the floors as clean as could be desired. So far as practicable, the operations incident to manufacture were performed by machinery; and in certain cases where much handling was necessary, it was done upon large tables of thick plate-glass, which could be readily cleaned at the close of the day's work. Taken all in all, it would seem that the principal meat-packing establishments of Chicago are now conducted with as strict attention to the demands of cleanliness as circumstances permit, or as the most fastidious critic could require. What the casual visitor may not remember is the fact that the real value of each and every food-product depends not merely upon the nicety with which the processes of manufacture are carried on, but, *above everything, upon the quality of the meat composing them.* It is probable that on this point the visitor will learn nothing from observation in the packing-house, no matter how frequent his visits, or how keen his sight.

One great evil of the former system, which in many respects does not appear to have been reformed to any notable degree, is the hideous cruelty to living animals, occasioned by the haste with which every operation pertaining to slaughter is carried on. The celerity with which living creatures may be turned into food-products

has long been a matter of subdued pride in slaughter-house society. And yet it would seem that when we had decided to sacrifice an animal in order to devour it, we might at least try to put it to death with the fewest pangs. It would hardly take a moment longer to deprive every animal of sensibility by a blow over the brain or by some similar procedure, as in the case of cattle; but only a small minority of the creatures slaughtered may experience so painless an exit from life. Sheep, led by a little goat into the slaughter-pen, are caught up by the hind-leg in bunches of three or four at a time, passed on to the butcher, who cuts the throat, and then to a long line of assistants, each of whom has one thing to do. It is evident that too little time is allowed for dying, and removal of the skin is almost certainly commenced before sensibility can have ceased. One sees the palpitating dying thing in the hands of someone, actively at work upon it, from the moment it leaves the butcher's hands.¹

The killing of cattle is more humanely performed. The animal is first stunned by a blow; it falls on its side, the throat is cut, and the processes of removing the skin and evisceration follow very soon. As a rule, care is taken to strike the animal immediately over the brain; but sometimes one moved its head at the critical moment, and there were scenes over which the memory does not care to linger. All this might be avoided, if the animals were slaughtered with the

¹ Since these observations were made, some of the packers have promised to repress the worst cruelties. As this result has been attained through persistent personal and private influence, we are precluded from giving particulars.

deliberation and humanity which obtains in some foreign lands.

Some of the worst abuses still prevail in the slaughter of swine. The obese animals, in a long procession, ascend an inclined passage-way which, beginning at the ground-level, ends on the upper floor of the packing-house, where the killing is done. A huge wooden wheel, some ten or fifteen feet in circumference, forms one side of a pen; stout iron chains, two or three feet in length, hang from its circumference at regular intervals. A man enters the pen, fastens a small chain to the leg of a pig, deftly links it to the chain on the slowly revolving wheel, and the animal, however large, despite all struggles, is slowly lifted into the air and delivered automatically on a tramway, whereon, head down, it comes before the executioner. It is but a thrust of a keen blade, and the casual visitor perhaps questions whether any method of killing could be more merciful.

But this constant thrusting and letting out of life, this swift evasion of struggling animals and jetting blood, this killing at the rate of one every five or six seconds, cannot but create a terrible sense of weariness. The struggling creatures come swiftly against the slaughterer, and yet upon his unceasing activity depends the work of hundreds of men. The animals are supposed to bleed to death; the carcasses are then plunged into a huge vat of boiling water. But sometimes not enough time is allowed for the creature to die; sometimes the knife misses the artery at which it was aimed; sometimes, even, the animal passes the butcher without being struck at all, and then

the terrible spectacle is seen of living creatures writhing in torment, and slowly boiled alive. The packing-house cannot dispute this occurrence; the workmen freely admit that it happens when the haste of butchery passes a certain point, and the writer has seen it more than once. The regulations issued by the Government admit the fact by ruling that "hogs which have been *allowed to pass into the scalding vat alive . . . shall be condemned.*"¹ Possibly this regulation is strictly carried out, but there are reasons for doubt.²

Personal observation of Government inspectors at their work left much to be desired. At a certain stage of their transformation into pork the carcasses of the slaughtered animals passed, head downward, on a tramway. One Government inspector, engaged in his duties, was seen in a chair, tipped back against a post, watching the monotonous procession of dead pigs go by him at the rate of six or seven a minute. It is perhaps permissible to question the value of any inspection thus perfunctorily performed. A special committee, reporting to the Secretary of Agriculture in 1906, declared that, owing to the system of slaughtering in vogue, and the inspector's adaptability to the work, "he is enabled to examine each carcass carefully, although a large number of carcasses pass before him in a day." Probably any grave departure from normal conditions, if sufficiently prominent, might be seen by the skilled

¹ See Appendix, Regulation 13, Section 29.

² The italics in this sentence, and in all the quotations which follow, are the writer's. They serve to indicate passages to which the especial attention of the reader should be given.

inspector. When we learn, however, that during the year ending June 30, 1907, of every thousand hogs which received post-mortem inspection, *less than four* were totally condemned for food, we may perhaps be pardoned if doubts arise. Upon the extent to which such doubts are justifiable the following pages may throw light. What the public needs to know is the extent to which meat derived from diseased animals is officially permitted to be sold as wholesome food. The charge has been made that abuses exist; the evidence, however, must be sought otherwise than by inspection of the packing-houses.

The laws which Congress enacted were by no means the measures desired by the advocates of reform. Clauses intended for the protection of the public were antagonised by powerful combinations of capital, and failed to become law. The inspection of animals before their slaughter for food was not made mandatory, but left to the discretion of the Secretary of Agriculture. That the laws meet the demands of medical science in all respects few will assert. At the same time, it is generally believed at the present time, both in this country and abroad, that the legislation of 1906 practically insures the quality of American meat. The laws were apparently as explicit as human ingenuity could devise. The meat-inspection law seemed to be clear enough. There was to be an ante-mortem examination, and another inspection of the carcasses of slaughtered animals. "All carcasses and parts thereof of animals found to be unsound, unhealthful, unwholesome, or otherwise unfit for human food . . . *shall be destroyed for food purposes.*" The solicitor of the Department of

Agriculture has declared in the most emphatic way possible that meat and meat-products bearing the Government stamp were from healthy animals. "I am authorised to say to you," he declared, "that this Administration has made, and will continue to make, the Federal stamp upon meats and meat-food products stand for something. When you see this stamp upon a product, *you may know that the meat is from healthy animals . . .* It is hoped . . . that all obnoxious restrictions may be removed, when the various foreign governments understand the Meat Inspection label to be—*what it really is—a guaranty by the United States, of the healthfulness, wholesomeness and purity of the product.*"¹

Such assurances are impressive; they tend to incite confidence. Nevertheless, there are good reasons for incredulity and distrust. We propose to make known facts which seem to indicate that laws, passed by Congress for the protection of the public health, have been so construed, and so administered, as largely to favour the pecuniary interests of a great Trust whose rapacity and disregard for human welfare have already led to scandal and abuse. It may be shown upon the authority of Government documents that in some most important particulars the present Federal inspection of meat is but little better than a delusion and a sham. Notwithstanding official assurances to the contrary, it shall be shown that at the present time, the flesh of animals killed while suffering from most dangerous and loathsome diseases may be "*passed*" by Federal inspectors as "healthful, wholesome, and fit for human food." It shall be shown that the law as now executed permits

¹ See U.S. Dept. of Agriculture, Circular 101, pp. 14-15.

the manufacture of lard—a product which finds itself in so many articles of food—from some of the most disgusting materials it is possible to conceive, and that the highest officials in charge of the execution of the law not only permit the act, but assert in a Government publication that “not the slightest objection can be raised against this procedure,” so far as the public health is concerned. Perhaps the reader who studies the evidence it is proposed to adduce may reach a different conclusion.

CHAPTER II

THE NULLIFICATION OF LAW

ON the last day of June, 1906, as the result of an agitation which had spread throughout the world, two statutes affecting the public health received the formal approval of the President of the United States. The first of these laws, the Food and Drugs Act, and popularly known as the "Pure Food Law," related chiefly to medicines and drugs, but was made to include within its scope the adulteration of food. The second enactment was in form of an amendment to the Act, which made the annual appropriation for carrying on the work of the Department of Agriculture, and provided for the inspection of meat. Its object was to render illegal the transport from one state to another, or the shipment to a foreign land, of any meat or meat-food product, unless it had been duly inspected and passed by officials of the United States.

It will be seen that, so far as meat and meat-products were concerned, Congress placed the public health under the charge of the Secretary of the Department of Agriculture. Vast and important powers were conferred upon him; and the general public, with abiding confidence in official wisdom, ceased to take further interest

in any reports affecting the quality of American meat. Undoubtedly there had been abuses in the past ; but the law must have rectified them all. Undoubtedly there may have been a time when the flesh of diseased animals had been permitted to be sold for food ; but, of course, this scandal had been made impossible by laws which distinctly made such an act a criminal offence. As a result of the agitation which had lasted for many months, it was believed that these two enactments by Congress must have effected a complete reform of any abuses which had previously existed.

It is the purpose of the writer to call in question the administration of these laws, and to disturb the confidence now felt in the purity of American meat. As previously stated, many of the horrible conditions revealed during the agitation of 1906 have generally disappeared. The visitor to a great packing establishment in Chicago will undoubtedly note evidence of improvement at nearly every step, and he may return home to London or New York ready to chant the praises of American slaughter-houses under the new régime. What he cannot possibly discover by any inspection of such establishments are the abuses regarding the quality of the meat, which even under his eye was being daintily manufactured into a food-product destined for some man's table.

If abuses exist, have they been infractions of the law ? Or has the law been so interpreted and administered as to permit them ? Has the law been construed in favour of the meat-producers, or in favour of the public health ? Have the laws been nullified or disobeyed ?

Almost immediately after the passage of the two laws

of June, 1906, the Secretary of Agriculture issued a new series of regulations governing meat inspection. These rules, which bore date July 25, 1906, differed but slightly from similar regulations put forth in June, 1904, long before any agitation began concerning the packing-houses. On April 1, 1908, still another series of regulations governing the inspection of meat were issued by the Secretary of Agriculture, and these are the rules which are now in force. Proceeding from the Department of Agriculture, a bureau devoted to furtherance of the interests of the agriculturist and stock-raiser, what ought the public to expect regarding regulations of this kind? On the one hand is the public welfare, and the will of the people, expressed by laws. On the other hand, in some respects antagonistic to the public health are vast financial interests, which would be detrimentally affected by a scrupulous regard for the common good. In formulating rules regarding inspection of animals or carcasses of animals intended for food, which interest should we naturally expect to control conduct, the public welfare or the financial benefit of the Meat Trust? Let us look at a few typical instances wherein regulations have been changed, and see if we can discern for what reasons, or in whose interest, the changes have been made.

It would seem to have been the design of the framers of the meat-inspection amendment to require an examination of the living animals intended for slaughter before they entered the pens of the packing-house. The provision of the statute by which it was hoped to secure this object reads as follows:

“That for the purpose of preventing the use in interstate or foreign commerce, as hereinafter provided, of meat and meat-food products which are unsound, unhealthful, unwholesome, or otherwise unfit for human food, the Secretary of Agriculture, *at his discretion*, may cause to be made, by inspectors appointed for that purpose, an examination and inspection of all cattle, sheep, swine, and goats *before they shall be allowed to enter into any slaughtering, packing, meat-canning, rendering, or similar establishment*, in which they are to be slaughtered and the meat and meat-food products thereof are to be used in interstate or foreign commerce; and all cattle, swine, sheep, and goats found on such inspection to show symptoms of disease shall be set apart and slaughtered separately from all other cattle, sheep, swine, or goats, and when so slaughtered the carcasses of said cattle, sheep, swine, or goats *shall be subject to a careful examination and inspection*, all as provided by the rules and regulations to be prescribed by the Secretary of Agriculture as herein provided for.”

The reason for this wise provision is evident. Carried into effect, it would at least have tended to secure that no animal manifestly suffering from certain diseases could find admission to the pens of the packing-house. Unfortunately for the general public, this form of inspection outside the precincts of the packing-house was abandoned under the clause of the law which left it to the discretion of the Secretary. The solicitor of the Department of Agriculture thus explains the reason for this decision :

“The Secretary has directed that the ante-mortem inspection shall not be made until the animal becomes the property of the establishment which is to slaughter it. . . . Until the animal becomes the property of the establishment, the Department has no control over its disposition, and cannot enforce the provision of law that all animals suspected of disease on ante-mortem examina-

tion shall be slaughtered and the ante-mortem diagnosis confirmed or disproved by the post-mortem inspection."¹

There are those, undoubtedly, to whom this excuse will seem ample. We cannot so regard it. If the law permits an owner to withdraw his stock after they have been inspected and condemned, then more ample powers should have been asked. We are not concerned so much with the action of unscrupulous owners outside the stock-yards, as with what may become of diseased cattle or hogs or sheep after they have entered the pens from which Congress hoped to exclude them. The Department of Agriculture has decided that the packing-houses must first buy the diseased animals, and then bring them upon their grounds, before the ante-mortem inspection shall take place. We can guess what will happen, from the experience of preceding years. During the period 1901-1906 inclusive, over 660,000 post-mortem inspections were made of animals, which before slaughter had been rejected in the stock-yards as apparently diseased. Of these, only 85,000—*less than one in eight*—were finally condemned as wholly unfit for food purposes.² May it not be possible that, on the whole, the average profits of the meat-packers upon animals suspected of disease are even greater than upon sound and healthy animals? We shall see reasons for this inquiry.

Another important provision of the law of June 30, 1906, is that which makes obligatory a

¹ U.S. Dept. of Agriculture, Circular 101, 1907, p. 5.

² Since July 1, 1906, these most important facts have been withheld from publication, and no longer are to be found in the official reports.

post-mortem examination of all carcasses of animals butchered outside the packing-houses before they can be brought therein. The law says :

“The foregoing provisions shall apply to all carcasses or parts of carcasses of cattle, sheep, swine, and goats, or the meat or meat-products thereof which may be brought into any slaughtering, meat-canning, salting, packing, rendering, or similar establishment, *and such examination and inspection SHALL BE HAD before the said carcasses or parts thereof shall be allowed to enter into any department wherein the same are to be treated and prepared for meat-food products.*” (Italics ours.)

Now this provision of the law seems very plain. So far as one can discover, there is conferred upon the Secretary of Agriculture no power or right to annul or revoke this clause of the law. Its wisdom is evident. It was designed to keep away from the packing-house the carcasses of animals slaughtered without Government supervision and possibly diseased, unless they could be inspected with all the internal organs and parts attached. Without such provision as this, diseased meat to almost any extent might find its way to the manufacturers of canned goods and of sausage. Yet on December 5, 1906, this provision of the law was partly annulled by the Secretary of Agriculture for reasons so extraordinary that they deserve quotation in full. A circular issued by the Department of Agriculture affords us the following authoritative statement :

“The law provides that the ante-mortem and post-mortem inspections shall apply to all carcasses or parts of carcasses of the four animals, or the meat or meat-food products thereof, which may be brought into any establishment where inspection is main-

tained, *and that such examination and inspection shall be had before the carcasses or parts thereof are admitted into the establishment.* Under this clause of the law, the Department ruled, originally, that carcasses of animals which had been killed without inspection, and from which the viscera had been removed (such as animals killed upon the farm), could not be admitted into establishments where inspection was maintained. The ruling was deemed necessary, because of the fact that all meat-inspection authorities agree that it is impossible to conduct an efficient post-mortem examination of the carcass unless the principal viscera be present and held with natural attachments.

“It was found that the strict application of this rule was a hardship to the farmer, particularly in the eastern part of the country, as it limited their market for their farm-dressed hogs and calves. The Secretary of Agriculture, as you are probably aware, is a practical farmer; *his heart is with the farmer, and he will not let the farmer suffer if he can help it.* . . . The regulation has been amended to permit the entrance into establishments where inspection is maintained of carcasses of animals which have been slaughtered without Federal inspection, if the head and all viscera *except the stomach, bladder, and intestines* are present, and held together by natural attachments. Inspection is then had; and if the carcass is found to be free from disease and otherwise fit for food, it is marked ‘U.S. Inspected and Passed,’ and admitted into the establishment. And Secretary Wilson is satisfied, *because the farmer has been taken care of.*”¹

We are not satisfied with the reason for the Department's action, thus officially announced. This is partial inspection. It does not seem to be that post-mortem examination which is required by the regulations in regard to animals slaughtered in the packing-houses. It is not the inspection demanded

¹ Circular 101, U.S. Department of Agriculture, issued January 4, 1907: “An Address on the New Meat Inspection Law,” by George P. McCabe, Solicitor for the Department of Agriculture, pp. 6, 7. (Italics ours.)

by the regulations of 1904 for animals killed at other than regular hours, when not only the thoracic viscera were left attached, but *all other viscera* were to be identifiable. We may be certain that Congress had in view no partial and incomplete inspection like this. To-day, animals slaughtered outside the packing-house without Government supervision may be brought to the producers of meat with bladder, stomach and intestines removed, and if then found satisfactory, the carcass may be transmuted into food-products, and stamped with the guarantee of the United States. Undoubtedly "the farmer has been taken care of," and the meat-packers as well. But was it quite fair to the consumer to decrease in any way the few existing safeguards established for the protection of the public health?

The tendency to favour a lax construction of the law is perceptible in other directions. Take lard, for example. To Great Britain alone we sell annually an average of over two hundred million pounds. Regarding animals the carcasses of which were brought into a lard-making or rendering establishment, the law was explicit: they could not be admitted unless a post-mortem inspection had been made under the usual formalities. In accordance with these provisions, the regulations of 1906 stated that "animals that die in abattoir pens, and those in a dying condition before slaughter . . . *in all cases shall be condemned*. . . . No dead animals shall be brought into an establishment for rendering, from outside the premises of said establishment." The necessity for this regulation is evident. It was intended to keep suspected carcasses away from

the tanks where lard is rendered. Yet hardly two years later—in April, 1908—another regulation is framed which makes this prohibition depend on the will of an official. The clause at present reads thus :

REGULATION 13, *Section 30.*—“No dead animals shall be brought into an establishment for rendering from outside the premises of said establishment, *unless permission is first obtained from the Chief of the Bureau of Animal Industry.*” (Italics ours.)

Why were the words in italics added to the regulation of 1906? How does it happen that a plain requirement of the law may be thus nullified, if “permission is first obtained”? Who asked for this change, and for whose benefit was this peculiar clause made a regulation? By what packing-houses, and how many times, has this permission to bring in dead animals from outside been requested? If so plain a provision of the law may be thus made void, to what extent may not other provisions of the laws of the United States be abrogated, if “permission is first obtained from the Chief of the Bureau of Animal Industry”?

Take another instance of the method by which the law is interpreted. What is a meat-food product? Probably the average man would define it as a substance derived from an animal, and intended for human consumption. The Regulations of 1906 gave the following definition :

“MEAT-FOOD PRODUCTS.—This term shall mean any product used for food, into the composition of which any portion of the carcass enters, or in the preparation of which any portion of the

carcass is used, including *lard, mince-meat, extracts, gelatin, oleo-margarine, butterine, soups,*" etc.¹

This is certainly a fair definition. Evidently it did not satisfy the manufacturers of certain products. Might it not be within the bounds of possibility to define a meat-product in such way as would permit it to escape the stringency of the law? It would appear that some manufacturers desired this; it is not easy, upon any other hypothesis, to understand what followed. Human ingenuity has few limitations when great interests desire a more favourable interpretation of the law. Within less than two months after the regulations governing the inspection of meat had gone forth in 1906, the Department of Agriculture issued an amendment, giving another definition of meat-food products, one the tendency of which would be to remove certain articles from the supervision of the law. The amendment, in part, was as follows:

"A meat-food product, within the meaning of the Meat Inspection Act, and of the regulations made thereunder, is considered to be any article intended for human consumption, which is derived or prepared from any portion of the carcass of cattle, sheep, swine, or goats, and which, when eaten, is capable of supplying nourishment or energy to the human body, or of repairing body waste."²

This definition has been most carefully phrased. It would seem to have been made so that it might be possible to exclude from inspection all of the various extracts of meat, which so largely enter into the pre-

¹ See Regulations issued July 25, 1906, p. 10.

² See Amendment No. 2 to B.A.I. Order No. 137, issued by the Department of Agriculture, September 17, 1906. Twenty-third Report, B.A.I., p. 382.

paration of certain foods, but which cannot be said to "supply energy or repair waste." Then, too, the meat must be a considerable portion of the article :

"A mixture of which meat is an ingredient will not be considered a meat-food product, unless the meat contained therein is *a definite and considerable portion of the said mixture*. . . . Where such a mixture is prepared in an establishment where inspection is maintained, the sanitation of that portion of the establishment in which said mixture is prepared will be supervised by the Department, and the meat or meat-food product which enters the said mixture will be inspected before it enters the said mixture. *The mixture will not be officially labelled.*"

In other words, the manufacturer of a "mixture" was warned that if he makes up his compounds within an inspected establishment, the stuff will be inspected. He is not obliged to submit to such inspection anywhere else, and he is allowed no official label. So far as one can see, he has no advantage over the manufacturer who declines Government inspection altogether, and makes his "mixtures" wherever he desires. Then follows this significant ruling :

"Mixtures such as mince-meats, soups, etc., which come under this ruling, and which are not officially labelled, *are allowed in inter-state and foreign commerce without inspection and without certificates*, subject to the provisions and requirements of the Pure Food Law and the regulations made thereunder."

These two clauses, with but slight changes in phraseology, have been incorporated in the regulations of 1908. The meat which enters into the composition of "mince-meat, soups, etc.," must pass Government inspection, but these delicacies, when complete, "are allowed in interstate and foreign commerce without

further inspection, and without certificates." It is difficult to surmise any reason creditable to the various manufacturers of "mince-meats, soups, etc.," or pertaining to the purity of their products, which could have induced them to ask from the Department of Agriculture such a ruling as this. The definition of a food-product in the regulations of 1906 was a distinct safeguard for the customer. Why was it altered? At whose solicitation was it changed? Why should certain products—especially those covered by the comprehensive "*etc.*"—be made in any way exempt from official inspection? We may be told that in England and in some other countries there are consumers of American "mince-meats, soups, etc.," who are entirely indifferent to the possibilities of adulteration, but we are quite certain that for the majority of us these rulings will give occasion for suspicion and doubt.

If there be a single article, regarding whose purity and quality there should be no question whatever, it would seem to be the meat extracts, so frequently prescribed by physicians for the use of invalids. One manufacturer and meat-packer enthusiastically advertised his product as "the best extract of the best beef"—a designation which describes what it should be, whether or not it is capable of "supplying energy or repairing waste." In the regulations concerning meat inspection, issued in July, 1906, these extracts of meat are included with other meat-food products which were subject to the examinations required by law. Yet the first amendment to the regulations, dated September 7, 1906, exempted these products from the ordinary requirements. It reads as follows:

“MEDICAL MEAT-PRODUCTS.—*Regulation 51.* Products such as meat juice, *meat extract*, etc., which are intended only for medicinal purposes, and are advertised only to the medical profession, *are not considered meat-food products within the meaning of B.A.I. Order No. 137, and this amendment.*”¹

This is most ingenious, if we regard it as a method of evasion. If these extracts are not “considered meat-food products” by the Department of Agriculture, are they, then, outside that surveillance which the law was intended to secure? Certainly, it would be interesting to know the whole history of this singular ruling. Who were the firms or manufacturers of meat extracts “only for medicinal purposes” at whose request or suggestion this “ruling” was issued? What makers of this article were anxious to escape that supervision, which was imposed by the regulations of 1906?

It would seem possible, therefore, that in some respects, the laws passed by Congress for the protection of the consumers of American meat have been interpreted chiefly in the interest of the Meat Trust. But might not the intent and purpose of such laws be yet further strained in behalf of those financial interests which the Department of Agriculture was established to promote? Suppose, for instance, that a way could be devised, by which old abuses might continue, and the carcasses of animals, found affected by disease, be turned into food-products under the guarantee of the Government of the United States—how illimitable would seem the pecuniary profit that might thus accrue! At first thought, one would deem

¹ See also Regulations of 1908, p. 8, Section 9.

this an impossibility. There is the law of the United States, passed by Congress in order to prevent such an abuse. It distinctly declares that

“all carcasses and parts thereof of all such animals found to be unsound, unhealthful, unwholesome, or otherwise unfit for human food . . . thus inspected and condemned, *shall be destroyed for food purposes.*”¹

There, too, is the Pure Food Law, which expressly forbids the sale of food,

“if it consists in whole or in part of . . . any portion of an animal unfit for food, *or if it is the product of a diseased animal.*”²

Is there any ambiguity or double meaning perceptible in these provisions of the two laws, passed by Congress for the protection of the public health? Does it not seem clear that the law-makers intended to forbid the utilisation of diseased animals for food? This is the meaning which the Department of Agriculture, through its official exponent, declared to be the intention of this enactment. It is officially affirmed that, when one sees the Government stamp on a meat-product, “he may know the meat is from *healthy* animals.”³ And yet there are reasons for doubting the accuracy of this statement. It has been asserted that laws of the United States, designed for protection of the public health, have been so construed as to permit the Meat Trust to use diseased animals as wholesome food, as was the case in the years before the legislation of 1906.

¹ The Meat Inspection amendment. See Regulations Governing Meat Inspection of April 1, 1908, p. 46.

² See Food and Drugs Act, Section No. 7, Clause 6.

³ U.S. Department of Agriculture, Circular No. 101, p. 14.

The gravity of such a charge is apparent; it touches the interests of the consumers of meat, not only in America, but throughout the world. We propose, not only to investigate its truth, but to indicate the tremendous import of such a practice, in its possible relation to some of the most terrible diseases which scourge the human race.

CHAPTER III

MALIGNANT TUMOURS AND THEIR RELATION TO OUR MEAT-SUPPLY

OF all the ailments which affect the human race at the present time, none is more mysterious than the various forms of malignant disease. Everything pertaining to cancer is significant of horror: its mysterious and yet undiscovered cause; its slow beginnings, its gradual ravages, its sometimes agonising end. So painless are its first advances, that, in innumerable cases, the only chance of relief has passed when the sufferer becomes aware of the terrible character of his disease. Except through surgery, no certain cure is known to medical science at the present day.

“Cancer,” says Dr. Roswell Park, “with all its local characteristics and its fatal termination, is a disease without a symptomatology of its own. Take any organ you like—the stomach, for instance; there is nothing distinctive in the way of symptoms about cancer of the stomach.” As Dr. Park points out, until this disease has fastened itself, often beyond the possibility of cure, it generally reveals to its victim no definite signs of its presence.

Cancer appears everywhere to be increasing. From

France, Germany, Austria, Switzerland, Norway, Sweden, Denmark, and Holland, and other countries of Europe, we have the same report of a steadily advancing mortality out of all proportion to the increase of population. In the United States, according to the last census report, we are told, that, as compared with 1890, there was a decided increase in the death-rate due to cancer and tumour, varying from 15 to 27 per cent. In certain states, upon whose statistics we may, perhaps, place especial dependence, the cancer death-rate for women rose in ten years from 690 to 832 per million of the population. The statistics relating to the mortality of this disease in England and Wales are of great value; and, as elsewhere, they indicate a constant tendency to an increased mortality, year after year. In the year 1902, for example, the various forms of malignant disease in England and Wales demanded a death-toll of 27,872 lives; in 1903, the mortality rose to 29,089; in 1904, it was 29,682; in 1905, the deaths numbered 30,221; in 1906, they were 31,668; and in 1907—the last year for which facts are now available—the total demanded by cancer was 31,745. A significant illustration of its progressive fatality is seen by comparing its prevalence among women between the ages of forty-five and sixty-five. Thirty years ago, in 1875, of all deaths of women at this period of life, in round numbers, one in ten was due to malignant disease. Ten years later, in 1885, the corresponding mortality was one in eight. In 1895, cancer claimed upwards of one in seven; and in the three years, 1905-1907, of all the deaths of women between the ages of forty-five and sixty-five, one in every five and a half was due to some

form of malignant disease. How long will it be, before this disease will be responsible for every third or fourth death among women who shall have reached the middle period of life, if the increase in mortality is to go on unchecked?

Most significant is the fact that in England, and among the female population, *the mortality from cancer is now greater than the mortality from consumption*. Thirty years ago, say in 1880, the mortality from phthisis among women was nearly three times as great as from malignant disease. In 1897, the contrasted death-rates from phthisis and cancer were as 1,156 to 924. In 1903, for the first time, the death-rate from cancer exceeds that from consumption; from malignant disease, there is a death-toll of 1,003, and from consumption, 993. From this time onward, there is but one year in which cancer does not demand from women the greater mortality; in 1907, for instance, 1,026 per million living, perished from this form of disease, as compared with 952 from phthisis.

A remarkable phenomenon pertaining to malignant disease is that the death-rate from cancer in no two countries is precisely alike, and in certain lands and among certain races the disease is relatively infrequent. Dr. Bainbridge tells us that "cancer is comparatively rare in hot countries, especially in those whose inhabitants subsist largely on vegetable diet. With certain exceptions, it seems to be prevalent where animal diet is mostly consumed."¹ For instance, cancer is rare in Egypt, in Tunisia and Algeria, and in certain other parts of the African continent. In certain

¹ The *New York Medical Record*, September 1, 1906.

parts of China, Burmah and India, cancer is very rare; in Persia it is seldom seen; in Borneo, it appears to be comparatively unknown. In Japan, where the statistics of mortality are far superior to those of the United States, cancer is increasing as in England and America, out of all proportion to the increase in population; but the people of Japan are fast ceasing to hold to the vegetarian diet of former years. One theory of cancer ascribes the inception of the disease to abnormal conditions pertaining to prenatal life. To others, it seems more probable, that some unknown and undetected cause, whose malignant potency we cannot estimate, is steadily at work among the most civilised races of our globe, producing a disease of the most terrible character; a cause as yet unrecognised, and whose nature we can only surmise.

The universality of malignant disease is yet another important fact. It is now asserted that cancer occurs throughout the entire vertebrate creation, with almost the same essential characteristics. It is not beyond possibility, therefore, that cancer is one of a considerable number of germ-diseases, which, affecting first the lower animals, is being passed upward to the human race. We need not assert this as an undoubted fact; it suffices to suggest it as a working hypothesis, for which evidence seems to exist. Let us grant that it is merely a matter of significant possibility; but it is one that concerns the most terrible destroyer of the human race. We know now that there are germs of disease so infinitely small, that the human eye, even when aided by the most powerful instruments, is powerless to discern them. The germs of malignant disease may be of this

character, and may be resistant to temperatures that suffice to kill the majority of such bodies.

What, then, are some of the facts which seem to point to the theory that cancer, or malignant disease, occurring in the human subject, is due to germs, probably invisible, which are transmitted in some article of food, from animals to man?

I. In the first place, malignant disease is peculiarly liable to attack organs or parts pertaining or relating to the digestive system. In the United States, at the last census (1900), of each thousand cases of cancer among men, the seat of the disease in almost exactly two-thirds of the cases was the stomach, the abdomen, or the liver. If one studies the statistics of the Registrar-General of England and Wales during the first seven years of the present century, it will be found that, exclusive of disease affecting the mammary glands and generative system, the location of malignant disease resulting in death, in over 70 per cent. of the cases for men and 71 per cent. of the cases among women, was either in the stomach, the intestines, the liver, or in some part or organ pertaining to the digestive system. Nor is this an irregular phenomenon; the proportions during the six-year period, 1901 to 1906, remain almost exactly the same, with a slight tendency to increase the proportion for both sexes.

II. In the United States, the proclivity to malignant disease seems to be greatest among the white foreign-born population, or in other words, *among the poorest class of the American people.*

It is unfortunate that the mortality statistics of the United States do not apply to the entire country, but

only to a very considerable portion, known as the "Registration Area," and to certain cities in other states, the mortality statistics of which appear to be worthy of consideration. For the last census year, 1900, we are able to contrast the mortality from cancer and tumour between foreign-born and native population, and in three sections of the country, the rural districts and cities of the States having a satisfactory registration of deaths; and in certain cities of other states. The results of such comparison may be seen in the following table:

DEATH-RATE ACCORDING TO NATIVITY FROM CANCER AND TUMOUR PER 100,000 OF THE WHITE POPULATION. (1900.)

NATIVITY.	REGISTRATION AREA, U.S.A.		CITIES OF OTHER STATES.
	Rural Districts.	Cities.	
OF FOREIGN BIRTH ...	119	115	140
BOTH PARENTS OF AMERICAN BIRTH... ..	75	65	49

If we take the same statistics for the year 1890, we are confronted by a precisely similar result. Whether it be the rural districts or the larger cities, within or without the Registration area, everywhere the death-rate from malignant disease was greatest among that class of the general population upon whom the burden of poverty most severely presses. A fact like this is rather suggestive, though not conclusive. But suppose it were practicable to-day to distinguish in England

and America between the mortality from malignant disease among the rich or well-to-do classes, and its rate among what may be called the working class, should we expect to find a difference in proclivity to this scourge of our race? And if difference were discovered to exist, would it be favourable to those whose means permit use of the best and choicest kinds of food, or to those who are compelled to subsist on the cheapest and the poorest varieties?

III. Among the foreign-born population of the United States or their offspring, *the mortality due to malignant disease is not uniform, but varies very widely according to different races and nationalities.*¹

This phenomenon is peculiarly significant. The facts are clearly shown in the table on page 32, which gives the mortality-rate from malignant disease among those of the population whose mothers were born in foreign lands, according to the country from which they came. To bring out the facts still more clearly, the mortality is calculated for three different sections of the United States.

One can hardly fail to note the singularity of the phenomena here revealed. These figures relate to three quite different sections of the United States; and yet for each nationality there is a remarkable agreement between the cancer death-rate in the rural districts, in the cities belonging to the registration states, and in the cities which are in other sections of the country.

¹ The statistics which make up these tables are to be found in the Twelfth Census of the United States, vol. iii., pp. clxxxii, and after.

Nor is this all. The Federal census of 1900 permits us to contrast the tendency of different nationalities to certain special forms of malignant disease which conceivably may owe their origin to some articles of food. If we take cancer of the stomach, we find that the death-rate per hundred thousand of the population whose maternal ancestry was English, Irish, Scotch, or

UNITED STATES : DEATH-RATES FROM CANCER AND TUMOUR, PER 100,000 OF THE WHITE POPULATION, OF WHICH THE MOTHERS WERE BORN IN DIFFERENT LANDS. (CENSUS OF 1900.)

BIRTHPLACES OF MOTHERS.	REGISTRATION STATES.		CITIES OF OTHER STATES.	TOTAL.
	Rural Districts.	Cities.		
Italy	20	24	39	25
Russia and Poland ...	26	30	26	29
Hungary and Bohemia ...	21	32	40	34
Scandinavia	30	37	35	35
Canada	48	41	41	44
UNITED STATES	64	50	34	53
England and Wales ...	79	77	80	78
Ireland	90	82	86	84
Germany	77	88	82	84
Scotland	104	90	62	90
France	89	89	121	98

German, was from *two to three times as great* as for those whose mothers were born in Poland, in Italy, or in Hungary. If we study cancer of the liver, there again is the same phenomenon; the death-rate of those whose maternal ancestry went to England, Ireland, Germany, Scotland, or France, is about double that of men and women whose mothers belonged to Italy,

Russia, Scandinavia, or Canada. These figures are too uniform to be due to chance. They point to the existence of some law. Shall we say that there is a constitutional tendency to degeneration, in England and Ireland for instance, *twice or three times as great* as that in Italy or Russia? It is inconceivable.

IV. Let us consider these facts in their relation to another hypothesis. Let us suppose that malignant disease, in some of its manifestations, if not in all, is due to germs which find their way into the human system through the use of meat derived from animals which were suffering from cancer at the time they were killed. According to this hypothesis, much that is otherwise obscure becomes somewhat more clear. We should expect, then, to find cancer more prevalent among the poor than among the rich, and especially prevalent among those who from ignorance or necessity consume as food the cheapest kinds of American meat. We should expect to find malignant disease a cause of greater mortality among emigrants from England, Ireland, and Germany, than among those whose ancestors have dwelt for one or two generations on American or Canadian soil, and whose greater prosperity enables them to purchase the better qualities of meat, and to exclude from their tables the cheap products of the packing-house. Since emigration from Russia and Poland to the United States is very largely made up of Jews, whose aversion to meat, affected in the slightest degree by disease, is grounded upon religious injunctions, we should expect to find a population thus guarded from the cheap products of the Meat Trust, to show, despite their poverty, a far less pro-

clivity to malignant disease. Doubtless investigation would demonstrate that emigrants from Italy are more careful in their choice of meat than the newly-arrived adventurers from England, Ireland, or Germany; it is certain that at home their consumption of animal food is far less.

A careful study of statistics of mortality, extending over many years, has led to the discovery of a certain phenomenon, to which attention has not hitherto been directed, and which tends to prove the germ origin of malignant disease. It is not easily explicable without recourse to diagrams, but a brief reference may be here made to it.

As revealed by statistical evidence, all social phenomena which depend upon the action of fixed causes upon a race or nation, tend to exhibit, year after year, a peculiar uniformity that seldom fails in its manifestations. The number of male children born in England to each thousand female children born, was *1,041* in the year 1862, and *1,041* in the year 1906. There has been variation, but such variance is extremely slight. The death of males to a thousand deaths of females in England, was *1,134*, in 1872, and *1,130* in 1907. The percentage of marriageable men and women in England, who prefer the rites of the Established Church, is slowly decreasing; but it is with an almost steady uniformity, from year to year.

When we come to study the mortality from germ diseases, we find, as we should expect, that such mortality is variable from year to year, precisely as the causes inducing the diseases are of unequal potency during a succession of years. In England, for example, the deaths from tuberculosis are slowly decreasing;

but now and then, without any apparent reason, there is, for some particular year, a slight increase for both sexes in the mortality from this scourge, a phenomenon sure to be followed later by a return to the lower death-rate. Now the singular thing about cancer in England is this: that while it seems to be steadily increasing if we survey its ravages in five-year periods, yet, studying its death-rate by single years, *it exhibits precisely that wavering irregularity which we find in other diseases that are certainly due to germs.* Suddenly—without any evident reason—the mortality from cancer rises in a curve-diagram considerably above the rate of any preceding year. Then, for the following year, the scourge seems less destructive, and the death-rate either falls slightly, or exhibits a much less marked advance. For this variability, there is surely a cause; it is not due to chance. If cancer be due to some invisible germ, then we can comprehend that a lessened exposure of the entire population during some particular year, to the causes which induce the disease, would—some three or four years later—lessen the cancer death-rate; while an increased exposure of the population to the causes of the disease, might be expected, a short time after, to express itself in a considerably higher mortality from this cause of death.

But how do these facts concern the present inquiry? In what way can the cancer-mortality in England and the United States have any relation to the consumption of American meat? With all the safeguards against diseased meat which Federal inspection is now supposed to have created, is there the slightest possibility that the flesh of an animal, found at the time of slaughter to have been suffering from a malignant or a suspicious

tumour, would be permitted in America to be used for food, or in any form of food-product, to find its way to English shores? Would not any such carcass be wholly condemned and destroyed?

We propose to answer some of these questions. Let us grant that at the present time, there is no certain knowledge regarding the cause of the most terrible scourge that to-day afflicts the human race. But no thinking man or woman can be insensible to the significance of possibilities, when he learns that cancer affects not only the human race, but animals which are killed for food; that the disease is most liable to find its seat in some part of the digestive tract; that it seems to prevail most among the poorer class of the population; and that, according to the present and past administration of so-called "Pure Food Laws" by the United States Department of Agriculture, *the carcasses of animals, butchered under Government inspection and found to be affected with malignant tumours, are not invariably required to be condemned as unfit food for human beings.* The cancerous tumour, the diseased organs must, it is true, be cut out and condemned. The disposition of the remainder of the carcass is left to the discretion of the inspector.

On June 27, 1904, the Department of Agriculture put forth certain official regulations, intended to govern the disposition of meat derived from animals killed under Federal inspection. Among these regulations, we find the following important rule:

"Any organ, or part of carcass which is affected by malignant tumours, abscesses, suppurating sores, tape-worm cysts or liver-flukes, shall be condemned."

We need to read this regulation most carefully, and more than once. It is of strange and sinister significance.

What is it that the United States Inspector was required by this regulation to condemn as unfit for human food? The carcasses of animals which he might find affected by cancer or malignant tumours?

No. He was directed to condemn *the tumour*, the part of the carcass which was affected, the organ which was infiltrated by disease. The remainder of the carcass—what became of that? Is there anything which prevented it from being turned into the food-supply of the poorer classes? There is sometimes a silence that accords consent.

In the spring of 1906, an agitation arose both in America and England concerning the conditions which prevailed in certain packing-houses of Chicago. As a result of disclosures then made, Congress passed a new law, by which the United States Government guaranteed the purity of the meat and meat-products intended for export to foreign lands or for inter-state commerce. In the regulation promulgated by the Secretary of Agriculture, July 25, 1906, concerning the inspection of the carcasses of animals, found to be affected with malignant tumours, a slight, yet significant, change was deemed necessary. The new rule read as follows:

“Any organ or part of a carcass which is badly bruised, or *which is affected by malignant tumours*, abscesses, suppurating sores, or liver-flukes, shall be condemned; *but when the lesions are so extensive as to affect the whole carcass, the whole carcass shall be condemned.*”

The meaning of this regulation would seem quite clear. There is here no demand that a carcass affected with cancer or malignant tumour shall be utterly destroyed; for in such case, a considerable pecuniary loss would fall upon the packing-house. When the disease has so far progressed that the whole carcass becomes affected by it, *then only*, its total condemnation is enjoined. Doubtless such a condition is as rarely found among animals as among human beings. Unless it is found, only the affected organ or the diseased part must be condemned for food. Suppose the entire liver of a hog to be a mass of cancerous disease; what was there in these "Regulations" of the Department of Agriculture to prevent the packing-house from transmuting the muscular tissues and unaffected organs into various food delicacies or food-products, which in due time should find their way to the tables of rich and poor in England and America? Not a word!

Another question interests us. In the regulations pertaining to the inspection and disposition of this kind of diseased flesh, a change was made following the revelations of 1906, and the passage of the "Pure Food Law." The principal difference consists of a single clause. In 1906, after the agitation of the meat question, both in this country and Europe, the Department of Agriculture ruled that in case of diseased animals where the whole carcass was affected by malignant tumours, then, in such case, "*the whole carcass shall be condemned.*" Strangely enough, this requirement, so far as one can discover, does not appear in any of the regulations previously promulgated; certainly not in those put forth two years before. Why

was it added? Does it indicate a change in the procedure of Government Inspectors? Before the enactment of the Legislation, was it possible that a contrary custom obtained in the packing-houses, and that a carcass infiltrated with malignant disease could be turned into various forms of edible meat-products without objection on the part of Government officials? We shall be told, of course, that this never occurred. *Why, then, was this clause added?* Either the clause was unnecessary and superfluous, or else it was inserted in the Regulations of 1906, to check an abuse due to the conscienceless rapacity of producers of meat. Now, which conclusion must the public adopt? If uncalled-for during the past quarter of a century, why was it inserted in the Regulations of 1906, and continued in the Regulations of 1908? If needed to correct and prevent an abuse, why was it omitted by the United States Government during all the preceding years?

The Regulations now governing meat inspection, were issued April 1, 1908, and are, so far as they concern malignant tumours, almost the same as those promulgated two years before. They read as follows:

“SECTION 23.—*Any organ or part* of a carcass which is badly bruised, or which is affected by *tumours—malignant or benign*—abscesses, suppurating sores, or liver-flukes, shall be condemned; but when the lesions are so extensive as to affect the whole carcass, the whole carcass shall be condemned.”

It will be seen that the public health is now to be protected against “benign tumours” as well as those of a malignant character. Otherwise than this, the

permissions and prohibitions of the former Regulations have not been changed. As before, the organ or part of carcass affected by malignant tumours, must be rigidly condemned. As before, if "the whole carcass" is affected, it must not be allowed to pass. Beyond this, what is there, in this regulation, *to prevent the flesh of animals affected by malignant disease, from passing into the food-supply of a credulous and trusting world—after the condemnation of affected parts?*

A matter of considerable interest to the consumers of American meat, would be the number of animals found, upon post-mortem inspection, to be affected with malignant tumours, and of which "parts" were thus condemned. Unfortunately, the United States Department of Agriculture has not deemed it best to present these facts to the general public. Inquiry, however, has elicited the official statement that the number of "parts" practically represents about the number of carcasses which were thus partly condemned. It is a matter for regret, that where the interest of the public health is so deeply concerned, the most complete information on these subjects is not readily to be obtained.

Previous to the year 1900, no statistics whatever regarding the condemnations of animals for various forms of disease are to be obtained. During the years 1900-1906, the Chief of the Bureau of Animal Industry presented annually in his report a table, giving the various diseased conditions which led to the condemnation of the carcasses for food purposes, either wholly or in part. During these seven years, we find that the condemnations for "tumours," including cancer, were

4,115, and for abscesses, 7,330. During the same period, the number of animals of which "parts" were condemned for "tumours" were 8,007, and for abscesses, 22,931.

In the Report for 1907, the Chief of the Bureau unfortunately saw fit to adopt a new method of tabulation which effectually tends to conceal facts previously disclosed. "Tumours" and "abscesses" are no longer reported separately, but are grouped under a single heading. It is thus made impossible for any curious scientific inquirer to ascertain how many carcasses were condemned for causes connected with malignant disease. That the elimination of the words *cancer* and *malignant disease* from official reports meets the approbation of the producers of meat-products, can hardly be questioned; but if we consider the interests of the public health, every such limitation to inquiry is a backward step. Upon such a subject as this, it is impossible that our knowledge should be too complete. Yet the figures placed at our disposal are significant. The number of animals totally condemned for these two forms of disease, in proportion to the number inspected, was less than the number pertaining to years immediately preceding. The number of animals of which "parts" were condemned was over 90,000—or nearly three times the total number of "parts condemned" during the entire seven years, 1904-1906! Compare, for instance, the three years, 1905 to 1908. The total condemnations were rather less, proportionately, in 1907 than they were in 1905. The following table shows the number of carcasses which were in part condemned, and the species of animals thus affected :

"PARTS" CONDEMNED FOR "TUMOURS AND ABSCESSSES."

	1905.	1907.	1908.
Cattle	258	57,547	4,357
Hogs	1,556	32,526	1,544
Sheep	81	59	27
Calves... ..	12	31	18
Total	1,907	90,163	5,946

How shall we explain these differences in the number of animals thus inspected and "partly" condemned? The number of carcasses Federally inspected in 1907 was only 25 per cent. larger in 1907 than two years before; it rose from forty to fifty millions. But in the number of "parts" condemned, how vast is the increase! Shall we say that these figures for 1907 indicate an increased efficiency of Federal inspection, so that fully 90,000 cattle and hogs were partly condemned for "tumours and abscesses," when, according to the rate of such condemnations in 1905, this number would have been less than 2,500? If this be the explanation of the figures of 1907, what a horror they reveal concerning that indifference to the public health manifested by the lax inspection by the United States Department of Agriculture during all preceding years!

If there was a tendency to reform during 1907, what shall we say of the statistics of 1908? Do they show any retrogression toward earlier indifference? Let us contrast the two years.

	1907.	1908.
CATTLE :		
Total number post-mortem inspections	7,621,717	7,116,275
Number wholly condemned on account of "tumours and abscesses"	180	116
Number of carcasses of which "parts" were condemned for "tumours and abscesses"	57,547	4,357
HOGS :		
Total number post-mortem inspections	31,815,900	35,113,077
Total number wholly condemned on account of "tumours and abscesses"	1,483	1,280
Number of carcasses of which parts were condemned for "tumours and abscesses"	32,526	1,544

Now the significance of these figures can hardly escape the reader. The total condemnations were very nearly the same in both years, showing that there was no sudden outbreak of disease. Yet when we look at the number of animals of which parts were condemned for tumours and abscesses, how vast is the falling off from the experience of the preceding year! We are unable to ascertain what proportion of these figures touch only tumours, malignant and otherwise; these facts, the Department of Agriculture has seen fit to conceal from the public since 1906. We are obliged, therefore, merely to present the facts, and indicate their possible significance.

It is not wholly assuring to find that according to

methods of inspection in vogue, the decision whether a given carcass is to be destroyed or turned wholly or partly into meat-products is largely determined, not by printed rules and prohibitions, but by the favour of the inspector. It lies to-day within the power of a young official—the lax performance of whose duties in way of condemnation, certainly makes for the pecuniary profit of the packing-house, and possibly for the permanency of his place—to decide beyond appeal whether any carcass whatever, affected by malignant tumours, is sufficiently loathsome to require condemnation, or whether the meat may not be passed as fit for general consumption. Here, for example, is the clause which confers this power, taken from the Regulations which went into effect, April 1, 1908. The italics are not in the original.

“REGULATION 13.—*Section 1. . . . It is to be understood, however, that owing to the fact that it is impracticable to formulate rules governing every case, and to decide at just what stage a process becomes loathsome or a disease noxious, the decision as to the disposal of all carcasses, parts or organs not specifically covered by these regulations, shall be left to the veterinary inspector in charge.*”

There are here conferred great possibilities of abuse. To what such power led, we may see by comparing the number of animals “partly” condemned in 1905 and 1908 with the number thus disposed of in 1907.

To what conclusions are we led by a careful survey of the facts relating to malignant disease?

1. Cancer, or malignant tumour, as a cause of mortality is apparently increasing year by year,

in all the more civilised portions of the globe. Of the cause of malignant disease, nothing is certainly known.

2. Animals used for food purposes—cattle, swine and sheep—are all liable to become affected by malignant tumours.
3. While we are far from certainty, it is conceivably possible that this disease among human beings is sometimes induced by the consumption of the flesh of animals which have been the subject of malignant disease.
4. As a matter of prudence, therefore, no human being should be forced to eat meat derived from an animal which, at time of its slaughter, was affected by malignant disease.
5. The condemnation of the entire carcass of an animal found to be affected by a malignant tumour, necessarily involves the meat-producers in a considerable pecuniary loss. It may seem, therefore, to their financial advantage that such "total condemnations" occur as rarely as possible; that whenever the inspector can decide that the flesh is not "loathsome," only the parts affected by cancerous tumours shall be discarded for food purposes; and above all, that the policy of Federal inspection in this respect shall be chiefly favourable to the financial interest of the producers of meat.
6. On the other hand, it is obviously contrary to justice and to the interests of the consumers of American meat, whether at home or abroad, that in any case whatever, meat derived from

animals affected by malignant tumours should be sold as food for human beings, unless the origin of such meat or meat-food product be plainly indicated, or made known to every intending purchaser. It may be impracticable to prevent the consumption of such meat by those who prefer it, or who are willing to assume the risk of disease. *But no one who detests it, should be forced to consume it unawares,* because its origin is concealed, and its purity is guaranteed by the lax administration of a sanitary law.

7. If cancer be due to germs, derived from the flesh of animals, then, so long as the carcasses of animals affected by such tumours are permitted as now, to pass Federal inspection and to be admitted into the world's food-supply, it is evident that the Public Health in England or America is not protected from malignant disease, to the extent that we are entitled to demand.

CHAPTER IV

TUBERCULOSIS AND AMERICAN MEAT

FOR unknown centuries, consumption has been the chief scourge of humanity. It has been said that no other disease affecting our race is productive of so much suffering, or so destructive of human life. Even in our time, consumption and the other diseases which proceed from the same cause, are doubtless responsible for not less than one-tenth of the total mortality of our race. And yet, up to a very recent period, medical science was wholly ignorant of its cause. The intimate relation between consumption and "scrofula" had been suspected, but the recognition of their common origin was long delayed.

It was in the year 1865, that Villemin first discovered that tuberculosis was an infectious disease. Three years later, in 1868, Chauveau induced the disease in animals, and thus gave a hint regarding the probable connection of the disease with what we eat and drink. When, finally, in 1882, the German investigator, Koch, announced his discovery of the almost invisible bacillus of tubercle, the scientific world recognised that it had no longer to deal with conditions and tendencies merely, but with a parasite, capable, in some way, of

finding entrance into the human system, and there inducing disease. "If ever," says a recent writer, "the human race is to be freed from this, its most terrible foe, we must before all things, *cut off the sources of infection.*"

It is quite probable that no other disease is more widely distributed throughout the animal kingdom. "Not only does it affect most mammals, such as man, monkeys, horses, cattle, hogs, sheep, goats, dogs, cats, rabbits, mice, rats, bears, lions, tigers, foxes, etc., but it affects birds, fish, frogs and snakes."¹ Of the identity of the disease among different animals, there can be little doubt. Again and again, tuberculosis has been transmitted from human beings to the lower forms of animal life. A more important inquiry is the transmission of the disease from animals to man; and upon this question, medical science is still engaged. It is evident that the problem is one of the utmost importance to our race. Science now views with very grave suspicion the milk derived from tuberculous cows. To what extent is the flesh of tuberculous animals, eaten as food, *the cause of tuberculosis in human beings?* There are few questions of greater import to mankind.

In order to determine whether human beings may be directly infected with disease by use of tuberculous flesh, experimentation is impossible except as a crime. But sometimes we may be absolutely certain of facts we cannot prove. Why must we regard with suspicion, the use of meat derived from animals suffering from tuberculous disease?

We note, in the first place, that tuberculosis is an

¹ Salmon "On Tuberculosis of Animals."

extremely common disease, particularly among certain animals which enter into our food-supply. Dr. Salmon tells us that there is "a great culture-ground and reservoir for tubercle bacilli outside the human body, and existing principally in the bodies of domestic animals which supply some of the principal articles of human food."¹ "Why should we continue to allow tuberculous animals to be slaughtered practically without supervision in numerous abattoirs, and the meat sold for human consumption? . . . The medical profession has never appreciated, and does not now appreciate, the importance of animal tuberculosis as a factor in the production of human tuberculosis."² The continued prevalence of tuberculosis among cattle, Dr. Salmon asserts, is "damaging the reputation of our meat and dairy products."³ Of course breeders do not advertise the fact that their herds are thus diseased; "it is, as a rule, only public institutions . . . that can afford to tell all they have suffered from tuberculosis." We are told that of a herd of cattle belonging to the Soldiers' Home in Washington, 84 per cent. were found tuberculous; that of a herd belonging to the Massachusetts Agricultural College, 78 per cent. were tuberculous; that at the Wisconsin Agricultural Experiment station, 86 per cent. were thus diseased; that of a herd belonging to the Government Hospital for the Insane at Washington over three-fourths were tuberculous. We have no means of knowing to what extent the disease is prevalent throughout the entire country;

¹ Eighteenth Report, Bureau of Animal Industry, p. 258.

² Twentieth Report, Bureau of Animal Industry, p. 84.

³ *Ibid.*, pp. 172, 173.

it suffices to say that "the integrity of our meat-supply is threatened" by the increase of this disease. That the average prevalence of the disease among dairy herds as revealed by tuberculin tests in different States "falls very little, if any, below 5 per cent. of the whole number tested," is the report of Mr. Dorset of the Bureau of Animal Industry.¹

Even more startling and ominous is the increasing prevalence of tubercular disease among swine. An inspector of meat of many years' experience, stated in a public address that animals apparently in perfect health were often as thoroughly infected with tuberculosis as the veriest scrubs. "Among 750 hogs which were discovered, *after* slaughter, to be tuberculous, we were not able to discover, on examination *before* slaughter, a single hog that we could say positively was tuberculous." "The increasing proportion of tubercular hogs found by the meat-inspection service, is a matter of grave concern," says the Chief of the Bureau of Animal Industry in his report for 1905. About 3 per cent. of the hogs coming to some of the largest abattoirs are affected with tuberculosis; and this fact, we are assured by the same authority, "indicates a rapid increase of the disease among this species of animals." It is not pleasant for consumers of American pork to find that one of the causes for the spread of tuberculosis is the practice of many farmers "*of allowing their hogs to consume the carcasses of cattle which have died of disease.*"²

¹ Year-book of the United States Dept. of Agriculture, 1906, p. 352.

² Report of Chief of Bureau of Animal Industry, 1905, p. 1.

The risks pertaining to the consumption of tuberculous pork would appear to be greater than the chances of infection through other kinds of food. Recent investigators tell us that there is "increased danger from the consumption of meat from tuberculous swine over that of tuberculous cattle. . . . While the local meat-inspector may be justified in being indulgent in the case of cattle, where the animals are in good condition and the lesions are restricted, . . . he should be very strict with the meat of swine affected with this disease."

The reasonableness of these views is admitted by most scientists to-day. The old theory that disease of the lungs was contracted by the inhalation of the germs of disease, and in no other way, is now admitted to be without foundation. It is possible that in a certain proportion of cases, consumption in human beings is thus induced. But if disease of the lungs is contracted by animals through the ingestion of improper food, why may not the same result follow in man? "It has been shown that tubercle bacilli may pass through the intestinal wall without injuring it, and thus reach the lung. . . . The inhalation of tubercle bacilli is losing much of its importance in the minds of investigators, and the swallowing of tubercle bacilli is gradually supplanting it *as the true mode of infection.*"¹ Says Dr. Melvin, the present Chief of the Bureau of Animal Industry: "The respiratory theory has been shown to be unnecessary to account for the frequency with which tuberculosis is an affection of the lung, and it

¹ Report of U.S. Dept. of Agriculture on "Danger from Tubercle Bacilli," dated May 11, 1907, p. 17.

has been shown that *tubercle bacilli usually reach the lung, irrespective of the manner of their introduction into the body.*"¹

The latest views of scientific investigators are in accord with this statement. In the Twenty-fourth Report of the Bureau of Animal Industry, issued in January, 1909, Dr. Schroeder refers to more than a dozen recent writers and investigators favourable to this theory; adding his personal conviction that no one can read them "without coming to the conclusion that tubercle bacilli easily pass through the intestinal mucosa, from there into the lymph stream, and from it into the circulation, *to be filtered out by the lung, where they most commonly cause disease.* The most important investigations are probably those of Calmette and his associates, now published in book form. They claim not only that pulmonary tuberculosis by the way of the intestine is possible, but also *that this is the common mode of infection.*" The "greatest tuberculous danger to which public health is exposed" seems to this writer the presence of tubercle bacilli in articles of food. He is especially suspicious regarding impure milk; but it is evident that the same danger applies to every article of food, in which the infectious material may be found. In a leading article in the *Medical Record* of June 13, 1908, Dr. Huber admits that perhaps nearly as frequently as by inhalation the tubercle bacillus "is taken into the body with impure food, especially with the *milk and meat of tuberculous cattle.*"

We now come to a question of tremendous importance. We have seen that tuberculosis, in one form or

¹ Year-book, Dept. of Agriculture, 1906, p. 496.

another, is the great destroyer of our race. We have learned that it affects also the animal creation, and that it is especially prevalent among animals used as food by a great part of mankind. We are told, finally, that even consumption—the great white plague of humanity—makes its attack upon its victims by the stomach and intestinal tract, and not the lungs. Now, is it possible that domestic animals, affected by tuberculosis, are to-day slaughtered under the inspection of United States Government officials, and that, by their permission, parts of such diseased carcasses are sold as sound and wholesome food? It is quite certain that the American people have believed that nothing of the kind was possible, since the revelations of 1905, and the resulting legislation of 1906. Again and again, we have given the world assurance of the absolute purity of American meat-products; and we have made these declarations by Government publications and Government officials of the first rank. In 1891, for example, to the Congress of Hygiene and Demography held in London—the assembled sanitarians of the world—we sent as a delegate the Chief of the Bureau of Animal Industry, a subdivision of the United States Department of Agriculture. In a paper on “The Inspection of Meat” which he read at this Congress, he made the following statements:

“With us, in the United States, an animal which is sick—no matter what the disease—is considered as unfit for food, and our people would not knowingly tolerate an inspection which allowed the carcasses of such animals to go upon the market. . . .

“Animals with large abscesses, whether these affect the general condition or not, and those affected with . . . *Tuberculosis, whether generalised or not, are all condemned.* . . . If there is any value in

inspection, the consumer should hereafter eat American meats with a feeling of great relief and confidence."¹

Ten years later, practically the same assurance may be found in a Government publication—the Twelfth Census of the United States. Therein the following statement appears :

“The reputation of American meats in the markets of the world, depends upon the care and thoroughness with which the meat is inspected. This inspection is conducted by the Bureau of Animal Industry of the Department of Agriculture. On arrival at the stock-yards, all animals intended for slaughter, are subjected to an ante-mortem examination by a Government inspector. Any animal *that is found to be diseased*, or not fit for human food, is condemned. . . . At the time of slaughter, all animals are again examined, *and if found to be diseased*, the carcass is . . . removed, and rendered so that *no part of it can be placed on sale for food.*”²

Were these official assurances in accordance with the facts? Is it true that under the inspection of the United States Department of Agriculture animals “affected with tuberculosis, whether generalised or not,” have been *all* condemned? Is it true that “no part” of an animal so diseased can be placed on sale for food, with the consent of our Government? Official assurance to this effect has been given. American meat has been exported throughout the world. In 1904, the United Kingdom took from us over fifty million pounds of canned and salted beef, and more than five hundred million pounds of various preparations of pork. It is probable that this result has

¹ Transactions, Seventh Congress of Hygiene and Demography, London, 1891, vol. iii., pp. 174-176.

² Twelfth Census United States, 1900, vol. ix., p. 420.

been achieved because foreign nations put faith in the purity and wholesomeness of American meat-products. Were the assurances put forth founded upon fact?

Within the brief period of four years, the Department of Agriculture issued three sets of Regulations, governing the inspection of meat. It will be easy to determine, therefore, whether these rules required the rejection of all carcasses found tuberculous, "so that no part can be placed on sale for food."

The Regulations of 1904 were issued on June 27 of that year by the United States Department of Agriculture. Certain of the requirements were as follows:

"All animals found upon post-mortem examination, to be affected with any of the diseases or conditions named below, shall be disposed of according to the following instructions. . . .

TUBERCULOSIS :

1. *The carcass may be passed* when the lesions are limited to one group of lymphatic glands or one other organ.
2. *The carcass may be passed* when the lesions are limited to two groups of visceral lymphatic glands in either the thoracic or abdominal cavity.
3. *The carcass may be passed* when the lesions are limited to two visceral organs (other than lymphatic glands), in the thoracic or the abdominal cavity, provided the lesions are slight, calcified and encapsulated.
4. *The carcass may be passed*, when the lesions are limited to one group of visceral lymphatic glands and one other organ in the thoracic or abdominal cavity, provided the lesions in the affected organs are slight.
5. *The carcass may be passed* when the lesions are confined to two groups of visceral lymphatic glands and one other organ in the thoracic or abdominal cavity, provided the lesions are slight, calcified and encapsulated.
6. *The carcass may be passed* when the lesions are confined to the lungs, the cervical lymphatic glands, and one group

of the visceral lymphatic glands of the thoracic cavity, provided the affection is slight, and the lesions are calcified and encapsulated.”¹

It is not supposed that these Government concessions to the financial interests of the Meat Trust will be understood by the general reader. Probably it was not intended that they should be quickly comprehensible, except by the young officials to whom they were addressed. But concerning one point, these regulations are perfectly plain. No one can fail to see that each United States Inspector of newly-slaughtered animals was required by these regulations *not* to condemn all carcasses found to be affected with tuberculosis, but to “pass” certain of them as fit for human food.

The Regulations concerning meat inspection issued in July, 1906, were supposed to be in accordance with the legislation which had just been enacted by Congress. As a matter of fact, the new rules, in nearly every respect, were as favourable to the pecuniary interests of the butchers and packers, as those they were supposed to supplant. Regarding the carcasses of animals affected by tuberculosis, the new Regulations seem to be intentionally drawn with the design of making the meaning as obscure as possible. There is no specific permission given to “pass” any tubercular meat; the permission must be made out by the intelligent inspector for whom the Regulations were made. It would be difficult to devise rules which should be less obvious or clear. Were they drawn with intent to conceal from the public as far as possible the permitted utilisation

¹ Twenty-first Annual Report, Bureau of Animal Industry, p. 577.

of diseased meat? The italicised words (not thus in the original) will enable the reader to see how the producers of meat, notwithstanding agitation and legislation, were enabled to continue the abuses of other years. Certain paragraphs are as follows:

“TUBERCULOSIS.—All carcasses affected with tuberculosis and showing emaciation shall be condemned. All other carcasses affected with tuberculosis shall be condemned, *except those* in which the lesions are slight, calcified, *or* encapsulated, and are confined to the tissues indicated *in any one of the following five paragraphs, or to a less number of such tissues*, and excepting those also which may, under paragraphs below, be rendered into lard or tallow.

1. The cervical lymphatic glands *and two groups* of visceral lymphatic glands in a single body cavity, such as the cervical, bronchial, and mediastinal glands, or the cervical, hepatic, and mesenteric glands.
2. The cervical lymphatic glands *and one group* of visceral lymphatic glands *and one organ* in a single body cavity, such as the cervical and bronchial glands and the lungs, or the cervical and hepatic glands and the liver.
3. Two groups of visceral lymphatic glands *and one organ* in a single body cavity, such as the bronchial and mediastinal glands *and the lungs*, or the cervical and hepatic glands and the liver.
4. The cervical lymphatic glands *and one group* of visceral lymphatic glands *in each body cavity*, such as the cervical, bronchial, and hepatic glands.
5. *Two* groups of visceral lymphatic glands in the thoracic cavity *and one group* in the abdominal cavity; or *one* group of visceral lymphatic glands in the thoracic cavity and *two* groups in the abdominal cavity, such as the bronchial, mediastinal, and hepatic glands, or the bronchial, hepatic, and mesenteric glands.”

The foregoing paragraphs are all that relate to carcasses to be partly utilised as food. Succeeding

paragraphs refer to still worse conditions, and the utilisation of the carcass in other ways.

We come, finally, to the Regulations governing meat inspection, issued by the Secretary of Agriculture, April 1, 1908, and now in effect. In some respects, the new Regulations make clearer the conditions under which the meat derived from diseased animals may be sold as food. With respect to tuberculosis, we are furnished with arguments in support of the policy which permits its use. The Regulations begin by laying down certain propositions or principles, which are supposed to guide the inspector in his work. We are told, in the first place, that meat should not be approved if there is a reasonable possibility that it contains tubercle bacilli, "or if it has been injuriously affected by tubercular infection" — statements with which we are all in substantial agreement. Then comes the assertion that when tuberculosis in an animal "is limited to a single or several parts or organs of the body, without evidence of recent invasion of numerous bacilli into the systemic circulation," it may be concluded that the disease is localised, and that there is no reason to suspect that the flesh is unwholesome. Having thus cleared the way for an endorsement of tuberculous meat, the United States Department of Agriculture advances yet another step, and, under certain circumstances, *requires the inspector's approval* of the flesh of tuberculous animals as fit food for human beings:

"RULE C.—The carcass, if tuberculous lesions are limited to a single *or several parts or organs of the body* (except as noted in Rule A) without evidence of recent invasion of tubercle bacilli into

the systemic circulation, SHALL BE PASSED after the parts containing the localised lesions are removed and condemned.”¹

A strange and important difference between this regulation and those promulgated at an earlier date, should not be overlooked. The permission to pass tuberculous meat, has now become a command which the inspector is not at liberty to disregard; the tuberculous carcass “*shall be passed*” after the obviously diseased parts are “removed and condemned.” We have no reason to be surprised that the rule which permits this to be done has received the approval of certain very distinguished veterinarians and pathologists. However it may be in England, it is certainly true of the United States, that wherever important financial interests are threatened, their methods can always secure the approval of distinguished advocates. Is it not possible that the approval of tuberculous flesh as wholesome and pure food proceeded less from any considerations of public health, than from a tender regard for other interests? There are men of high repute, who see no harm in the use of tuberculous meat by the general public; we have found no one who has expressed a willingness to have it served on his own table. It is a somewhat interesting and perhaps noteworthy fact that the same Federal official who in 1891, assured Europe that in America, animals affected with “tuberculosis, whether generalised or not, *are all condemned*,”² declared only a year or two later, in his official report, that “it is perfectly safe to con-

¹ See Appendix for these regulations in full.

² Trans. Seventh International Cong. Hyg. and Demog., vol. iii., p. 175.

sume the carcasses of animals which are only slightly affected, and which are in a satisfactory condition of flesh."¹

How many cattle and other animals, found to be affected with tuberculosis, have been permitted by the Department of Agriculture to be turned into meat? Upon this point, we are confronted with official reticence hardly in accord with the frankness which such a matter demands. *No official statistics issued by the Government afford the information desired.* The facts, it would seem, must be known at Washington. Is there any reason why during so many years, they should have been concealed from the general public? The Department of Agriculture is able to tell us precisely how many pounds of beef or pork are annually exported, and even to what countries the meat goes. Is there any reason why the Government should not also be able to tell American and foreign consumers of meat how much of it was derived from tuberculous animals?

In one way, some light may be obtained regarding the inefficiency of our methods of inspection. Every year, since 1900, the Bureau of Animal Industry has reported the number of carcasses which have passed under the inspector's eye, and the number of "*parts*" of carcasses, which on account of this disease, have been "condemned." Now, might not the number of "*parts*" thus condemned, represent also the number of carcasses of diseased animals, which were duly approved for food purposes, after the affected organs and other portions had been eliminated? Inquiry at the Bureau of Animal Industry proved the correctness of this hypothesis; a reply was duly received, stating

¹ Report of Bureau of Animal Industry, 1893-1894, p. 16.

that although the column in question represents the number of parts condemned, and not the number of carcasses from which they were taken, "they would not likely be very different."¹ The light thus thrown is not very vivid; we get, however, some clue to the number of tuberculous animals of which parts have been annually turned into the world's food-supply, for the benefit of the Meat Trust. Assuming, therefore, that the number of "parts" condemned represents approximately the number of tuberculous animals the flesh of which was passed by Federal inspectors as wholesome meat, the following table affords matter of interest:

NUMBER OF CARCASSES (APPROXIMATELY) FOUND ON INSPECTION TO BE AFFECTED WITH TUBERCULOSIS, OF WHICH "PARTS" WERE CONDEMNED, AND THE REMAINDER PASSED AS WHOLESOME FOOD.²

YEAR.	CATTLE.	HOGS.
1900	85	1,061
1901	256	44
1902	152	4,700
1903	250	52,006
1904	703	118,820
1905	647	142,105
1906	1,114	113,491
1907	10,530	364,559
1908	27,467	628,462
Total ...	41,204	1,425,248

¹ Letter of A. D. Melvin, Chief of Bureau of Animal Industry dated April 16, 1907.

² Abstracted from the annual reports of the Bureau of Animal Industry.

The significance of these figures should not escape the reader. Here is the proof, based upon official statistics, of the utilisation for food purposes of animals suffering from tuberculous disease.

But the figures prove far more. They illustrate the terrible indifference to public interests which governed the inspection of meat, especially before the legislation of June, 1906. Note the vast difference which obtains between the number of animals found "partly" diseased in 1907, and the average of preceding years. For instance, the total number of beef carcasses inspected in 1907 showed an increase of precisely 10 per cent. above the figures of 1906. Yet the number of cattle, of which the carcasses were in part condemned increased—not 10 per cent.—*but over 800 per cent.* above the figures of the years before! Almost as many hogs were condemned in one year (1907) as *in part* affected by this disease, as during the entire seven years that preceded it. Was there any noteworthy sudden increase in the prevalence of this disease among animals intended for food? There is no hint of it in the official report. The only conclusion we can reach is that *following the agitation and legislation of 1906, thousands of hogs and cattle were at least partly condemned, which in preceding years, without even the condemnation of a "part," passed into the food-supply of the world.*

Nor is this all. Since the year 1900, the Department of Agriculture has told us the number of carcasses which have been examined each year, the number found so diseased as to require their total condemnation, together with the number which were permitted, in

part, to be utilised as meat. During eight years, how many carcasses were inspected, and how many were condemned? The figures¹ deserve study.

	CATTLE.	HOGS.
Number of carcasses inspected during eight years, 1900-1907	48,926,440	203,281,214
Number of carcasses wholly condemned for tubercular disease... ..	81,172	308,844
Number of carcasses, tuberculous, of which "parts" were condemned, and the rest utilised as "wholesome and healthful food"	13,737	796,786
Of each ten thousand (10,000) carcasses inspected, how many were totally condemned on account of tuberculosis? ...	17	15
Of each ten thousand (10,000) carcasses inspected, how many were partly condemned, and partly used for food purposes?	3	39

There is something inexpressively horrible in the facts which these figures reveal. In his report for 1905 the Chief of the Bureau of Animal Industry asserts that "about 3 per cent. of the hogs coming to some of the largest abattoirs are affected with tuberculosis." Yet even this may be an underestimate. In his report for 1906, the Secretary of Agriculture refers to "the increasing and alarming frequency of tuberculosis in hogs," contracted, as the Secretary points out, not by inhalation

¹ Tabulated from statistics given in annual reports of the Bureau of Animal Industry.

of the germs of disease, but because the animals are permitted to feed upon excrementitious matter and the foulest food.¹ Yet now we discover that during eight years of Federal inspection, of every 10,000 animals examined after slaughter, only 17 carcasses of cattle and 15 carcasses of hogs were absolutely condemned as totally unfit for human food because of tuberculosis! That is less than two out of every thousand. If of the total number of carcasses of cattle inspected, during eight years, less than *two in every thousand* were pronounced by Government inspectors as so affected by tuberculosis as to preclude even a partial utilisation in some form of human food; if of every 10,000 carcasses of hogs that during eight years passed beneath the eye of the Federal inspector, only 15 were condemned because they were so affected by tubercular disease as to be wholly unfit for any kind of meat-food product, then we do not hesitate to say that the system of official inspection of meat, which afforded no better protection from tuberculosis than this, was worse than no protection at all, for in the public mind it induced a mistaken belief in a security that had no existence in fact.²

We cannot question the utility of our Federal inspection of meat if we regard merely the chief

¹ Page 32.

² In 1908, there was a very considerable increase in the number of food-animals of which parts were condemned for tubercular disease and parts converted into articles of food. Four out of every thousand beef carcasses were in part condemned for evidences of this disease, and nearly 18 per thousand carcasses of pork. The total condemnations of both classes of animals *for all causes whatsoever* were less than 38 out of every ten thousand slaughtered for food.

purpose for which it was instituted. It has, indeed, inspired a confidence in the quality of American meat which has vastly increased its consumption at home and abroad. It enabled the meat-packers to sell to the people of Great Britain during the year 1904 nearly five hundred million pounds of American meat-products. Three years after, during 1907, there died in England, from some form of tuberculous disease, no less than 56,101 men, women and children. Are we sure that tuberculous meat was not responsible for some part of this tragic mortality? Looking at the question from every point of view, only one conclusion seems evident: that under the inefficient system of Government inspection which now prevails in the United States—an inspection instituted, admittedly, simply to promote trade—millions of carcasses of animals, affected to some extent by tuberculosis, have been officially approved as “sound, wholesome and fit for human food,” and in one form or another, sent as food-products to nearly all parts of the civilised world.

CONCLUSIONS.

1. Tuberculosis, in some one of its forms, is at present the principal cause of death among human beings in all civilised lands. It is widely prevalent among animals that are used for human food.

2. Since it is yet uncertain how far the use of tuberculous meat may give rise to the disease among human beings, prudence and a decent regard for the public health should outweigh all consideration of whatever money interests are involved.

3. It is contrary to the public good that under the laws of the United States, and for the pecuniary profit of the purveyors of meat, the flesh of any tuberculous animal should be permitted, as now, to be sold to innocent and ignorant purchasers as "pure, sound, and wholesome food." Whenever the carcass of an animal is found to be affected with tuberculosis—no matter to what degree—the law should require that it be so stamped and removed to a special department, entirely apart from sound and healthful meat. While it may be contrary to expediency to forbid the use of meat, derived from tuberculous animals, when the consumer prefers it and is willing to take the risks, *it is absolutely opposed to justice to permit such meat to be forced upon customers who would avoid and discard it, if they were aware of its origin.*

4. So long as it shall be impossible to forbid the utilisation of meat, slightly affected with tuberculosis, the laws of the United States should require that every meat-product, consisting wholly or in part of the flesh of animals thus diseased, whether intended for export or for home consumption, should bear a special label, distinctive in character, clearly indicating to the buyer the origin of such product and its inferiority to meat-food products derived from healthy animals.

5. Since man's victory over tuberculosis, the greatest scourge of the human race, must depend largely upon the education of the people, the diffusion of knowledge concerning the prevalence of tubercular diseases among domestic animals slaughtered for human food is a matter of the utmost importance. For this reason the Department of Agriculture of the United States

Government should annually issue tabular statements, clearly setting forth all the facts pertaining to the inspection of animals intended for human food, for the information and guidance of the consumers of American meat. Such official reports should give (1) the number of carcasses of each species of animals examined; (2) the number found affected with tuberculosis and condemned; (3) the number found slightly affected, and utilised in part; and (4) the number of parts which were destroyed.

CHAPTER V

ACTINOMYCOSIS AND AMERICAN BEEF

A FEW years since, a visitor, passing through the Chicago stock-yards, was quite certain to note a large open pen filled with cattle suffering from a mysterious and horrible disease. To the observer, its resemblance to some forms of cancer was very marked. In the advanced stages of the ailment, the head of the poor beast was often swollen and distorted—a mass of fœtid and feculent purulence. So terrible was the outward appearance of the suffering animal, that every hour of permitted existence and continued pain seemed an unpardonable cruelty. These animals were in the later stages of the disease scientifically known as actinomycosis, and to the farmer and stock-raiser as “lumpy-jaw.” This disease, as a cattle-plague, has long been known. It was very prevalent in Scotland from 1827 to 1839, and, among other designations, was called “cancer of the jaw, cancer of the tongue, osteo-sarcoma, or carcinoma”—terms all significant of a malignant nature. Twenty years ago, in Australia, it was said to be very prevalent, and was there known either as cancer or lumpy-jaw, or a form of tubercular disease. While recent scientific investigators have decided that

its relationship to cancer is improbable, yet the fact that such a name was so long applied to it is strikingly significant of its external appearance. In its later stages, there would appear to be no remedy for it, and, as in cancer, death relieves only after prolonged suffering, if the disease be permitted to run its natural course.

The disorder is not confined solely to the lower animals. Among human beings, about two hundred cases have now been described in medical literature.¹ Like cancer, it does not appear to be contagious, nor is it apparently transmissible by contact from the lower animals to man. Of seventy-five cases recorded by one observer, there was but one in which there was any evidence of contact with an animal thus diseased. Yet we know that in some way, yet unknown, the germs of actinomycosis must find their way into the human system in order to give rise to the disease. In man, as in lower animals, it chiefly affects the head. Regarding its origin, a recent authority admits that "there are still wide gaps in our knowledge."

Is the flesh of animals suffering from this disease fit for the consumption of human beings?

The reply to such a question depends, manifestly, on the point of view. If we regard as paramount the pecuniary interests involved, whether they pertain to the stock-raiser or the packing-house, we shall long hesitate before we condemn as uneatable so vast a quantity of animal flesh. "No country is so rich that it can afford to throw good meat into the tank," says the present chief of the Bureau of Animal Industry in a recent report. From the point of view taken by the

¹ Trans. Cong. Hygiene and Demography, vol. iii., p. 196.

United States Department of Agriculture, "the prices of meat are usually high enough without increasing them by an indiscriminate condemnation of carcasses that are fit for food."

But, on the other hand, it must be confessed that in certain quarters there has been manifested a strong objection to using such diseased animals as food. Here is an ailment resembling cancer in some of its later manifestations, a disease involving conditions of putrid necrosis and broken-down tissues. Through these diseased parts courses the blood-stream of the entire system, going to every organ and part of the animal's body, bearing—for all we know—to the remotest organs the germs of a mysterious and horrible disease. We are told, it is true, and by eminent authorities, that the disease is purely local in character; and that if the butcher cuts away the affected parts, the remainder of the carcass may be consumed without danger. But assuredly the circulation of the blood is not local, nor would the most liberal of Government inspectors select knowingly, for his own consumption or that of his family, a portion of beef derived from an animal thus diseased.

When it was rumoured in England, several years ago, that cattle in the United States, suffering from this obscure disease, were killed and turned into meat, the possible injury of such a statement to the meat trade was at once recognised, and the charge was indignantly and officially denied. It was affirmed that the Board of Live Stock Commissioners of the State of Illinois enforced the destruction of all animals affected with actinomycosis, and prohibited the use of the car-

cases of such animals for human consumption.¹ The Inter-State Live Stock Sanitary Association assisted in the restoration of public confidence by passing a resolution affirming "that animals affected with this disease should be destroyed, and that the carcasses thereof should not be used for human food."²

Still more assuring was the action of the United States Government in sending the head of the Bureau of Animal Industry to London to speak on the inspection of meat before the International Congress of Hygienists and Pathologists. In a passage already quoted, he declared that in America "an animal which is sick—no matter what the disease—is considered unfit for food; and our people would not knowingly tolerate an inspection which allowed the carcasses of such animals to go upon the market." Americans, he declared, were accustomed to choose "the best cuts from the best animals"; and after naming a few of the conditions which in America render animals unfit for food, he asserted that "those affected with *actinomyces* and tuberculosis, whether generalised or not, *are all condemned*. In the condemnation of cattle affected with actinomyces we have probably gone farther than any other country, since beeves in perfect condition have been condemned when they only presented a tumour . . . the size of a walnut."³ The speaker proceeded to indicate some of the perplexities pertaining to the condemnation of cattle suffering from this disease which apparently trouble the Government inspector of meat. "If a suppurating tumour on the jaw, *ten inches in*

¹ Trans. Cong. Hygiene and Demography, vol. iii., p. 195.

² *Ibid.*, p. 196.

³ *Ibid.*, pp. 174, 175.

diameter, calls for condemnation of the carcass, why should not one which is eight inches or even six inches in diameter; and if these are condemned, what shall we say of those which are five, four, three, and two inches only?" What a glimpse into the inferno of meat production is implied by such a question as this!

In his address on this occasion the speaker, referring to contagious diseases of animals, informed his British and foreign associates that "the carcasses of animals *which have died of such diseases . . .* should be rejected, *or the customer should be informed* of the malady from which the animal had suffered."

In the course of a discussion which took place a few days later, the delegate from the United States Department of Agriculture again took occasion to repeat assurances he had before given, and to enunciate sentiments which certainly should underlie the practice of meat inspection. "The question of condemning the carcasses of all animals affected with this disease was very important, both to the consumers of meat and to the producers of bovine animals. If there were danger of infection to man, the meat should not be allowed to go upon the market; *and if there were no danger, the consumer was entitled to know that the meat he was buying came from an animal affected with a serious disease.*"¹ No higher sentiment concerning the subject could have been enunciated. Professor McFadyean, of Edinburgh, pertinently remarked that, although they had been

¹ Trans. Cong. Hygiene and Demog., vol. iii., p. 201. The speaker added that "in the present condition of public opinion in the United States, the utilisation of the carcasses of animals, affected *even in the slightest degree*, would not be tolerated."

assured that "in the United States the sale of the flesh of animals that were affected with actinomycosis was not tolerated, it would be interesting to learn whether the system of meat inspection in that country was adequate to insure that none of the dead meat exported to this country [Great Britain] was derived from animals that were the subject of actinomycosis or tuberculosis." What reply was possible to this most pertinent suggestion? The representative of the Department of Agriculture maintained a discreet silence. He had given to a large body of scientific men, gathered from all quarters of the world, the impression that no animal in America, suffering from "lumpy-jaw" disease in the slightest degree, would be permitted to be turned into marketable meat under the inspection of the United States.

But if such were the principles that governed the inspection of meat in 1891, they gave way very speedily to sentiments more favourable to the financial interests involved. The following year, we find the Chief of the Bureau of Animal Industry making a special report upon this disease, and arguing *against* the destruction of all carcasses of animals thus infected. He declares that the "forcing of infected animals with even slight lesions, to be destroyed for food, is in my opinion . . . a great wrong to the cattle producers of this country. There is no doubt that many thousand dollars' worth of property have been unjustly taken from the cattle owners by such action." Somewhat later the same views are brought forward in a report on actinomycosis by Drs. Salmon and Smith. Should animals thus diseased be used for human food, after

all the diseased organs and tissues have been removed? It is a question, the answer to which depends "on a variety of circumstances." Animals seriously affected, and when the general condition is involved, must of course be condemned. At the same time, it is necessary to be discriminating. "Hard and fast lines, it would be impossible to draw in this, as in some other diseases; and it must be left to the skill of the inspector . . . to settle the fitness or unfitness of each case as it comes up."¹ To the decision of young men, working on small salaries, within the influence of the most unscrupulous and remorseless trust the world has ever known, the decision was now to be left—not whether the animal was affected by disease, but whether, if only the festering and putrid parts could be cut away, the remainder of the carcass might not be utilised in some way as human food!

In accordance with this policy, at different times during the past few years, various Regulations, governing the inspection of animals thus diseased, have been promulgated by the Department of Agriculture. In the Regulations of 1904, we find that in case the disease had not extended beyond the primary area of infection—usually the head—the carcass, if in good condition, might be "passed." There was no limitation whatever, as to the extent to which the disease in the head might have progressed before condemnation was required; not even the existence of "a suppurating tumour on the jaw, ten inches in diameter," was stipulated as any reason for rejecting

¹ Article on "Infectious Diseases of Cattle," by Drs. D. E. Salmon and Theobald Smith, pp. 416, 417.

the carcass. Yet even this was not the worst. If the disease had extended beyond the head, *even then the condemnation of the carcass was not required*; its disposition was to be "in accordance with the instructions relating to tuberculosis." There, we find no less than six statements of diseased conditions which permitted, nevertheless, the approval of the meat. It would seem, therefore, that according to the Government Regulations of 1904, if the carcass of an animal affected by this loathsome disease seemed to the inspector to be in good condition from the butcher's point of view, it need not be condemned. No matter whether the disease had invaded the body, no matter to what horrible state of corruption and putridity the disease in the head had advanced, still, the flesh might be passed as "wholesome and healthful food" if only the polluted parts were carefully cut away and solemnly condemned!

Following the legislation of June, 1906, new Regulations pertaining to meat inspection were issued by the Secretary of the Department of Agriculture. We have seen how easily it was possible to render null and void the stringency of the law forbidding the utilisation of diseased animals as food. The new rules were exactly the same as those issued in 1904, in their requirements and prohibitions concerning "lumpy-jaw" meat. Whatever was permitted in 1904, was equally permitted by the Regulations of 1906.

The Regulations at present operative were issued in April, 1908. So far as concerns animals affected with this disease, there is no essential difference between them, and the rules in force before the attempt at

reform. As in 1904, *no matter how far the disease had progressed in the head*, there is nothing in the present Regulations that requires condemnation of the carcass, provided the head and tongue are carefully condemned. It is a significant and instructive fact, that the Regulations of 1908, by enlarging the opportunity of utilising this kind of flesh, are even more favourable to the pecuniary interests of the packing-house than were the rules of 1904. Before the agitation of 1906, the permission to use meat derived from animals thus diseased depended somewhat upon the number of organs or parts that were involved. According to present regulations, all this is changed; *there is now no limitation to the number of organs which may be affected by actinomycotic lesions*, provided they are "uncomplicated."

The official regulation governing the inspection of cases where the disease has extended even beyond the head of the animal is as follows:

"SECTION 11, *Paragraph 2.* — Carcasses of animals showing uncomplicated localised actinomycotic lesions *other than or in addition to*, those specified in paragraph one of this section *may be passed after the infected organs and parts have been removed and condemned.*" (Italics ours.)

Do we observe in this regulation any limitation to the number of "organs and parts" that may be infected by this disease before condemnation becomes imperative?

The consumption of flesh derived from tuberculous or cancerous animals probably involves more risk to the consumer than is incurred by the ingestion of this kind of corrupt and polluted meat. If one could see the creatures from which it is derived, there would be no

difference in abhorrence and loathing. It is probable that in the history of corporate greed, there is no instance of the supremacy attained by selfish interests more horrible than that which thus permits animals suffering from a most disgusting and abominable disease to be sold as wholesome food, under the sanction of the Government of the United States.

How many animals thus diseased are, by the genius of the meat-packers, transmuted into meat and meat-products and various edible delicacies every year? Up to the year 1900, no information published by the Department of Agriculture gave light upon this question. In the report of the Chief of the Bureau of Animal Industry for that and for subsequent years, we find figures showing the disposition, under Government inspection, of cattle affected with this disease.

DISPOSITION OF CATTLE, FOUND UNDER UNITED STATES GOVERNMENT INSPECTION TO BE AFFECTED WITH ACTINOMYCOSIS, OR "LUMPY-JAW."

YEAR.	CARCASSES WHOLLY CONDEMNED.	NUMBER OF "PARTS" CONDEMNED.
1900	1,661	766
1901	1,355	629
1902	1,264	652
1903	834	837
1904	1,130	2,379
1905	1,246	1,755
1906	797	1,985
1907	661	22,081
1908	667	32,430
Total	9,615	63,514

The meaning of these figures it is not difficult to discern. We note in the first column the total condemnation—head, tongue and carcass—of over nine thousand animals which were found affected by “lumpy-jaw” since the beginning of the fiscal year 1900. Then comes a column giving the number of “parts” condemned during the same period. But the present head of the Bureau of Animal Industry has stated that under this designation we have also approximately the number of carcasses of which a portion was condemned, and the rest turned into food. What is the meaning of that strange increase in number of “parts” condemned during the last two years, for which figures are given? No great outbreak of the disease among cattle has occurred; the total condemnations are even less in 1907 and 1908 than in the preceding year 1906. How, then, does it happen that 20,000 more “parts” of carcasses were eliminated from our food-supply in the year following the legislation of 1906, than during the year before? What interpretation of the facts is possible that is not appalling? Yet what escape is there from the conclusion that during 1907 and 1908, possibly fifty thousand carcasses of cattle affected to some extent with “lumpy-jaw” were held up by Government inspectors and partly condemned, which, under the inspection of preceding years, were permitted—without removal of diseased organs or affected parts—to be transmuted into food delicacies or “sound and wholesome meat”? There is at least this occasion for thankfulness, that if we must be compelled to consume such meat, the diseased “parts” are now somewhat more likely to be condemned.

How extensively cattle may be affected by this disease, and yet have the meat approved by Government inspectors as "sound, wholesome, healthful and fit for human food," we are permitted to know through the disclosures made by an official report.

On Friday, March 9, 1906, a number of lumpy-jaw cattle which had been rejected on ante-mortem examination were slaughtered at a Chicago abattoir. Eleven of the carcasses, after having been approved for food purposes by an inspector of the U.S. Government, were condemned by inspectors of the Chicago Board of Health. A conflict of opinion so marked, amounted to a challenge of the efficiency of Federal inspection of meat which could not be disregarded; and accordingly four officials of the U.S. Bureau of Animal Industry made a careful re-inspection of the eleven carcasses in dispute. We are not informed that the City inspectors who condemned the carcasses were present at the re-inspection, and the notes taken represent, probably, the impressions of those who desired to justify the action of the Federal inspectors in passing the meat. Some of these horrible carcasses are thus described¹:

CARCASS NO. 3.—Cheesy actinomycotic abscesses were observed located below the left ear and behind the lower jawbone, *the size of lemons*. The contents were semi-fluid, and circumscribed by dense fibrous tissue. . . . No other lesions.

CARCASS NO. 4.—At the base of the tongue is *quite a large liquid abscess the size of a teacup*, circumscribed by a thick capsule. *Indications of mixed infection are apparent*. One tubercular nodule, the size of a hazel-nut and slightly calcified, was noted in the . . . lung.

¹ See Twenty-third Report of Bureau of Animal Industry, pp. 420-422.

CARCASS NO. 6.— . . . *A large, fibrous actinomycotic tumour the size of a cocoa-nut*, which contained four or five centres of pus, well encapsulated. . . .

CARCASS NO. 7.—The entire post-pharyngeal space was occupied by *a large, fibrous actinomycotic tumour, the size of a child's head*. The encapsulating fibrous tissue showed numerous hæmorrhagic areas. *All the adjoining glands of this region were enlarged and hæmorrhagic.*

CARCASS NO. 9.—Two apple-sized actinomycotic tumours, . . . *contained a greenish pus*, semi-fluid in consistency.

CARCASS NO. 10.—The entire pharyngeal region was occupied by a large caseo-calcareous swelling, tubercular in character, involving . . . lymph glands. (Other slight lesions mentioned.)

In regard to nearly every one of these cases, the information is added that the carcass was in fine condition. One of the carcasses (No. 7) is declared to have been "*in extra fine condition for bologna!*"

As a result of this re-examination, it was the opinion of the four experts belonging to the United States Bureau of Animal Industry that "*no cause existed for the condemnation of the carcasses*" with the exception of No. 10, last mentioned. It was the further opinion of these officials that carcass No. 10 "*was on the border line, but that it would be advisable in this case to condemn the meat.*" Here, then, is a concrete instance of United States Government beef inspection as now conducted. Although the date was before passage of the present law, the same laxity of "regulations" permits to-day precisely the same abuse. When the English working-man buys a tin of American beef, "U.S. Inspected and Passed," is it stuff like this that he imagines he is placing on the family table? Only a few years ago, he was officially assured that carcasses "*affected with actinomycosis, whether generalised or*

not, *are all condemned.*" What is to be the value of our official word in the future, unless we hasten to make that promise good?

The excuses which will be put forth for permitting and authorising the use of such flesh, it is easy to foresee. The public will be assured by distinguished veterinary experts, and perhaps, even by medical authorities, that if the putrid and suppurating parts are removed, in a majority of cases the remainder of the animal is quite suitable for food. It will be asserted that the direct transmission of the disease to human beings by the use of this meat is by no means a proven fact. We shall be told that the objections to using it are purely sentimental; changed into food-delicacies by the skill of the packing-house, nobody would have the slightest objection to it, unless there was forced upon him the knowledge of its origin. To require condemnation of all "lumpy-jaw" cattle would be to inflict a heavy financial loss upon the meat-producing industry in America, and create conditions certain to result in higher prices for a staple article of food. But all such apologies for our present policy fail entirely to touch the chief issue—the right of the packing-houses to put upon the market meat derived from animals thus affected by serious disease, *and to keep from the public all information regarding its peculiar origin.* Have they such right as this? Can it possibly be maintained that in permitting this to be done, as it is being done to-day, in conniving at a policy of silence and in failing to make widely known the truth, the United States Government, as represented by the Department of Agriculture, has acted for the general

good of the nation, rather than the financial profit of the Meat Trust? Would any civilised man on the face of the globe be content with the hospitality of his host, if, invited to dine, he were secretly served with such abominable viands?

There is yet another objection to the Government's approval of this offensive stuff as fit and wholesome food. We shall be told, of course, that no disease can be transmitted by its consumption. Is this certain? Medical science is yet in its infancy, so far as concerns knowledge of certain diseases and their cause. Only a few years ago, the real nature of some of the most insidious and fatal of ailments was unsuspected by the medical profession. Concerning the causation of the worst foe to humanity, we know little more than was known half a century ago. Now, here is an ailment, chiefly affecting cattle, which for many years, in Scotland, in Australia, and elsewhere, was supposed to be a form of cancer, and called by that name. Under the microscope, differences between it and ordinary cancer have been revealed; yet to the unaided eye, little or no difference is apparent when the disease is greatly advanced. How do we know but that the science of the future may one day reveal that, closely resembling each other in external characteristics, *there are here two diseases?* Why may it not be possible, that coming up to Chicago packing-houses with cattle suffering from actinomycosis are also cattle suffering from unrecognised, undetected cancer, and that the flesh of these cancerous carcasses, stamped as wholesome and fit for human food by United States inspectors, goes into the food-supply of every nation which depends

in any way upon American meat? We need not consider this as a demonstrated fact; it may not even be a probability, but assuredly it is a possibility. Even the Department of Agriculture, in a circular dated July 24, 1906, admits that "there are still wide gaps in our knowledge" regarding the nature and origin of this disease. Greater discoveries than this would be have been made by the science of medicine during the last fifty years. And if ever, in years to come, such hypothesis should become a proven fact, and an explanation in no matter how slight a degree, of that ominous increase of cancer which is the tragedy of our time, then we do not envy the future repute of those men, high in influence and scientific authority, who, with power to caution and perhaps to forbid, were willing to endorse, to sanction, and to encourage the sale to the people of America and England of such meat as this.

If there are many matters in dispute, there are some facts that are beyond question.

It is certain that for many years past, the Regulations of the U.S. Department of Agriculture governing the inspection of meat have sanctioned the utilisation for food purposes of cattle affected with actinomycosis or "lumpy-jaw."

It is certain that notwithstanding all the agitation of 1906 concerning American meat, and notwithstanding the passage of a "Pure Food Law," the same abuse exists to-day under the direct sanction of a co-ordinate department of the Government of the United States.

It is certain that this utilisation of the carcasses of such diseased animals has not been made known to the

consumers of American meat, either in England or America, who are alike ignorant of this abuse as it exists at the present time.

It is certain that this abuse conduces, not to the advantage of the meat consumer, but rather to the benefit of those financial interests which now govern in great measure the production of American meat.

It is certain that in 1891, by a representative of the United States Department of Agriculture, the solemn assurance was given to the world that under the American system of meat inspection, "*animals affected with actinomycosis, whether generalised or not, are all condemned.*"

It is certain that this statement has not been true for many years.

In view of these facts, can we say that America has kept faith with its foreign customers throughout the world? Has the Department of Agriculture dealt fairly with the people of the United States?

CONCLUSIONS.

1. It is possible that actinomycosis or "lumpy-jaw" in its earlier manifestations, and in a majority of cases, is a local disease.

2. The use of the flesh of animals affected by "lumpy-jaw," and especially after suppuration has begun—even if without any recognised injurious consequences to health—would be utterly abhorrent to every intelligent man or woman in this country or England, if they could have seen alive the diseased creature from which such meat is derived.

3. It is contrary to justice, for the sake of any

financial interest whatever, to permit the sale of such meat, under any form or disguise, to customers who would discard it with disgust if made aware of its origin.

4. Both State and Federal laws of the United States should therefore require that all meat, or meat-food delicacies, beef-extracts or meat-products of any kind, derived wholly or in part from the flesh or organs of animals which at the time of slaughter were suffering from actinomycosis, should be permitted to be sold, *if at all*, only under a special label, distinctive in colour, clearly indicating the character of the flesh from which it was derived, and its inferiority to healthy meat.

CHAPTER VI

TRICHINA AND AMERICAN PORK

IN the year 1835, a young medical student in London, while engaged in dissecting a human body, discovered in the muscular tissue a singular parasite, a minute coiled-up worm almost invisible to the naked eye. Regarded merely as a curiosity, its significance as a cause of disease was entirely overlooked by the medical profession for a quarter of a century. About 1860, however, it began to attract the attention of German scientists; and soon after, the life-history of the *Trichina spiralis* became definitely known.

Although the parasite has been found to infest a number of animals, it is believed to find its way into the human body only by the ingestion of infested pork. The older trichinæ are lodged in the lean muscular tissue of the hog. If the animal is shortly afterwards sent to the slaughter-house, the pork or pork-products derived from its carcass, when eaten by human beings, may give rise to a new infestation. Millions of young trichinæ, having birth in the intestinal canal, penetrate its walls, and seek entrance into the muscular tissue of their new host. From 10,000 to 18,000 of these parasites have been found in a single cubic inch of infected pork. The danger depends upon the number of trichinæ

taken as food: the number may be so few that only vague symptoms will follow; the number may be so great that millions of the young will penetrate the muscles, and death is inevitable.

The symptoms which these parasites occasion are often obscure and varied. The patient complains of various gastric and intestinal disturbances, weakness or stiffness of the muscles, and especially of pains, resembling those of gout or rheumatism. Sometimes the pain is felt at the slightest movement, even the action of swallowing food or moving the eyes. If the disease progresses to a fatal termination, the end may come within a few weeks, or only after a considerable period of progressive emaciation.

The fact that the symptoms arising from the presence of this parasite in the human body have been ascribed very often to other causes is one of peculiar significance. In the bodies of persons supposed to have died of consumption, but where the autopsy disclosed no affection of the lungs, this parasite is said to have been found more than once. Virchow states that there are on record a number of instances wherein death having abruptly occurred after eating, and without known cause, the suspicion of poisoning gave rise to judicial investigations, which of course left reputations injured because innocence was not made clear. One instance is particularly curious. In 1863, in the muscular tissue of a patient undergoing a surgical operation, were noted evidences of the characteristic shells or cysts of trichinæ, which can be discerned with the naked eye. In reply to subsequent inquiry whether he had ever been very ill, the patient stated that in the year 1815,

while a member of a commission for the inspection of schools, he, with other members of his party, partook of a meal, which included ham and sausage, at an inn. Shortly afterwards, seven members of the party became sick, and all of them died with the exception of the relator. Naturally a grave suspicion fell upon the inn-keeper, but although subjected to a rigid investigation, no evidence of murderous intention could be adduced. Here was a case in which the survivor might have gone to his death, suspecting that his own illness and the deaths of his associates had been due to foul play, but for the knowledge which had been attained many years after the fatal repast. Another case mentioned by Virchow to a correspondent is that of a woman who had been affected by mysterious symptoms (now known to be due to the *Trichina spiralis*), which had finally disappeared, leaving her incapable of using her hands in piano-playing. When, quite ten years later, death occurred from malignant disease, an autopsy revealed the presence in the muscular system of the parasites which caused the symptoms of ten years before.

The multiplicity of its manifestations suggests the belief that the disease may be more common than has been supposed. One authority states that evidences of past or present infestation with this parasite have been found in between 1 and 2 per cent. of bodies anatomised in a dissecting-room. Sometimes the disease resembles typhus fever. Dr. Wendte of New York has suggested that many cases of so-called chronic rheumatism may be due to this parasite. Dr. Fagge of London believes that in cases where a very small number of the parasites gain admission to the system, the symptoms are merely

such "as might be attributed to a rheumatic affection." When we remember that, even in our day, medical science is not certain of the causes which give rise to rheumatic symptoms among patients who have been somewhat excessive in their consumption of meat, these references to similarity of symptoms become in the highest degree suggestive. Science does not profess to know everything. A hundred years hence, there may be a new theory put forth for explaining what is now obscure.

Naturally, after the minute worms have left the digestive tract and have sought a resting-place in the muscular tissue of their human host, there can be no remedy but the old cure for rheumatism—"flannel and six weeks." A German experimenter discovered early in his investigations that benzine would certainly kill the trichina, but he could invent no way of killing the parasites after they were embedded in the muscles of a living man. The only way to avoid the disease with certainty is to avoid eating trichinous flesh. "Cooking, smoking, or toasting trichinous meat—as it is usually done—does not appear to be sufficient to destroy the worms in all parts of the meat." Of course, if the meat is subjected to a high temperature for a sufficiently long time, the parasites must be cooked, and then probably can be eaten with impunity. But ordinary cooking in the average kitchen is quite insufficient. It was in a slice of boiled ham, upon which Dr. Leidy had partly made his dinner, that, in 1847, he discovered the presence of this parasite.

Now to what extent is American pork affected by this cause of disease? Upon what measures, if any,

has the Federal Government placed reliance for detecting its presence in American pork, and for the protection of the purchaser of our meats?

The poisoning of a whole family in New York City in February, 1864, after eating a portion of a ham, first led to a recognition in this country of the dangers pertaining to this article of food. The following year, a committee of physicians in Chicago examined nearly 1,400 hogs from different packing-houses, and reported that about 2 per cent.—one in fifty—was infested with this dangerous parasite. In 1878, another investigation resulted in the discovery that 8 per cent. of the hogs examined in Chicago were thus diseased. In 1879, a foreign authority declared that from 10 to 20 per cent. of American hams imported into North Germany were so infected with trichina as to render them dangerous for food.

It is quite possible that the latter estimate was an exaggeration, but it effected its purpose; and in the year 1880, Germany refused to admit American sausage, and three years afterwards prohibited altogether the importation of American pork. Eight years later, this restriction was taken off, but with the understanding that our Government should at once institute a microscopic examination of all pork destined for the German Empire. A few other countries—France, Austria, Italy and Denmark, for example—made the importation of American pork conditional upon the same microscopic examination. In the prevention of disease, the Department of Agriculture took an interest, only so far as it affected the sale of American products from ranch and farm. Only so many carcasses were microscopically

examined as would suffice to supply the demands of the few countries who insisted upon it as a condition of admitting American pork. Of the total number of hogs slaughtered under Government inspection during seven years, 1900-1906, less than one in forty was microscopically examined for this parasite.

The Departmental Reports enable us to get at the facts regarding the extent and efficiency of this examination. The following extracts are from the reports of the Chief of the Bureau of Animal Industry, under whose direction the examinations were officially made.

MICROSCOPIC EXAMINATION OF PORK.

(1902.) "The number of carcasses examined was 681,865, classified as follows: Class A (free from all appearance of trichinæ), 664,288, or 97.42 per cent.; Class B (containing trichina-like bodies or disintegrating trichinæ), 10,085, or 1.48 per cent.; Class C (containing living trichinæ), 7,492, or 1.10 per cent.

"There were 7,481 trichinous carcasses, weighing 1,585,627 pounds, and 68,801 pounds of livers disposed of during the year. About one-half was tanked, and *the rest made into cooked meat.*

"The cost of microscopic inspection was \$123,947.31. This is an average of twelve cents for each examination."

(1903.) "The number of carcasses examined was 489,667, classified as follows: Class A (free from all appearance of trichinæ), 477,195, or 97.45 per cent.; Class B (containing trichina-like bodies or disintegrating trichinæ), 7,394, or 1.51 per cent.; Class C (containing living trichinæ), 5,078, or 1.04 per cent.

"There were 5,136 trichinous carcasses disposed of during the year; these weighed 1,093,376 pounds, and about 41 per cent. were tanked, and *the rest made into cooked meat.*"

(1904.) "The number of trichinous carcasses disposed of was 2,643; these weighed 612,912 pounds; 38.5 per cent. of this

amount was tanked, and 61.5 *per cent.* was made into cooked-meat products."

(1905.) "The number of trichinous carcasses disposed of was 3,652, weighing 819,922 pounds, 57 *per cent.* of which was made into cooked-meat products, the remainder being tanked."

The official reports of the Chief of the Bureau of Animal Industry during the years 1900-1906 enable us to obtain the following summary :

FEDERAL INSPECTION OF PORK, 1900-1906.

Total number of hogs, slaughtered under Government inspection, 1900-1906	171,152,281
Number of these examined for trichina	4,102,330
Number of carcasses found with trichina-like bodies or disintegrating trichinæ	54,507
Number of carcasses containing living parasites	54,237
Per cent. of carcasses examined found infested by trichina (half of which were alive) ...	2.65

It is apparent, therefore, that during the seven years in question, one carcass in 38 of those examined, presented evidence of being infested, or of having been infested with trichinæ.

During eight years, 1900-1907, there were slaughtered, under Government inspection, over 203,000,000 hogs. Since there can be no doubt but that trichina was as common among all animals as among those whose carcasses were examined, it follows that during this period of eight years, over five million carcasses of hogs, or *about a thousand million pounds of pork*, infested by trichinæ—at least half of which at the time of slaughter were potent for mischief—were turned into the meat-supply of an unsuspecting world.

It is quite possible, too, that even these figures do not convey the whole extent of the evil. Dr. Melvin, in his report for 1906, tells us that "out of 6,329 cases of trichinosis in Germany, . . . a careful inquiry traced 2,042 cases (over 32 per cent.) to meat which had been microscopically examined and passed as free from trichinæ."¹ To what extent this statement applied to our American pork we are not told. For a number of years, however, "the German Government has not accepted the American certificate as having any sanitary value, and has reinspected, at the expense of the shipper, all pork received there from the United States. Nevertheless, it has appeared to be desirable to continue the microscopic inspection in this country, in order to reduce to a minimum the percentage of trichinæ found on reinspection in other countries. This is an important measure for maintaining the reputation of our meats, and one this country cannot afford to neglect."² If this scepticism on the part of Germany regarding the value of our inspection was well founded, the probability is strong that trichinæ in American pork exists to a considerably greater extent than we have been inclined to admit.

In 1905, we were officially informed that even though Germany scorned our inspection for trichinæ, it was important to keep it up. A year later, however, the Department of Agriculture decided to abandon altogether the microscopical examination of our pork for the detection of this parasite. Such inspection, of course, was useless, so far as Germany was concerned.

¹ Twenty-third Report, Bureau of Animal Industry, p. 96.

² Report, Chief of Bureau of Animal Industry for 1905, p. 47.

If all American pork, whether for home consumption or foreign export, was subjected to this test, it would cost somebody—the National Treasury or the meat-packers—about \$3,700,000 per year. “No microscopic inspection of pork, intended for home consumption, has ever been made, *or even contemplated*,” says Dr. Melvin in his paper on the inspection of meat.¹ The Department of Agriculture now takes the view that such inspection “would do more harm than good. It would create in the minds of the consumers a feeling of false security, which might lead them to omit the only sure means of escaping danger, namely, to refrain from eating uncooked or uncured pork.” The American Government now throws the responsibility of contracting this disease solely upon the consumer. Thorough cooking undoubtedly will destroy the parasite. But who tells the English labourer that his American ham or sausage is dangerous unless long subjected to the process of cooking? Who tells the American working man or the newly-arrived emigrant that such danger as this lurks in his food, because his Government does not insist upon a thorough inspection of pork? How many of the well-to-do classes in both countries know that the pork-products, so attractively advertised, may contain these parasites? Cooked trichinæ may be harmless; but is there anybody who would not prefer his meat free from them?

It is quite probable that one reason which strongly influenced the decision of our Government to abandon altogether the microscopic inspection of pork was the absence of any particular demand for it, either in

¹ Twenty-third Report, Bureau of Animal Industry, p. 96.

America or in England. At home, we have been for years entirely indifferent to the question, and quite content to eat food that Germany rejects. Outbreaks of trichinosis occur, even since the passage of the so-called "Pure Food Bill," but they make no impression on the public mind. Never in America, has there been any strong and persistent demand on the part of the people that trichinous pork shall not be sold. We make no protest at the present time against the inclusion, every year, of unknown thousands of such carcasses, in the food-supply of the United States. It may be that this indifference is partly due to ignorance of the facts. Possibly it may arise from the conviction that the cost of inspection would be immense, and that the purveyors of meat would find some way to put the cost upon the National Treasury.

More singular than American indifference is the attitude of unconcern manifested by Great Britain. Of American pork-products, she buys far more than all the rest of the world purchases; in 1904, for example, the United Kingdom took more than 80 per cent. of the exports of American bacon and hams, and more than 60 per cent. of all exported fresh and salted pork. Suppose that the English Government—following the example of Germany—had made the importation of American pork-products dependent upon this microscopic examination for trichinæ—is it likely that the United States would have refused it, no matter what the cost? Is England indifferent to the health of her people? It is a criminal offence in America to use borax as a preservative for meat; but the Chief of the Bureau of Animal Industry tells us that England makes

no objection to its use, and that meats to be sent to that country may be preserved with borax, provided they are prepared by the meat-packers in separate rooms, and marked with special labels.¹ It would be folly to expect the United States to show greater solicitude for the health of the English working man than his own Government manifests. But no one can doubt that the microscopic examination of every pound of pork-products going to England would have been granted, for the sake of continued trade, *if the English Government had seen fit to ask for it*. If England had received this privilege, it is not likely that it could have been long withheld from the American people. Perhaps in this way only, we may hope to obtain the microscopic inspection of all American pork.

CONCLUSIONS.

1. The experience of seven years' microscopic inspection of pork makes it certain that at the present time, in the United States, from eighty to a hundred million pounds of trichina-infested flesh are turned by American meat-producers into the world's food-supply every year. The probability is that the amount is vastly greater than this estimate.

2. It is the duty of the United States Government to require a microscopic examination of all hogs slaughtered under its supervision—not with the hope of eliminating the danger altogether, but for the purpose of reducing to its lowest terms the chances of infection of human beings.

¹ Twenty-third Report, Bureau of Animal Industry, p. 88.

3. The cost of Government inspection and microscopic examination—varying from fifteen to twenty cents per carcass—should be borne by the purveyors of meat.

4. Although we are told by veterinarians that no harm can arise from eating pork infested by trichinæ, provided it is well cooked, nevertheless, all meat-products, consisting wholly or in part of such flesh or organs, should be manufactured separately from other articles, and sold under such distinctive label as shall permit the customer to know what he buys.

CHAPTER VII

SWINE PLAGUES, AND THEIR RELATION TO PORK FOODS

IT is now hardly more than a quarter of a century since the visual demonstration of germs, as the cause of certain diseases, gave a new impulse to medical science and renewed hopes for the future prevention of disease. But no matter how close and careful the research, there are yet certain diseases, of which, though the cause is certainly a microbe capable of multiplying in the animal system, no human eye has yet been able to perceive it. As pointed out by Dr. Dorset, although microscopes have been greatly improved, yet the germs of measles, smallpox, rabies and yellow-fever, and certain other diseases more particularly pertaining to animals, still elude the keenest vision and the highest skill.

The hypothesis to which Science has therefore been led, is that the micro-organisms which constitute the germs of certain fatal diseases are so infinitesimally and inconceivably minute as to make their perception beyond the power of the human eye, even when aided by microscopes of the highest power. One investigator has questioned whether there may not be micro-organisms as much smaller than the ordinary bacteria

as the ordinary bacteria, invisible to the naked eye, are yet smaller than the largest trees? Upon the capacity of Nature, in this respect, there is nothing that enables us to place bounds. Beyond a certain limit she hides the secrets of the universe from the feeble vision of mankind.

There are two diseases affecting swine, so closely resembling each other in their symptoms that it is difficult to distinguish them, known as hog-cholera and swine-plague, the microbe of which, according to some investigators, has thus far eluded discovery by the human eye. Of hog-cholera, we know that it is an acute and highly-infectious disease, and one extremely apt to be fatal, unless the animal is butchered for food. Nearly every organ of the body—the heart, kidneys, lungs, stomach, spleen, and intestines—usually shows evidences, after death, of the results of this disease.¹ The ailment is extremely contagious, and one animal diseased may quickly infect a large number. A matter of some interest is the fact that the plague may be transmitted by inoculation with the blood of an animal suffering from the disease. The virus, however, is known only by its effects. “We have failed completely,” says Dr. Dorset and his associates, “in all attempts to discover, by microscopic examination or by the usual cultural methods, any visible micro-organism. . . .” That the disease is due to “some

¹ This is not uniformly the case. We are told that “the hog may be desperately sick, and yet when killed the autopsy may reveal only a few reddened lymphatic glands, and possibly a few hepatised areas in the lungs; or, on the contrary, every organ may show pathological changes” (Twenty-first Report, Bureau of Animal Industry, p. 146).

living agent endowed with the power of reproduction" seems evident to these investigators; but it passes in minuteness the discerning capacity of the human eye.

It is not pleasant reading, these details of animal disease. But if we are face to face with a mystery, we confront also a problem of the utmost importance to the consumers of meat. Here is a strange and most singular ailment, extremely fatal in its results, and caused by a living organism in the blood of the animal. We know that through every organ and tissue of the creature's body, flows the vital current, carrying innumerable millions of the invisible germs which give rise to the plague. Suppose the hog is slaughtered while suffering from the disease; is its flesh safe to eat? No matter how incipient is the infection, can we call it "wholesome, sound, healthful, and fit for human food"?

The reader may think that but one answer to this question is possible. Nevertheless, it is a fact that for many years, the Department of Agriculture has decided that carcasses of animals thus affected, may be used for food purposes, and stamped with the guarantee of the United States Government as healthful food. It is true that when this is permitted, the disease must not have involved every organ in the body, and the inspector must be able to say that "the lesions in the carcass are slight." Let us see exactly what the inspectors have been permitted to "pass."

REGULATIONS OF 1904.

1. Carcasses showing widely-distributed lesions of hog-cholera or swine plague shall be condemned.
2. When the lesions in the carcass are slight, and confined to either the skin, kidneys, bones, or lymphatic glands, or to

any combination of two of the organs mentioned, the carcass may be passed, provided it is cut for packing purposes.

3. When the lesions are well-marked in more than two of the organs mentioned . . . the entire carcass shall be condemned and tanked for fertiliser.
4. Carcasses which reveal lesions more pronounced than those described for carcasses that may be passed, but not so severe as the lesions described for carcasses that shall be condemned . . . may be rendered into lard. . . .
5. In inspecting carcasses showing lesions of the skin, bones, kidneys, or lymphatic glands, *due consideration shall be given* to the extent and severity of the lesions found in the viscera."

It is evident that in framing these rules, the financial interests involved were by no means overlooked. The inspector is significantly cautioned to give "due consideration" to the extent and severity of the lesions in the viscera, but it is largely left to his own discretion to say where any dividing-line shall be drawn. We note that the carcass in certain cases may be passed, when "cut for packing purposes," or made into "mess-pork" for the working classes.

In the Regulations promulgated immediately after the passage of the legislation of June, 1906, we should look, naturally, for some improvement in these rules, some further precautions against the use of meat of this character. On the contrary, no change for the better is apparent in the new Regulations. There is indeed no injunction to cut the meat for packing purposes. We cannot see that this omission constitutes any improvement. Under the old Regulations, the flesh of hogs thus diseased was passed on condition that it be cut for packing purposes and salted down, or subjected to

processes which food-products require. To-day, after all the agitation in favour of pure food, there is not a word in the regulations governing the disposal of this stuff which prevents the flesh from being offered for sale on the butcher's stand.

In April, 1908, appeared the Regulations which are at present in force. So far as concerns animals slaughtered while suffering from this disease, there is no improvement over the Regulations of preceding years. Here, for instance, are the first paragraphs:

“SECTION 10, *Paragraph 1.*—Carcasses showing well-marked and progressive lesions of hog-cholera or swine plague in more than two of the organs (skin, kidneys, bones, or lymphatic glands), shall be condemned.

“*Paragraph 2.*—Provided they are well-nourished, carcasses showing slight and limited lesions of these diseases *may be passed.*”

Then follow the stipulations which provide for the use of these carcasses for lard, and a suggestion that due consideration be given the evidences of visceral disease. There is, indeed, one particular in which the Regulations governing condemnation of this meat are now less stringent than in 1904. In the earlier rules, as we have seen, if the lesions were slight, and confined to two organs of the body—no more—the carcass could be passed. Under the Regulations put forth in 1908, so far as one can see, the carcass may be passed, *even though every organ in the body show evidences of the disease*, provided the inspector is willing to consider them “slight and limited,” and if the animal be fat.

How many hogs, thus diseased, are permitted every year, to pass into the world's meat-supply? It is impossible to say. No published statistics, in any Government report from 1900 to 1906, afford any

information as to the extent to which the meat-packers have availed themselves of the privileges thus accorded them by the Department of Agriculture. During seven years, 1900-1906, one finds in no official report the mention of any "parts" condemned on account of this disease. In the report for the year 1907, for the first time, we learn that some 729 "parts" were officially condemned as unfit for food. It may be that these figures indicate an attempt at reform. Perhaps, to-day, certain diseased portions of carcasses are actually rejected as unfit, even for transmutation into sausage, which in previous years were not thus permitted to be lost.

CONCLUSIONS.

1. It is not just that the working-class population either in England or America, without their knowledge or consent, should be compelled to consume as food the flesh of animals which at the time of their slaughter were suffering from a highly infectious and mysterious disease.

2. It is not in accordance with justice, that any regard for the pecuniary profits of the meat-packers should govern the regulations in this respect; or that the Government of the United States should permit the flesh of swine, suffering from hog-cholera or the swine plague, to be passed for foreign or home consumption as sound and wholesome meat.

3. Such amendment of the United States laws is therefore imperatively required, as shall forbid the utilisation for food purposes of pork derived from animals thus diseased.

CHAPTER VIII

OTHER CONDITIONS OR DISEASES AFFECTING AMERICAN MEAT

To what extent were the rules and regulations governing the inspection of meat influenced by suggestions and advice proceeding from the Meat Trust? It is a question to which no answer can be given at present; and yet it is one which cannot but come into the mind of every reader of these official regulations, who notes the care taken to conserve the financial interests involved. One can find hardly a single provision in these rules to which the purveyors of meat could really object. There are, indeed, certain infectious diseases of a specially dangerous character, regarding which the Government regulations are peremptory. Carcasses of animals showing signs of blood-poisoning, of anthrax, of blackleg or Texas fever, or of certain diseases which may give rise to poisoning, are of course condemned. With regard to a majority of diseases affecting animals slaughtered for food, there are fine distinctions laid down, and a peculiar latitude allowed. One observes too, now and then, a lack of clearness in the formulating of regulations, which doubtless gives no trouble to the intelligent inspector, but which nevertheless serves to hide the facts from the public eye. A few

other instances of governmental permission to utilise meat affected by disease are worthy of notice.

1. "*Malignant Epizootic Catarrh.*—Carcasses of animals affected with malignant epizootic catarrh, *and* showing generalised inflammation of the mucous membranes, shall be condemned" (Regulation 13, Section 9, 1908).

Is this a condemnation of the carcasses of all animals found to be affected by a malignant disease? At first glance the reader would get that impression. But suppose that animals come before the inspector which, though obviously diseased, do not show "generalised inflammation," what then is his duty? To cause the meat to be destroyed and the packing-house to lose? Is this course demanded by the Regulations?

Some light may be thrown upon the subject by comparing this regulation, promulgated in 1908, with a similar injunction in the regulations issued in 1904:

"Malignant Epizootic Catarrh.—The carcasses of animals affected with this disease, and showing generalised inflammation of the mucous membranes with emaciation, shall be condemned. *If the lesions are restricted to a single tract, or if the disease shows purely local lesions, the carcass may be passed.*"

We see that the phrase in italics, which in 1904 made the inspector aware of his privileges, has been carefully omitted from the rules of 1908. But is it not evident that the liberty accorded the inspector is as broad to-day as it was in 1904? He is told in so many words what animals he must condemn. We cannot doubt that when the diseased conditions fail in severity to reach the standard laid down by the Department of Agriculture, the intelligent inspector is aware of the course he may pursue. Is anything gained by this

partial suppression of rules which may meet the public eye?

2. *Skin Diseases*.—Cases of this kind, apparently, are not numerous. The official Regulations of 1908 indicate the action to be taken by the Government inspector regarding them :

“SECTION 16. — Carcasses of animals affected with mange or scab, in advanced stages, or showing emaciation or extension of the inflammation to the flesh, shall be condemned. *When the disease is slight, the carcass may be passed.*”

“SECTION 21. — Hogs affected with urticaria (diamond skin disease), tinea tonsurans, demodex folliculorum, or erythema, may be passed, *after detaching and condemning the skin*, if the carcass is otherwise fit for food.”

In the Regulations of 1904, it is stated concerning carcasses of animals affected with mange, that “when the disease is slight *and the carcasses are in good condition*, they may be passed.” In the Regulations of 1908, the words here underscored have disappeared; and apparently such carcasses may now be passed if *not* in good condition, provided the disease is slight. It would be of interest to know why this clause of the Regulations of 1904 was eliminated from the present rules?

Exactly what would happen to human beings who should feed regularly upon the flesh of hogs which, when slaughtered, were suffering from various skin diseases, is a question to which no scientific reply is available. Distinguished experts may doubtless be found who will insist that the English working man who could raise objections to such meat, when the skin has been most conscientiously condemned, is as unreasonable as the pupils at Dotheboys Hall, who regarded with repugnance the cow-liver broth furnished

by Mr. Squeers. One may be fairly certain, however, that both in England and America the consumption of such meat can only be secured by that concealment of the facts which, whenever possible, appears to be the policy of the Meat Trust.

3. *Caseous Lymphadenitis*.—Of this disease comparatively little is known. It seems to have been discovered in 1891, and was designated at first as due to the *Bacillus pseudo-tuberculosis*. As a rule, it attacks only sheep, and generally it is not discovered until the animal is slaughtered. Guinea-pigs and rabbits fed with the products of the disease die in from five to ten weeks. Cases of the disease have been reported in human beings.

The regulation of 1908 concerning this disease reads thus :

“SECTION 12.—When the lesions of caseous lymphadenitis are limited to the superficial lymphatic glands, or to a few nodules in an organ, *involving also the adjacent lymphatic glands*, and the carcass is well-nourished, the meat may be passed, after the affected parts are removed and condemned.

“If extensive adhesions, with or without pleuritic adhesions, are found in the lungs, or if several of the visceral organs contain caseous nodules, *and the carcass is emaciated*, it shall be condemned.” (Italics ours.)

Nearly word for word, this regulation duplicates the rule of 1904. It has been drawn up with great skill ; not one general reader in a hundred would discern the meaning. The inspector understands it. Even the casual reader will see that meat, thus diseased, is not to be condemned, but “passed” for food “after affected parts” are cut away, provided the animal is not emaciated. Apparently it would seem that, no matter

how many adhesions are to be found in the lungs, or how many organs contain the evidence of disease, there is no requirement for condemnation of the carcass unless it is associated with emaciation.

4. *Immaturity*.—A writer in the Twentieth Report of the Bureau of Animal Industry has stated the age at which young animals may be killed for meat as follows :

“A calf should not be used for veal under six weeks of age, and is at its best when about ten weeks old. . . . There is a law in most States against selling veal under six weeks of age. Hogs may be used at any age after six weeks. . . . Sheep may likewise be used when two or three months of age.” (Page 340.)

Now whatever State laws may have been passed concerning the slaughter of immature animals for food, they do not seem greatly to have impressed the compilers of the U.S. Government Regulations. The clause pertaining to the approval of immature meat reads as follows, both before and after the reform legislation of 1906.

Regulations of 1904.

“Carcasses of animals too young and immature to produce wholesome meat . . . also carcasses of calves, pigs, and lambs under *four weeks* of age, shall be condemned.”

Regulations of 1908.

“Carcasses of animals too immature to produce wholesome meat . . . also carcasses of calves, kids, pigs, and lambs under *three weeks* of age, shall be condemned.”

Here again we detect no evidence of zeal for reform, but only a wish to increase the profits of the Meat Trust. What influence secured the reduction of the period under which animals were to be considered unfit for food, from four to three weeks, after the passage of a Pure Food Law? We are told in one of the

official reports of the Department of Agriculture that a calf should not be used for veal under *six* weeks of age ; and then the Department of Agriculture permits carcasses to be approved which were only half the age that State laws require !

5. *Tapeworm Cysts*.—On the hypothesis of any deep concern for the public health, it is quite impossible to comprehend the changes which were made in the regulations concerning carcasses of animals found to be thus infested. Of one special parasite, an eminent authority says :

“ Infection through the embryonic form of the *Tænia echinococcus* as the source of hydatid tumours, is productive of the most disastrous consequences, and has ended in the destruction of many lives. . . . Ordinarily, the hydatid disease is beyond the reach of medical treatment. . . . In concluding the chapter on *Tænia echinococcus*, Cobbold gives the advice that all entozoa which are not preserved for scientific investigation or experiment should be destroyed by fire, and under no circumstances whatever should they be thrown aside as harmless.”¹

What disposition of the flesh of animals, found upon slaughter to be thus infested, is required by the United States Government ?

According to the regulations of the Department of Agriculture in 1904, any organ or part of an animal thus affected, must be condemned. Concerning the remainder of the carcass, the regulations are silent. It is probable that the Government inspector was fully aware of the course he was to pursue in the absence of definite rules.

In the regulations for meat inspection issued in 1906,

¹ Leidy on “ Intestinal Worms,” Pepper’s “ System of Medicine,” vol. ii., p. 943.

there would appear to be an improvement, so far as such flesh is concerned. The regulation says:

“Carcasses of animals slightly affected with tapeworm cysts may be rendered into lard or tallow, but extensively affected carcasses shall be condemned” (page 15).

Is there any permission given in this clause to pass as wholesome food any portion of an animal thus infested? It certainly is not evident.

We come to the regulations now in force, issued in 1908. Here we find a distinction made in the disposition of the carcasses of animals infested by different kinds of parasites. Animals infested by certain forms of cysts are condemned; when found infected by two other forms of disease-producing parasites, the carcasses may be passed for food, after a condemnation of the affected organ. Then follows this rule concerning hydatid cysts:

“SECTION 17, *Paragraph 3*.—Carcasses or parts of carcasses found infested with the hydatid cyst (*echinococcus*) *may be passed after condemnation of the infected part or organ.*”

This is a most horrible permission. It is evident that in the United States, the influence of the Meat Trust has been strong enough to secure quite another disposition of flesh infested by hydatid cysts than that which was the custom in 1906. The regulations of that year gave no permission to the meat-packers to utilise such flesh in any form of edible food. Why was the rule of 1906 abrogated? By whose advice or counsel was it done? What malignant influence in the Department of Agriculture seems ever at work to induce changes that are so often at the expense of the

public health, and as invariably for the benefit of the producers of meat? "Until our people are more careful with the raising of pigs," wrote Dr. Leidy twenty years ago, "European Governments will have reason for prohibiting the importation of our pork." We shall not dispute the justice of any such prohibition, but the responsibility rests elsewhere than on the shoulders of the American farmer.

6. *Other Peculiar Regulations.*—We have not yet exhausted the list of changes for the worse which mark the regulations at present in operation. In 1906, for example, the rules required that "carcasses showing generalised inflammation of the lungs, pleuræ, intestines, peritoneum, or the uterus, *whether in acute or chronic form*, shall be condemned." Someone must have discerned a means for increasing the profits of the meat-packers by lessening the stringency of this requirement; and in 1908 we find condemnation pronounced upon carcasses "showing signs of *acute* inflammation of the lungs, pleura, pericardium, peritoneum, or meninges"; and here again is the opportunity for an inspector to pass meat affected by "*chronic* inflammation" which two years earlier would have been condemned. Condemnation is passed upon carcasses showing signs of "*severe gangrenous* enteritis or gastritis"; but what if the young inspector thinks the gangrene is not "*severe*"? He must, indeed, most rigidly condemn carcasses showing signs of

"any other inflammation, abscess, or suppurating sore, *if associated* with acute nephritis, fatty and degenerated liver, swollen soft spleen, marked pulmonary hyperæmia, general swelling of lymphatic glands," etc. ;

but what action is the inspector to take if he finds the condition, but not that "association" with acute nephritis, etc., which he must discover if the carcass is to be destroyed for meat purposes? "*Portions of intestines that show evidences of infestation with œsophagostoma or other nodular affections shall be condemned*"; the portions that do not seem to be infested, are they to be destroyed? If not, what edible use are they to serve?

We have no conclusions to present for the consideration of the reader that do not suggest themselves. He will note the complexity of changes in verbiage with slight alteration of purpose; and he will ask himself whether these skilfully designed directions have been drawn for the protection of the public health, or for the promotion of private gain? He may think it evident that if any genuine reform in American methods of meat inspection is ever to be inaugurated, it must be induced by a regard for principles and purposes altogether different from those which seem to inspire the regulations under which, at present, we are compelled to live.

CHAPTER IX

AMERICAN PURE LARD AND ITS SOURCES

LARD is a substance of almost universal use throughout the civilised world. It is extensively employed in various culinary operations, particularly in the cooking of fish, and in one way or another it enters into the composition of a vast number of products intended for human consumption. To everyone not a vegetarian, the sources from which this substance may be derived are matters of interest and concern.

No other meat-product is so largely exported to all parts of the world. Between 1896 and 1905, we exported an average of more than 600,000,000 pounds every year. Great Britain is our best customer, taking from us an average of more than two hundred million pounds every year for the food of her people. Germany has taken from us an almost equal quantity, but the demand seems more fluctuating than that of England. It is unlikely that such a world-wide demand could have been created, except by the inculcation of faith in the purity of the product and the sources of its supply. In a document issued by the Department of Agriculture the author assures us that "when one purchases a can of lard bearing the words 'PURE LARD' and the legend 'U.S. INSPECTED AND PASSED

under the Act of June 30, 1906,' he may be sure that he is actually receiving pure lard, *rendered from clean, sweet fat of healthy animals.*"¹

And yet it is quite certain that all lard is not thus derived. Since, under certain circumstances, carcasses of diseased animals are permitted to constitute a portion of our meat-supply, it would be indeed surprising if they were always excluded in the making of lard. At the same time, we must not hope that any inquiries will enable us to see the whole truth. If we find ourselves unable to discover what is actually done, we can know beyond doubt what is permitted to be done by the manufacturers of this product.

So far as the process of manufacture is concerned, there is probably little to criticise at the present time. The Regulations of 1908 would seem explicit :

"The manufacture of all fats into lard, tallow, oils and stearin at official establishments shall be closely supervised by employees of the Department, who shall see that all portions of carcasses rendered into edible products are clean and wholesome."²

Then follow certain injunctions of very great significance, since they indicate past abuses, the horrible existence of which we could hardly conceive as possible, but for the disclosures of 1905 and 1906. But for our present inquiry these matters do not concern us. That in which we are interested is the question whether, and to what extent, the carcasses of diseased animals are allowed by our Government in the manufacture of lard.

We propose to show that this abuse is actually permitted at the present time. When the condition of

¹ U.S. Department of Agriculture, Circular No. 101, p. 9.

² Regulations Governing Meat Inspection, 1908, p. 32.

animals suffering from certain forms of disease—and some of them of the most dangerous character—is too horrible to permit the flesh to be passed as meat, there is, in some cases, an opportunity offered, whereby the packing-house may escape that pecuniary loss which total condemnation of the carcass would tend to involve. The Regulations issued by the Department of Agriculture for 1908 state the circumstances under which carcasses of diseased animals may be thus transmuted into an edible product, for consumption by the American people, and for exportation to England and other countries.

1. "*Tuberculosis*.—Carcasses which reveal lesions more numerous than those described for carcasses to be passed, but not so severe as the lesions described for carcasses to be condemned, *may be rendered into lard or tallow* if the distribution of the lesions is such that all parts containing tuberculous lesions can be removed. Such carcasses shall be cooked by steam at a temperature not lower than 220 degrees Fahrenheit for not less than four hours."

We have seen the conditions under which a tuberculous carcass may be passed for food. How much worse must it be to necessitate rejection as meat, and permit acceptance for lard-making? The foregoing regulation seems hardly as explicit as one might desire. The line of demarcation may be clear to the intelligent inspector; but it is not evident to the man in the street. It may be that in earlier regulations we shall find some light thrown upon the rules of to-day. In the Regulations of 1904, we find that "hog carcasses may be rendered into lard," when certain lesions of the disease, which might permit the carcass to be "passed" for food, "*are found to be in an advanced stage of caseation*

or *liquefaction necrosis*." There are few men in the medical profession who would care to furnish their families with lard which they knew was derived from animals suffering from "tuberculosis with liquefaction necrosis."

2. *Tapeworm Cysts*.—Prohibitive regulations regarding the flesh of animals thus affected are of recent origin. In the Regulations of 1904, we read that "*any organ or part of a carcass which is badly bruised, or affected by malignant tumours, abscesses, or tapeworm cysts, shall be condemned*"¹—and we wonder if there was a time when even these were permitted to be utilised. There is no injunction regarding the flesh from which these are cut. In 1906, the regulations say:

"Carcasses of animals slightly affected with tapeworm cysts *may be* rendered into lard or tallow, but extremely affected carcasses shall be condemned."

In 1908, there are three paragraphs devoted to this phase of disease. The first paragraph only concerns us here:

"SECTION 17, *Paragraph 1*.—Carcasses of animals affected with tapeworm cysts known as *Cysticercus bovis* and *C. cellulosa*, shall be rendered into lard or tallow, unless the infestation is excessive, in which case the carcass shall be condemned."

It is left to the conscience of the inspector to decide whether the infestation is such as to require total condemnation.

3. *Pregnancy and Parturition*.—We need not expect that the regulations governing the inspection of meat shall remain the same from year to year. The least we can hope for is that there shall be no backward steps,

¹ Twenty-first Report, Bureau of Animal Industry, p. 578.

and that every modification of regulations shall be in the direction of improvement and reform. Let us compare one of the regulations now in force with the one which governed the disposition of certain carcasses before the passage of "Pure Food Laws":

Regulation of 1904.

"Carcasses of animals (cows, sows, and ewes) in an advanced state of pregnancy, or which recently gave birth to young (within ten days), *shall be condemned, and rendered into grease.*"

Regulation of 1908.

"Carcasses of animals in advanced stages of pregnancy (showing signs of parturition), also carcasses of animals which have, within ten days, given birth to young, and in which there is no evidence of septic infection, *may be rendered into lard or tallow*, if desired by the manager of the establishment."

Now this regulation of 1904 was entirely proper. "Grease" is the stuff from which much of our soap is made. It is obtained sometimes from most loathsome materials—from dead bodies of horses and dogs picked up in the streets, as well as from animals that died before they could reach the butcher's hands.¹ To such an establishment, in 1904, pregnant animals—cows, sows, and ewes—were also to be sent. In 1908, after all the agitation about meat, it was ordered that they could be made into lard! In whose interest, at whose solicitation, was this change made? *Who was it that induced the framers of the United States Government Regulations of 1908 to turn this loathsome stuff from the vats of*

¹ For somewhat startling disclosures concerning the manufacture of soap, see Twenty-third Report, Bureau of Animal Industry (1906), pp. 418-419. Over 9,000 dead horses came to one establishment in a single year.

the soap-boilers to the tanks of the manufacturers of edible tallow or lard?

4. *Hog Cholera*.—Between the Regulations of 1904 and those of 1908, so far as concerns the manufacture of pure lard from animals affected by this disease, there is no essential difference. The rule promulgated in 1908 reads as follows :

“*Hog Cholera and Swine Plague* (Section 10, Paragraph 3).—Carcasses which reveal lesions more numerous or advanced than those for carcasses to be passed, but not so severe as the lesions described for carcasses to be condemned, *may be rendered into lard*, provided they are cooked by steam for four hours at a temperature not lower than 220 degrees Fahrenheit, or at a pressure of four pounds.”¹

During the agitation of 1906 concerning American meat, there appeared in a New York magazine an article on the failure of Government inspection. One passage read as follows :

“On the occasion of a visit I made to the packing-houses, the hogs from the killing-floor . . . were moving toward the doors of the cooling-room. I noticed occasionally that a solitary hog was cut out of the line, and pushed along an overhead track to the middle of the room, where several others hung. There happened to be six of these hanging together when my party arrived. Two of them were as red as if smeared with paint, and scabbed on the legs and snouts.

“‘These hogs had cholera,’ the inspector said, ‘and the next three are tubercular. See how skinny they are, and they have these queer spots inside of them.’

“The remaining carcass had an ugly ulcer in its side. Around a block near by, several men were chopping up these diseased hogs. . . . The chunks of diseased meat were then thrown into a tank in the inspector’s presence.

¹ Regulation 13.

“ ‘What will be the product of this tank?’ I anxiously inquired.
“ ‘Fertiliser and lard,’ the inspector replied.”¹

The Department of Agriculture felt obliged to notice a number of charges similar to this, and a special committee, consisting of high officials in the Department criticised, was appointed to investigate the various charges, and to make report thereon. In its reference to the above statement concerning our lard-supply, the committee quotes the foregoing paragraph in full, and adds the following significant comment :

“ The Department regulations stipulate that *diseased carcasses* shall be either condemned for offal, or *passed for food*, except in those cases of hogs showing mild lesions of hog cholera or tuberculosis, *when they may be rendered into lard*, provided they are cooked by steam for four hours at 220 degrees Fahrenheit; the tubercular lesions having first been removed and condemned. *Not the slightest objection can be raised against this procedure from a hygienic standpoint. . . .*”²

This paragraph is not only a defence, but also a confession. We have here the formal admission by some of the highest officials in the Department of Agriculture that “*diseased carcasses*” may be “passed for food.” We have also a defence of one phase of the practice, on the ground that lard, derived from such sources, cannot menace the health of those who use it as an article of food. It is quite true that grease, extracted from the most filthy and polluted sources,

¹ Quoted from “The World’s Work,” in the Twenty-third Report of the Bureau of Animal Industry, 1906, p. 451.

² Twenty-third Report, Bureau of Animal Industry, p. 453. This report is signed by John R. Mohler, Chief, Pathological Division, Bureau of Animal Industry, and other officials, and approved by A. D. Melvin, Chief of the Bureau of Animal Industry.

may be so refined by prolonged heat as to render it free from living germs. But is this all we ask for meat-products? Is not something due to that sentiment, common to all civilised human beings, which makes polluted origin a matter of some consideration? Can we doubt that the average consumer of American lard in this country and abroad would long hesitate before buying it where it was known to be manufactured out of the horrible materials from which the Department of Agriculture now permits it to be made?

In an American magazine of wide circulation, one of the leading packing-houses of Chicago placed, recently, a full-page advertisement pointing out the excellence of a certain brand of lard. It read, in part, as follows:

“MADAM, LOOK TWICE!

Be sure the label reads ‘LEAF LARD,’
else you’ll get common lard!

Common lard is made from various hog fats.

‘Pure Lard’ doesn’t mean Leaf Lard.

*A lard can be labelled ‘Pure Lard’ even though
it is made from various hog fats.”*

The advice is good, though there is apparently a desire to communicate more than can be put in words. One should “look twice”—and more than twice—before purchasing the “Pure Lard” of the American packing-house. We have seen of what “various hog fats” it is now officially permitted to be composed.

CHAPTER X

THE FEDERAL INSPECTION OF HORSE-MEAT

THE substitution of horse-flesh in the manufacture of food-products might seem to be more of the nature of a fraud than a crime against the public health. No animal is more cleanly in its choice of food, or less subject, as a rule, to diseases liable to be passed on to the human race. On the Continent of Europe the flesh of horses is largely eaten by the poorer classes, and enters there, no doubt, into the preparation of various products whose composition is not evident to the sight. In America and in England a strong prejudice exists against such meat as an article of food-supply. Considering that only those horses are sent to the shambles which are broken down by age or disease, or otherwise incapacitated for work, we may be sure that the flesh is not usually of a character to make fit nourishment for human beings.

It would appear that during several years the Government of the United States permitted horses to be slaughtered for food purposes under the inspection extended to other animals.¹ During five years—1899-1903—the number of carcasses of horses inspected

¹ Twentieth Report, Bureau of Animal Industry, p. 29.

was 12,876. In his report for 1904, the Chief of the Bureau of Animal Industry informs us that "the inspection of horses for slaughter ceased during 1903, and was not resumed in 1904." The reason for this relinquishment of Government inspection is not known.

There are, however, a number of points relating to this Federal inspection of horse-carcasses for food, regarding which it seems that a little more light is desirable. We should like to know in what packing-houses this slaughter took place, under whose persuasion or by whose inducements the practice of Government inspection was granted, and for what reasons it was finally given up. The official reports tell us how many packages of horse-flesh destined for export to foreign lands received certificates of inspection, and the number of pounds of meat, the wholesomeness of which was guaranteed by the Federal stamp, annually sent abroad. But this meagre information only serves to excite curiosity in other directions. *What became of the horse-meat which was not sent abroad?* A moment's calculation shows that the Government's reports do not account for it. The average horse weighs more than 1,000 pounds, and its carcass, dressed or cut up, would furnish, according to the estimates of reliable butchers, not less than 500 pounds of meat. Suppose, however, that we estimate the meat derived from each animal as amounting only to 400 pounds, and see if we can account for its disposition. In the following table, the figures giving the number of horses killed and inspected, and the weight of horse-meat sent abroad, are taken

from the annual reports of the Bureau of Animal Industry.

DISPOSITION OF HORSES SLAUGHTERED FOR FOOD UNDER FEDERAL INSPECTION.

YEAR.	NUMBER OF HORSES KILLED.	ESTIMATED NET WEIGHT OF CARCASSES (POUNDS).	WEIGHT OF HORSE-MEAT EXPORTED (POUNDS).	WEIGHT OF HORSE-MEAT UNACCOUNTED FOR (POUNDS).
1899	3,332	1,332,800	347,048	985,752
1900	5,559	2,223,600	188,800	2,034,800
1901	1,992	796,800	249,900	546,900
1902	1,649	659,600	170,968	488,632
1903	344	137,600	28,000	109,600
Total...	12,876	5,150,400	984,716	4,165,684

We have estimated the net weight of each carcass of horse-meat at only 400 pounds. Undoubtedly, that is far too low. Yet, even at this estimate, we find that *over four million pounds of horse-meat* are unaccounted for. Certainly it was not submitted to Government inspection simply to be turned into fertiliser. How much of this flesh was used in the preparation of canned goods, such as "minced steak" or "veal loaf"? How much of it went to the manufacture of "meat-juice" or "extract of beef"? It is alleged that many thousands of old, worn-out, and decrepit horses are sent every year from England to Belgium and Holland, to be turned into meat-food products. It will doubtless be a revelation to the majority of the American people to know that in the United States, during

several years of the present century, horses have been slaughtered for food, under Government inspection.

An illustration of the value of official disclaimers we may find in an official report made to the Secretary of Agriculture by a committee of employees connected with the Department. It appears that a writer for the London *Lancet*, commenting upon stock-yard abuses, had referred incidentally to the existence on the premises of "a very large horse-market," a fact of which every visitor is aware. For some reason, the committee discovered in this simple statement a sinister significance. In their report they quote the words of the *Lancet*, and then add the following comments :

"The inference that horses are slaughtered for meat in Chicago is erroneous, and without foundation in fact, so far as this committee is aware."¹

The special report in which this disclaimer appears was signed by some of the leading officials having to do with the inspection of meat, and approved by the Chief of the Bureau of Animal Industry. Strictly speaking, the statement made was quite true. In April, 1906, when it was made, the inspection of horse-meat had been discontinued. But in the foregoing statement is there not a suppression of fact that tends to convey a false conclusion? Would not the average reader understand that the Government inspection of horse-flesh for food was a practice quite unknown to the Bureau of Animal Industry and to the Secretary of Agriculture? We know that any such conclusion would be entirely wrong. In the same volume con-

¹ Twenty-third Report, Bureau of Animal Industry, p. 443.

taining this disclaimer — the Twenty-third Annual Report of the Bureau of Animal Industry—we find another report, also bearing the signature of the head of that bureau, giving the number of cattle, hogs, sheep, *and horses* inspected at the time of their slaughter during five years, 1899 to 1903.¹ The fact of such past inspection surely was known to every official. Was it not a little disingenuous thus to intimate entire ignorance of a practice which, though then discontinued, had been so recently in vogue for several years?

It seems to us that there is a somewhat serious aspect to this matter. In America it is supposed that the Department of Agriculture was instituted for the benefit of the American people, not to promote a Trust. Without questioning, most people have implicitly believed that it was faithful to the best interests of the nation. Is there here any reason for a contrary suspicion? We see that several million pounds of flesh, regarded with detestation and abhorrence by both English and American consumers, passed the inspection of officials of the United States Government, and then mysteriously disappeared. And although we should like to know where it all went, yet there are certain other questions of far more importance. Who was it that first authorised the Federal inspection of this kind of meat? *What packing-houses requested the Department of Agriculture to institute upon their premises, and for their use, the inspection of horse-meat?* What steps were ever taken by the Bureau of Animal Industry to prevent the utilisation of horse-meat in meat-food products intended for consumption in Eng-

¹ See page 17 of this Report.

land or America? Under what law of the United States was authority found for placing horse-meat under Government inspection and on an equality with the inspection of beef or mutton? It is not likely that to these questions we shall ever have any satisfactory answer until some inquiry, instituted by Congress, may finally enable the British and American consumer to know the whole truth.

CHAPTER XI

MEAT INSPECTION IN CITIES AND STATES

FIFTY years hence, when the civilised world shall have begun to comprehend the relation between premature mortality and unwholesome food, few facts will seem more significant to the historian of our time than the singular indifference to the question which so generally has prevailed. Except where foreign trade or interstate commerce is concerned, every American state regulates its concerns after its own ideals; and wherever great financial interests are concerned, it is always difficult to induce action on the part of the legislators, which shall appear in any way to conflict with existing privileges. Even where no such interests are concerned, it is often impossible to induce a state to act. Take, for instance, the registration of births and deaths. Not only is the United States more backward than any civilised country in the world, but certain individual states are principally responsible for our national inferiority. In New York State, for example, an attempt is made to record, annually, the deaths from certain causes; the State of Ohio, which adjoins it, is in this respect almost on an equality with the heart of Africa, and a century behind the present civilisation of

Japan. "We have no means of knowing how many people died in Ohio last year, nor of what diseases they died," is the humiliating confession of a state official.¹ Bills again and again have been introduced into the Legislature to remedy this defect, but for some inconceivable reason fail to pass. Since this is the case where no financial interests are to be affected, we cannot be surprised to find that in this state the inspection of animals killed for food is very imperfectly conducted, and especially so in great cities. It would seem probable that in no state of the Union does any law require a rigid inspection of all animals slaughtered for food, by state officials, and the condemnation of all carcasses found affected with disease.

In the State of New York, no such inspection is required by existing laws, and no reports of animals condemned at time of slaughter appear to exist. In Massachusetts, a recent enactment forbids sale of the carcass of an animal for food which is not "in a healthy condition," and requires the destruction of meat and meat-products if, in the opinion of an inspector, "any such meat is diseased, corrupted, unwholesome or unfit for food"; but we have no means afforded of knowing how each inspector defines the word "*diseased*"; and the report of the State Board of Health gives no information regarding the condemnation of animals slaughtered for the Massachusetts meat-supply. In Illinois, a Board of Live Stock Commissioners "may, at their discretion, make or cause to be made . . . an examination of any animal intended for human food." The regulations which govern such inspection are

¹ Twenty-second Report, Ohio State Board of Health, p. 13.

apparently those adopted by the United States Department of Agriculture; but no statistics are published which enable us to judge regarding the efficiency of this inspection except where it concerns cattle, or how many animals of all kinds are found unfit for food. In Pennsylvania a similar board—"a Live Stock Sanitary Board"—have issued a series of regulations copied from those of the Bureau of Animal Industry, and containing all their defects—leaving it to the inspector to decide when "a condition becomes loathsome," and in case of animals affected by malignant tumours, requiring—not the destruction of the carcass—but of "the part or organ affected." Other great states, such as Wisconsin and Nebraska, Michigan and New Jersey—are apparently without any regulations governing the detection and the condemnation at the time of slaughter of diseased animals intended for human food.

In certain quarters, there would appear to exist a decided scepticism regarding the benefit of Federal inspection, no matter how conducted. A contributor to the latest report of the Iowa State Board of Health complains that the Federal law tends to injure the states which supply the cattle, because the best are sent to market, and the diseased animals are left at home. "The people of Iowa, who by rights, are entitled to the best and choicest of meats, are compelled to live upon the carcasses of worn-out cows, unthrifty calves, and cattle and hogs *in advanced stages of tuberculosis.*"¹ The writer, a physician, declares that "more disastrous results are produced through consumption of

¹ Iowa, Fourteenth Report, State Board of Health, p. 166.

diseased or contaminated animal commodities than from chemical adulterations."

A similar complaint finds expression in the State of Minnesota, where also there are no enforced regulations controlling the inspection of meat. In a private letter, one of the officials of the State Board of Health says :

"We are endangered rather than aided by Federal inspection of meat. To call Federal inspection a sanitary movement for the benefit of our citizens is simply absurd. *It was a commercial movement to maintain the sale of our meats abroad.* The Federal inspection laws, instead of benefitting the people at large, simply force upon a state where there is no meat inspection the slaughter of animals *that will not pass Federal inspection. . . .*"

We do not find ourselves deeply sympathetic with these complaints. If the Federal system of meat inspection tends to keep diseased animals in the states where they were raised, such a result is certainly for the benefit of the public health. Assuredly, there is no necessity for the people of the great stock-raising states to consume such meat longer than they wish. The remedy of legislation is in their own hands.

To what extent are the inhabitants of large cities in the United States protected from liability of consuming diseased flesh? It will be of interest to examine the results of meat inspection in some of the larger cities, so far as it may be determined from reports of the local Department of Health.

NEW YORK.—A considerable portion of the meat consumed in this city is slaughtered within its limits. It appears that during the year 1907, animals were slaughtered as follows :

Cattle	...	...	...	...	...	488,846
Calves	...	...	...	...	...	283,075
Sheep and lambs	...	...	...	...	...	1,495,340
Hogs	...	...	...	...	...	867,916
Total	...	...	...	...	...	3,135,777

How carefully were these animals inspected at time of slaughter for any conditions of disease which may have been present? On this subject, we have no information. The Annual Report of the Department of Health for the year 1907 tells us simply that "the inspection of meat has been conducted as in former years. Inspectors in the slaughter-houses have supervised the slaughter of animals for food purposes as set forth in the following table;" and then follow the figures just given, but naming—as if it were matter of the slightest consequence—the number slaughtered on either side of the city, and during each month of the year. In another part of the Report, we are told, indeed, that at stock-yards and slaughter-houses there were some 2,415 "condemnations," but these figures include the meat condemned as tainted or spoiled. We have no means of knowing what animals were condemned at time of slaughter, nor the reasons for which any such condemnations were made. So far as concerns the utilisation of diseased meat as food, the largest city in America appears to be at the mercy of inspectors, who give no reasons for condemnation, and who make no adequate report.¹

¹ Referring to the ominous increase of cancer and other malignant diseases in New York, the Report says that "there is hardly any doubt but that some potent factor or factors are at work in causing this ever-increasing mortality" (p. 487).

ST. LOUIS. — Concerning animals slaughtered for food, the Health Commissioner states that the city of St. Louis has no inspection except in relation to the sanitary condition of the abattoirs. The slaughtering of animals is left entirely to the inspectors of the United States Department of Agriculture. It would seem that, in one respect, the inspection of meat designed for the poor in public institutions is conducted with an efficiency which might well be imitated in other cities. It appears that during the fiscal year 1907-1908, of all the meat "*condemned*" in St. Louis, 24 per cent., or nearly one-fourth, had been furnished to certain city institutions. As these facts do not appear to be furnished in the report of any other city of the United States, they are here given. They doubtless afford an indication of the institutions to which diseased or tainted meat finds its way in other localities.

PUBLIC INSTITUTIONS OF ST. LOUIS, TO WHICH TAINTED, UNWHOLESOME, OR DISEASED MEAT WAS FURNISHED.

INSTITUTION.	NUMBER OF POUNDS CONDEMNED.
City Hospital	6,515
Insane Asylum	3,419
The Poor-house	3,075
Workhouse	2,682
Female Hospital and Emergency Hospital	1,317
Industrial School	927
Jail	440
Total condemned	18,375

Of the total amount thus condemned as unfit food for the inmates of charitable and penal institutions, about half was beef. The reasons assigned for condemnation are various. Some of the meat was stale, some tainted, and some evidently diseased. On one occasion, about six hundred pounds of a mixture called "mutton stew," sent to the Poor-house, was seized and destroyed. At another time, several hundred pounds of ham, destined for public institutions, were seized and condemned by the city inspectors, notwithstanding the fact that they bore the stamp of the Federal Government, guaranteeing that they were "sound, wholesome, and fit for human food"! Such a conflict of opinion could not be permitted to pass unchallenged, and three inspectors of the United States Government came from Washington to investigate, and, if possible, to persuade. "They desired to know," writes Inspector Mulhall, "if we would accept meats for public institutions if they bore the inspection stamp of the United States Government as to quality, etc. They were informed that only wholesome meats were accepted at the city institutions, *and that no inspection stamps were given consideration, in face of the fact that meats might be tainted, diseased, and generally unwholesome.*"¹ It was a reply worthy of remembrance. But the spectacle of United States Government officials coming thus to the defence of the purveyors of unwholesome meat for the unfortunate beings in asylums and hospitals—is it one which can inspire any American with enthusiasm or pride?

PHILADELPHIA.—In 1907, after several efforts, the

¹ Annual Report, 1908, p. 36.

Board of Health of the city of Philadelphia secured passage of a law affecting the slaughter of animals for food. Among regulations adopted as a result of such legislation was one prescribing that "Meats showing evidence of disease, likely to be communicable or otherwise injurious to the customer, shall be seized and destroyed." The chief Meat and Cattle Inspector reports, therefore, that during the year ending December 31, 1907, there were 6,701 animals "inspected at killing," of which the carcasses of 132 were condemned—a proportion of about 2 per cent. As there are in the city 170 slaughter-houses, it would show that the sanitary inspection of meat in Philadelphia resulted in the condemnation of an average of less than *one carcass per year in each establishment*.

The absurdity of such inspection would appear to be recognised even by those who conduct it. "It is obviously impossible for our six men to be on hand and inspect the slaughtering" which is carried on, sometimes by day, sometimes by night, in widely separated establishments. We are told that there are certain receiving stations in the city to which are shipped "immature calves, emaciated sheep, fevered and otherwise diseased hogs"; and that these animals are not subjected to inspection. To some slaughter-houses are shipped what the report designates as "suspicious-looking animals," and these are killed for the local trade. Certain establishments, we are informed, "are owned and operated largely for a class of men who are not likely to be over-scrupulous in the matter of dressing *diseased*, injured, and immature animals."¹

¹ See Report, Bureau of Health, 1907, pp. 73, 189, 195.

It would seem, therefore, that in the city of Philadelphia at the present time, for the general population, there is little, if any, protection from the risks of consuming diseased flesh as food.

BOSTON.—The Inspector of Animals reports annually the number of animals slaughtered for food, and the number condemned. For the year 1907, these figures were as follows:

	KILLED.	CONDEMNED.
Cattle	40,664	267
Calves	10,742	1
Sheep	1,186	—
Swine	32,967	19
Total	85,559	287

These figures show better than words how inadequately Boston is protected from the utilisation of diseased meat. Of each thousand cattle killed, no less than 994 are passed, *and only six condemned*. Regarding swine, the meat inspection for Boston is even more indulgent, passing as sound and good somewhat over 999 out of every thousand killed! The report frankly admits that diseased animals were passed as proper food—the diseased parts, of course, being carefully condemned. Of 706 cases of tuberculosis in animals slaughtered, “only 269 were condemned,” the remainder being “not condemnable under the Act passed by the Legislature of 1898.” Some 1,864 livers and “parts” of 185 swine were thus con-

demned, figures which probably represent so many diseased animals. Thirty-one cattle were found affected with actinomycosis or "lumpy-jaw"; and the carcasses of these animals, which but a few years ago would have been wholly condemned, were turned into the food-supply of Boston, the head and tongue, the sole evidences of loathsome disease, being first removed. Can we say that by the degree of inspection now in vogue the population of Boston is sufficiently protected from the unconsenting use of the flesh of diseased animals?

The experience of smaller cities of the United States is not different from that of larger communities. In the city of Detroit, Michigan, the official known as the "honorary meat inspector" reports that of hogs slaughtered, about two carcasses per thousand were condemned, and that of 5,701 "parts" found diseased, about 60 per cent. were for tuberculosis. For the excellence of its vital statistics it is probable that San Francisco stands at the head of all cities of the United States; and yet even here we find a system of meat inspection so lax that of each thousand hogs slaughtered during a recent year, less than two carcasses were wholly condemned; and no report is made of the causes of condemnation or of the number of "parts" permitted to pass. In the city of Newark, New Jersey, during the year 1907, some 91,643 animals were slaughtered for food purposes. These were inspected by a single official, "whose duty it is to look after slaughter-houses and wholesale meat-markets"; and the protection against the consumption of diseased meat, thus afforded a city of over 300,000 population,

we may estimate by the fact that, with the exception of thirty-eight calves (which were probably condemned as immature), *there were condemned during the year only nine cattle, and not a single hog or a single sheep.*

It must not be forgotten that in every large community there is every year officially condemned a large quantity of meat or meat-products found upon inspection to be tainted or spoiled, or otherwise unfit for human consumption. As a rule, however, this is due to carelessness or neglect of proper precautions; and, however effective may be the inspection of hucksters' carts or butchers' stands for such meat, it has no relation, as a rule, to the far greater problem—the elimination of diseased animals from the food-supply. This is a point of the utmost importance. There is no doubt whatever but that in palliation or defence of abuses pertaining to the utilisation of diseased flesh, attention will again and again be vociferously directed to this large condemnation of tainted or spoiled food, with which the present inquiry has absolutely nothing to do.

It would seem certain, therefore, that from the evils outlined, the consumers of meat have no protection by reason of any efficient system of state or municipal inspection of animals killed for food purposes. For some reason, the most reasonable and rudimental ordinances fail to become laws; some malign influence inevitably blocks the way. What is the nature of this strong opposition? Is it the ignorance of the average man or woman? Is it the comfortable assurance of the Meat Trust and its supporters that everything is all right? Is it popular indifference to the ever-present tragedy of premature death and incurable disease? Is

it criminal hostility of vast financial interests to every reform that might possibly affect pecuniary gain? We may indeed suspect; but we cannot be sure. Certain, however, we may be, that until there is inaugurated a thoroughly efficient system of state and municipal inspection of animals when they are slaughtered for food—a system far superior to that carried on by the United States Government for the promotion of its foreign trade—the American consumer of meat enjoys little or no protection from the dangers of which we complain.

It would seem that for each state of the Union—and particularly for the states which are engaged in raising stock—it would be the part of wisdom to institute a system of state inspection so much better than that of the Federal Government that it would tend, by the superiority of its standards, to keep within its own borders the best and healthiest animals for home consumption. Nor is such policy as selfish as it might seem. Against such system of more rigid inspection by stock-growing states we should undoubtedly see thrown the strongest possible influence of the great packing-houses; for the establishment of a superior system of state inspection would surely force the Federal Government to make its standards equal to those of any of the states, or to lose domestic trade. A rivalry between the state and the Federal Governments for the most rigid exclusion of diseased animals from the food-supply, and for the most careful examination of every slaughtered beast, would undoubtedly tend more than anything else to the attainment of everything that is at present practicable in the way

of reform. The question ought not to be a matter of politics. Whether a man is a Republican, a Democrat, or a Socialist, he is alike interested in securing for himself and his family only food that is sound and wholesome and free from disease. If we can only agree that commercial interests must always be subordinate to the public welfare; that the medical profession, by training and interest, is better fitted to decide with impartiality upon matters pertaining to the public health than the stock-raiser or the pork-packer; and, above all, that the label on the meat or the meat-product must tell the essential facts which any customer can desire to know, it should not be impossible to agree upon some measure providing for the inspection of meat that shall everywhere be uniform, and everywhere, in its rules and regulations, protective of the public health.

CHAPTER XII

THE DEFENCE OF A WRONG

THE great crimes of History seldom fail to find an apologist or defender. There are no limits to the advocacy which vast financial interests are able to command. We may rest assured in advance, that every charge here made against the Trust will be palliated, excused, or denied with all the skill which intellectual ingenuity can devise.

It will be of interest to endeavour to anticipate this defence. Along what lines, upon what points, and in what manner may we expect the purveyors of meat to attempt to justify their conduct to the world?

1. We may be very certain, at the outset, that no serious attempt will be made to deny the facts which in these pages have been revealed. If they rested solely upon the testimony of eye-witnesses, even though men of the highest skill and repute, the charges would undoubtedly be denied and met by the counter-charge of ignorance, exaggeration and prejudice. When the special correspondent of the *Lancet*—a leading medical journal of England—referred to abuses existing in certain packing-houses in Chicago, a special committee, made up of officials belonging to the Department of Agriculture, hastened to assure the world that a similar

occurrence (the dragging of diseased and condemned carcasses through the packing-house) had never been seen by themselves on occasion of their visits, and for such a puerile reason, imagined they had made a contradiction of testimony! But the charges herein placed before the reader are independent of personal attestation, and rest entirely upon public documents easily accessible to every American citizen. When it is said that carcasses of tuberculous animals are allowed to be turned into edible food, and that the degree of loathsomeness is determinable only by the inspector in charge, it is not the word of an eye-witness, but the Regulations of the Government which supply the proof. When it is alleged that the carcasses of swine, affected by most disgusting and horrible complaints, are permitted to be transmuted into lard with the consent and approval of the Department of Agriculture, how is it possible to deny the fact, when every reader of the official Regulations can see the evidence for himself? When it is charged that horses have been butchered under Government inspection, the most ardent apologist of the Meat Trust is not likely to deny facts confessed in a Government report. The facts will not be denied. We must look elsewhere for that defence which is sure to be made.

2. Undoubtedly the meat-packers will strongly insist that they have strictly adhered to every provision of the laws, as interpreted by higher powers. Have carcasses of animals suffering from various diseases been turned into food-products? The fact is admitted. But there has been no illegality about it. "If there be blame," the meat-packers may say, "place it where it

belongs. Our hands are as clean as our shambles. We have simply lived up to the law as interpreted for us by the United States Government."

Is not this excuse a valid one? We can certainly conceive the possibility that, in whatever they have done, the butchers and packers have only taken advantage of privileges granted by the Department of Agriculture. If it be true that the Regulations governing the inspection of meat, now in force, were formulated by the Government without the slightest suggestion, persuasion, or demand on the part of the Meat Trust, or of any one of the purveyors of meat, then, of course, there is a single responsibility. If, on the other hand, each one of these ingeniously devised regulations was first phrased by some clever expert in pay of the Trust, who knew what avarice demanded, no matter at what risk to the public health; if not a rule was laid down, not an exemption formulated, not an amendment conceded, not a privilege granted, that did not originate in the packing-house, or was not suggested by some agent of that great combination which to-day controls the output of this article of food, then assuredly we can see no reason for relieving the Trust from any responsibility that belongs to it. Let the reader turn for a moment to the Appendix, and read these "Regulations." Is he impressed by the zeal of their authors for the public good? Is he convinced that these carefully formulated exemptions were contrived by one chiefly concerned for protection of the public health and indifferent to other considerations? Has the rapacity of a great Trust betrayed itself in a single line? The reader must judge. The facts are before him.

Ought we to approve the principles which have governed the action of the Agricultural Department in its relation to the inspection of meat? That demand will be made. For those who concede it, the question is settled. We shall be told that if the agitation of 1906 resulted in no reform of meat inspection, it is because no reform was necessary. The Regulations of 1908 are based upon those of 1904. When Congress in 1906 passed a law, making it an offence to put upon the market a food, "if it be the product of a diseased animal," can we say that there was not also implied a permission to the Department of Agriculture to define the word "*disease*" in such a way as would allow vast numbers of animal carcasses, otherwise shut out by the law, to be admitted to our food-supply? We may be certain that this defence will be put forth. It was O'Connell who once declared that there never was an Act of Parliament through which he could not drive a coach-and-four. But equity and the public welfare are of greater importance than legality, as construed by the attorney of a Trust. It is yet a question for the people of the United States to decide whether, by these rules and regulations, the popular mandate for reform was carried out as they expected and wished, or whether their interests have been sacrificed to private gain. We impute no dishonourable motives; but we do suggest the possibility of erroneous judgment and mistaken zeal.

3. No claim has been more persistently pressed than the assurance that any abuses must be impossible, because of the absence of secrecy in the preparation of meat and meat-products. In a recent report, the Chief

of the Bureau of Animal Industry dwells at length upon this point. He says :

“ Practically all the operations of slaughtering and preparing meats *are open to the world*, and are, indeed, in the large centres, one of the sights to which visitors flock. It is well known that accredited representatives of foreign Governments, expert and otherwise, see all the processes of inspection, and more than one has satisfied himself and his Government, sometimes to the surprise of both—that inspection is all that it is claimed to be.”¹

But even this official admits that there were past abuses. “ The preparation of sausage has in the past year undergone a wonderful change for the better.” The statement is enlightening. And yet, but a year or two ago, there was apparently as frank a publicity in the great packing-houses as there is manifested to-day. For the fact remains that, no matter how close the scrutiny of the visitor, nor how keen-eyed the inspector or the representative of a foreign Government, they will not and they cannot discover the greatest of all abuses—the utilisation of detestable stuff. *Nothing in the way of outside inspection or observation can prevent the use of diseased meat in the tinned can or in the sausage, so long as its use for food purposes is permitted by the Regulations of the United States Government.*

4. It is quite probable that, in defence of what has been done, some appreciation of the pecuniary advantages secured thereby will be suggested by the advocates of the Meat Trust. Some of these it will be impossible to deny. By permitting the utilisation of diseased meat, instead of condemning it to the soap-makers, an important trade in tinned goods has been built up in

¹ Twenty-third Report, Bureau of Animal Industry, p. 92.

Great Britain and in other parts of the world—a trade with which some of our rivals find themselves unable to compete. In America, we complain much of the high prices of meat. Yet is it not obvious that, but for the liberal interpretation of the law, which permits diseased carcasses to be passed as food, the cost of beef and pork might be materially higher? We shall be told to look at the matter without “sentimentality” or rigid notions of right or wrong, but in a plain, straightforward, business way. The Department of Agriculture, we shall be told, was not instituted as a Health Board. It was organised to promote, as far as possible, the interests of the farmer, the dairyman, the stock-raiser, and the fruit-grower. If the microscopic inspection of pork for trichinæ will extend trade, then the Department will order it to be made. Where no such inspection is demanded, there is never a thought of instituting it. We shall be told that whoever, for any reason, creates suspicions regarding the purity and wholesomeness of our meat-products, incurs thereby a weighty responsibility. The world seems well content with American meat; is there a single foreign nation that to-day is pressing for a more rigid examination of slaughtered animals?

Take England, for example. Her poorer classes largely depend for the cheaper qualities of meat upon importations from the United States. The pauper in the workhouse, the soldier in the barracks, the defenders of British interests on every sea—are supplied with American meat. If it is of questionable quality, why should we enlighten them, when completer knowledge can only result to our detriment? Is the American

manufacturer to display greater solicitude for the health of the English working man than is shown by the English Parliament? Arguments like these may find listeners. But we need not dwell on them. We can have no controversy with any man who finds in financial success and pecuniary gain and extension of commerce the slightest excuse or palliation for the betrayal of those who had faith in our honour, and placed confidence in our integrity.

5. Whenever any suggestion of inefficiency of Federal inspection is made, the attention of the public is at once called to the very large quantity of meat which is condemned during the course of every year as unfit for food. An excellent illustration of this method of defence is afforded by the report of a committee appointed to investigate certain charges seriously affecting the meat-inspection service.

It appears that on June 8, 1909, one of the meat inspectors in a Western packing-house addressed an open letter to the Secretary of Agriculture impugning the integrity of the meat-inspection service throughout the United States, and asking for a fair and impartial investigation of his charges. From such a source, the accusation was too serious to be passed unnoticed; and—with a view perhaps of demonstrating their conception of fairness and impartiality—some of the leading officials of the Bureau inculpated were appointed a committee to conduct the investigation! In a final report to the Secretary of Agriculture, referring to the charge of inefficiency in meat inspection, this committee says:

“The complete answer to this charge is found in the records of the Bureau of Animal Industry, which show that

between July 1, 1906, when the meat-inspection law went into operation, and December 31, 1908, inspectors of the Bureau of Animal Industry absolutely destroyed for food purposes 383,187 carcasses of food animals in their entirety."

After stating that over seventy-three million pounds of meat and meat-food products were also condemned, chiefly because they were found to be "tainted, rancid, putrid, or unclean"—facts that have nothing to do with the inspection of animals at time of slaughter—the committee adds :

"This enormous destruction of food shows conclusively that there is no collusion between those in charge of the enforcement of the law and the packers, and that the meat-inspection law *is being enforced to the limit.*"

Now we can by no means share in this comfortable conclusion. The mere fact that 383,187 slaughtered animals were wholly condemned as unfit for food, during two and a half years following the passage of the present inspection law, is not of the slightest significance as proof of zeal, *unless, at the same time, we are enabled to compare the total rejections with the total number which were inspected after slaughter.* The facts thus omitted are given below. It is probable that they will suggest a very different conclusion from that of the committee, as quoted above.

For the period of two and a half years, from July 1, 1906, when the present law governing meat inspection took effect, to the end of December, 1908, the following table gives us the facts desired. Concerning each species of animals, we have, first, the total number inspected during that period; second, the number which the zeal of inspection totally condemned, in all,

383,187 carcasses; and finally—what is of chief interest and importance—the proportion which the number thus condemned bears to the number inspected.

SPECIES.	TOTAL NUMBER INSPECTED.	TOTAL NUMBER CONDEMNED.	OF EACH 10,000 INSPECTED, HOW MANY WERE CONDEMNED?
Cattle ...	18,848,198	77,780	41
Calves ...	4,762,562	13,820	29
Sheep ...	25,178,415	23,298	9
Swine ...	85,123,993	268,175	31
Goats ...	119,813	114	10
Total ...	134,032,981	383,187	29

With the missing facts before us, the matter appears in quite a different light. There were, it is true, 383,187 carcasses of animals found upon inspection to be unfit for human food during the long period of two and a half years. But how insignificant is the number of these condemnations, when contrasted with the total number of animals inspected! Of a thousand cattle examined, the carcasses of *four* were wholly condemned; of a thousand pork carcasses, *three* only were thus put aside; the average of condemnations in these two and a half years was less than three in a thousand; and we are soberly invited by the officials of the Department of Agriculture to consider “this *enormous* destruction of food” as conclusive proof that “there is no collusion between those in charge of the enforcement of the law and the packers, and that the meat-inspection law is being enforced to the limit.” So far from being

“enforced to the limit,” the fact remains that the rate of total condemnations during the two years immediately following the passage of the Pure Food Law was actually less than during the two years immediately preceding the legislation of June, 1906. During this earlier period, per ten thousand animals inspected after slaughter, 33 were totally condemned as unfit for human food. During the two and a half years of a “Pure Food Law,” as seen in the preceding table, the rate of total condemnations was but 29 to each ten thousand slaughtered.

6. As an indication of the efficiency of meat inspection, attention will probably be directed to the large quantity of food-products which have been condemned upon reinspection. During the fiscal year 1908—the first complete year for which the facts are given, somewhat over forty-three million pounds of meat and meat-food products were condemned upon reinspection, chiefly because they were found to be tainted, putrid, unclean, or otherwise unfit for food. But what proportion does this amount bear to the total amount of “processed” meat foods? It was probably less than a half of one per cent. of the total amount put up. What the public would be interested to know is the total amount of each kind of meat-food product manufactured, and the amount found upon reinspection to be unsuitable for food. To tell us that forty-three million pounds of food were condemned, or that so many thousand carcasses were tanked, conveys no real information until we are enabled to compare such figures with the amount that passed inspection to enter the food-supply of the world. Even these facts

have no pertinence to the permitted use of diseased animals as proper food for human beings. The diligence of an employee is seldom accepted as an excuse for betrayal of trust.

7. We come, finally, to that ingenious defence, upon which the officials of the Department of Agriculture undoubtedly place their chief reliance. Anticipating criticism of the regulations—which, as we have seen, permit the Meat Trust to utilise the flesh of diseased animals for human food—it was thought best to obtain for such policy the endorsement and approval of certain veterinarians and pathologists. The committee thus appointed to advise concerning the “Regulations of the Bureau of Animal Industry” for the inspection of meat, were undoubtedly selected with great care. Two of the men thus asked to serve had been officially connected with the Department of Agriculture some years before; and were now invited to express their opinions concerning the rules, with which they were doubtless familiar. The city of Chicago contributed two members, one of them being the head of the Veterinary College in that meat-packing metropolis. The chairman was an Eastern man, the professor of pathology in a well-known medical school. They were asked “to consider and advise relative to those portions of the Department’s Meat Inspection Regulations relating to the disposition of carcasses *affected with various diseases and abnormal conditions.*”

The need for such a commission it is not easy to perceive. Before these Government officials was the law of the United States, prohibiting the manufacture of any article of food “*if it is the product of a diseased animal.*”

But laws are sometimes considered as counsels of perfection, for the disregard of which it is the province of ingenuity to find a way. The gentlemen honoured by the appointment of the Secretary of Agriculture met at the city of Washington, February 4, 1907. Their deliberations—if their meetings deserve such designation—lasted during a period of two and a half days. An application was received from the representative of the meat-packing interests to be present at their meetings, and the request was granted. No public announcement of any desire of this commission for other interests to appear before them seems to have been made; we are told, however, that in granting to the packing interests the opportunity of representation, it was “distinctly understood that should other interests desire hearings, their applications would also be considered.” No such application seems to have been made; and none could have been seriously expected. The health interests of eighty million people in America, of thirty-five million of the people of England, were without any such representation as might tend to disturb the harmony of the occasion. The committee was convened for a particular purpose; and that purpose was speedily fulfilled.

In due time, a formal “report” was made by the committee to the Secretary of Agriculture.¹ Therein,

¹ The detailed report of this committee may be found in the Twenty-fourth Report of the Bureau of Animal Industry, p. 361. In the same volume, p. 11, we are told that the committee held sessions “during February.” This gives a mistaken idea of their devotion to the work. As a matter of fact, the committee held meetings on February 4 and 5, and on February 6, for half a day.

he is informed that "from the standpoint of meat inspection, the term 'diseased' must be used in a sense not entirely in harmony with the popular conception of this word"—a fact of which this official must have been long aware. The committee tells him that no animal can be said to be absolutely free from any infection or lesion, forgetting also to remind him that no human being is in a similar state of absolute perfection. They intimate that it would be well for the general public "to have confidence in the ability of veterinary inspectors to pass judgment upon the purely technical side of the questions involved," as if a Government inspector could make the flesh of a cancerous animal fit to eat! They approve the rule permitting carcasses of animals showing lesions of actinomycosis elsewhere than in the head "to be *passed*, after the affected organs and parts have been removed and condemned." The opportunity for the meat-producers to pass animals affected by the swine plague is made a little broader than it was in the rules of 1906. They ratify the utilisation of the flesh of animals affected by mange "when the disease is slight." They present for consideration a new regulation permitting the utilisation of the flesh of cattle and swine "found infected with not more than *ten* tapeworm cysts" after removal of the parasites, the pork to be thoroughly cooked, while the beef may be "canned" or passed after keeping in cold storage for twenty-one days. They inform the secretary that "unless some movement is initiated, looking to a prevention of hydatid disease, this malady may cause serious loss of life among both men and livestock"; and then, as an evidence of their concern for

the public health, they propose (*for the first time in the history of American meat inspection*) that "carcasses or parts of carcasses found infected with the hydatid cyst (*echinococcus*) may be passed after condemnation of the infected part or organ." They solemnly advise that "any organ or part of a carcass which is the seat of a tumour, *malignant* or benign, shall be condemned"; but they have not a word of advice concerning the disposition of the remainder of such polluted meat. They suggest that "a strictly localised tuberculosis, consisting, for instance, of an isolated tuberculous nodule in the lungs, in the liver, or some other portion of the body," would not justify the condemnation of the carcass; and then they submit regulations which, far more extensively than this, permit the utilisation of tuberculous meat. They tell the Secretary that the inspectors of meat, in judging whether or not a carcass is diseased, should not act upon any "exaggerated or *sentimental* idea"; that at slaughterhouses, tuberculous meat should be judged on other grounds than "*sentimental* ideas"; and that persons interested in safeguarding the public health from tuberculosis should "consider the subject from a rational point of view, rather than a *sentimental* one." May we not be quite certain that, aided in their deliberations by the accredited representative of the packing interests, no "sentimental" considerations were permitted to govern action, or to shape advice?

Admitting the service which this committee rendered to the pecuniary interests involved, are there any reasons why the millions of consumers of American meat and meat-products, in England and the United States,

should distrust their advice? We think such reasons exist.

In the first place, one cannot but suspect that the principle governing the composition of this advisory committee may not have been based upon disinterested regard for the public health. How did it happen that these particular individuals were chosen to advise the Department of Agriculture? Were not the views of each one of them, regarding the utilisation of diseased meat, known before their appointment? Were they not all of one mind regarding this vitally important question? No hint of any disagreement appears in their report. And yet opposing views have elsewhere found utterance. A member of the medical profession, Dr. W. K. Jaques, was formerly at the head of meat inspection in Chicago stock-yards, and he tells us frankly that disagreement even then existed concerning the condemnation of diseased meat. "One authority declared that when any part of the animal was diseased, it should all go into the fertiliser tank. Another said that only the diseased part need be cut away. Still another would pass all meat if well cooked. . . . I venture the assertion that although the Commissioner of Health *will allow the flesh from an animal that has localised lumpy-jaw to pass into the public food-supply, he would not permit his family to eat an ounce of it if he knew it. . . .* If the finest restaurant in America should publish on its bill of fare that its choice roast beef was cut from an animal which had a small, localised tubercular area, *no physician would dine there, or permit his patients to do so.* Yet if this issue were brought to court, probably a hundred physicians would be will-

ing to testify that such meat, if well cooked, would be harmless!"¹

There is not the slightest evidence in their report that any such divergence of views found expression during the deliberations of the committee. It is quite probable that not a single voice was raised favourable to any such system of slaughter and meat inspection as would enable the purchaser to distinguish between meat-food products derived from healthy animals and those manufactured from animals that were diseased. May it not be more than likely that this advisory committee was made up of men of learning and respectability, no doubt, but men known by the department, from their previous affiliations or from their writings, to favour the utilisation of diseased meat as food for the poorer classes in England and America, provided the diseased parts were cut away?

Let us concede the existence of more than one view on this subject. *But should not both opinions have had representation and a hearing?* In England, when a great question like this comes into the arena of public opinion, a Royal Commission is appointed; as members of such Commission, men of opposite views find a place; all evidence is welcomed which tends to elucidate facts; the sessions may extend over months; and no matter to what conclusion the majority of such Commission may arrive, there is a mass of evidence made public which is of permanent value. In America, a packed committee, probably made up of men who are in

¹ *The World's Work*, May, 1906: "A Picture of Meat Inspection," by Dr. W. K. Jaques, formerly head of the meat inspection at Chicago stock-yards.

practical agreement, holds private sessions for two and a half days; hears no evidence; is assisted by the presence of the Meat Trust's representative; endorses all the practices in vogue; and we are invited to regard their judgment as a determination of the questions involved! Is this the part of wisdom? In America, men have come to view with some suspicion the opinions of experts selected to testify upon matters involving vast financial interests, or questions of life and death. We all know that if a millionaire kills his rival in a fit of jealous rage, his legal advisers will not have the slightest difficulty in securing the testimony of scientific experts of the highest character, who will swear that the murder was an insane act, for which the prisoner should not be held to legal accountability. Now here was a case in which vast financial interests were involved. For many years the United States Government had approved of the utilisation by the meat-packers of diseased animals as food. The justice of the regulations which permitted it was certain eventually to be called in question. There was need for some endorsement of the Department's policy. That endorsement has been secured. The character of the individual experts who thus represented one phase of the question is not in dispute. Even conceding to them the highest motives, we nevertheless challenge the value of their services to the cause of preventive medicine and the public health. The addition of their views to those of the Department's officials is very different from the public discussion of a great problem by disinterested and unbiassed men.

Another reason for questioning the value of this

committee's conclusions is the comparative absence of any suggestion or recommendation for reform. What abuses, if any, did this committee point out? *Not one.* In the report of this Commission to the Secretary of Agriculture, the reader will search in vain for the slightest evidence indicative of a desire for any reform of the methods of inspection in vogue. The new regulations, based, we are told, upon the recommendations of this committee, became effective in May, 1908. In phraseology and arrangement, they are an improvement upon preceding rules; but in substance, and often in language, they are practically the same as those which were put forth even before the agitation in favour of "pure food."

It will be seen that they prohibit for the first time the utilisation of parts or organs affected by "benign tumours" and the flesh of vaccine animals. Otherwise than this, the most careful comparison, sentence by sentence and word by word, *will fail to disclose in the Regulations now in force a single prohibition more favourable to the purchaser of American meat than existed in the Regulations of 1904 or 1906.*

Nor is such omission the most amazing feature of these new Regulations, based upon the advice of the committee of scientific men. In many respects *the new rules are distinctly worse than those which they supplanted.* It would seem that whenever there was any possibility of modifying the old Regulations so as to favour the Meat Trust at the expense of the consumer, or to widen the utilisation of diseased meat, it was done. There can be no question on this point in the mind of any reader who will simply take the trouble to

compare the two sets of rules governing meat inspection. We have seen that, according to the Regulations of 1904, diseases such as inflammation of the lungs, of the intestines or of other organs, "*whether in acute or chronic form,*" were held to be sufficient to justify the condemnation of carcasses thus affected; in 1908, as we have seen, such diseased carcasses were only condemned when the inflammation could be called "*acute*"; and an unknown number of animal carcasses that four years earlier would have been condemned are now permitted to be turned into meat. In 1904 the Regulations wisely required that "*the viscera of all tuberculous animals shall be condemned*"; in 1908 no such requirement is made; and, for all we can see, the utilisation of such material is not forbidden. In 1904 it was required that the carcasses of recently pregnant animals "*should be condemned and rendered into grease*"; in 1908 the same carcasses, if without evidences of blood-poisoning, "*may be rendered into lard or tallow, if desired by the manager of the establishment*"; and so what once went to make soap now goes to make "pure lard." In 1904 the packers were strictly prohibited from utilising for food purposes the flesh of immature animals "*under four weeks of age*"; in 1908, for the benefit of the Trust, a week is taken off; and the purveyors of various meat-delicacies may utilise carcasses that are just over *three* weeks old. Some of these changes were made in 1906, but they passed beneath the eyes of the Commission in 1908. Could anyone imagine that such changes as these would one day be claimed as inspired by a regard for the health of the consumer, rather than the profits

of the Meat Trust? Practically, the Commission makes precisely this claim; for they assert in their report to the Secretary of Agriculture that "if there be any general error in the regulation" (pertaining to diseased meat), "this is in favour of the public, rather than in favour of the butchers and packers." We do not believe that posterity will endorse this claim. We are unable to see that by approving every existing abuse, without making more than one or two slight changes in the direction of reform; by confirming and sanctioning the utilisation of the flesh of animals suffering from tuberculosis, from hydatids, from actinomycosis and from other diseases; and, above all, by enlarging permission to use flesh that was formerly condemned, and expressing the view that even existing restrictions might be "made less stringent," this Commission, no matter with what intentions, has acted otherwise than for the promotion of ignoble interests, and against the welfare of the millions of consumers of American meat throughout the world.

CHAPTER XIII

THE HELP OF THE ENGLISH PEOPLE

REGARDING the hostile forces which will strenuously oppose all attempts to institute reform of these abuses, one should entertain no delusions. Based upon many millions of invested capital, involving innumerable sordid interests, defended by advocates of ability in the Press, in Congress, and in a great Department of the Government, the Meat Trust has the American people so completely in its grasp that it is not easy to discern any avenue of present escape. With immeasurable resources at command, it may not be difficult for the Trust to quiet, in America, all agitation for reform, and probably for a long time to prevent the passage by Congress of any laws looking to change of present privileges and profitable abuses.

To foreign lands, and chiefly to England, we must look for the development of a public sentiment concerning meat inspection in the United States, which we may hope will conduce to reform. In the first place, the English people have been vast consumers of American meat and meat-products. The following table gives some of the facts. We have thus an official estimate of the number of pounds of certain

meat-food products which have been exported to the United Kingdom during two years of recent date.

MEAT AND MEAT-FOOD PRODUCTS EXPORTED TO THE UNITED KINGDOM DURING TWO YEARS, 1902 AND 1906 (POUNDS).

KINDS OF MEAT.	1902.	1906.
Pork, salted or pickled	54,487,290	73,526,635
Pork, fresh	44,017,247	12,580,875
Hams	202,390,263	173,926,165
Bacon	310,380,793	280,280,628
Lard	199,442,907	241,903,704
Beef, fresh	297,844,537	265,444,500
Beef, canned	51,282,929	44,335,871
Beef, salted or pickled	16,155,785	18,681,138
Total number of pounds ...	1,176,001,751	1,110,679,516

Even this table does not include everything that goes to Great Britain from American packing-houses. It shows, however, the immensity of the traffic. If all the above had gone to England alone, the quantity consumed in 1902 would have been at the rate of 58 pounds for every man, woman and child over the age of fifteen years.

Now a notable decrease in the exports of meat and meat-products to Great Britain is invariably viewed with apprehension by the purveyors of American meat. This fear of loss, due to possible diversion of trade, finds an expression in official reports. In 1905, attention was thus called to the fact that the dead meat sent from the United States to England had decreased each year since 1901. The trade in fresh beef between 1901 and 1904 had decreased a fraction over 16 per cent.,

while the trade of England with Argentina had increased more than 300 per cent. In the foregoing table, we see that American trade with the United Kingdom in certain meat-products named fell off in four years more than sixty-five million pounds. Between 1900 and 1904, England's imports of American bacon fell off over 29 per cent. (or more than a million hundredweight), while imports of the same article from Canada, from Sweden and from Russia increased from 56 per cent. for Canada to over 600 per cent. for Russia. The Chief of the Bureau of Animal Industry does not conceal his apprehensions regarding this loss of American trade. He says:

"Our natural conditions are such that we should be able to produce this article at a cost which would permit it to compete successfully for many years with any other part of the world. If we are producing a bacon which does not fully meet the requirements of the trade, it would not be a difficult matter *to change our type of hog*. . . . There appears to be a more promising field for effort in Great Britain than in the markets of other countries."¹

We shall not question the need for modification of present practices, if we are to regain our trade. It is not the "type of hog" that needs to be changed so much as the type of American officials, whose approval of diseased animals as wholesome food has cast suspicion upon every product of the packing-house, and degraded the standard of American meat.

The chief incentive to immediate reform of the more glaring abuses must, therefore, be supplied by the foreign consumers of American meat and meat-products. If the day ever comes when the English consumers of American meat and meat-products shall be dissatisfied

¹ Report of Chief of Bureau of Animal Industry, 1905, p. 50.

with that Government inspection which is now vouchsafed (to defects of which his attention has now been called), they need only to refuse their custom, and whatever reform is required will speedily be accorded. If the working man in England should decline buying meat-products which in part are derived from the flesh of diseased animals; if he indicates a preference for meat which has undergone an inspection, before and after slaughter, far more rigid than that which now pertains to the American packing-house, we may be sure that national legislation securing the ends desired will soon find place on the statute-books of the United States, if only for the sake of retaining the trade of so profitable a customer. But, on the other hand, should the English working class continue indifferent to the quality of American meat; if from the Army and Navy comes no protest concerning rations thus derived; if no whisper of discontent is heard in the great public institutions of England, or from those who supply them with meat-food products imported from America, then, in all probability, the Great Trust will continue serenely indifferent to other criticism, and the day of emancipation from present slavery may be long deferred. But postponement of the problem cannot be permanent. However long delayed, we cannot question the eventual awakening of the English and American people to dangers so vitally affecting the physical welfare of the race.

CHAPTER XIV

THE PROBLEM OF REFORM

A DISCLOSURE of a great abuse is generally useless unless we see possibility of reform. In the preceding pages, it has been demonstrated that, unknown to the great majority of the people of this country and Europe, the practice of using the flesh of diseased animals for meat-food products has been the custom of the American packing-house for many years. We have seen that some of the diseases with which such animals were affected are of a disgusting or dangerous character, and that some have an intimate relation with human ailments. We have noted that the practice is one of long standing ; that it is based upon desire for greater profit to the Trust ; that of recent years it has been sanctioned by a Department of the United States Government ; and that for its defence there has been no difficulty in securing the opinions of men who sustain and approve it, precisely as every great crime against Humanity in the past has found someone to justify and defend.

We may take it for granted that no adequate reform of this evil is possible while the present ignorance and indifference can be maintained. So long as the public are content to eat without question the products which

are made up of questionable flesh, the abuse will continue. We may be certain, however, that whenever the people of this country and of Great Britain shall demand that the abuses cease, some means will be found very speedily for the initiation of reform. Along what lines is any reform practicable? Through what measures may it be carried into effect?

It seems evident, in the first place, that we can hope for nothing in the way of reform from that vast aggregation of interests and influences which, for want of any better name, we have called the Meat Trust. It has fattened, so to speak, upon the blood and through the agony of millions of animals, slaughtered with the utmost attainable speed, and with complete indifference to the cruelty which haste has occasioned. For anything but profit, what concern has it ever manifested? What has it cared that half a million of hogs go every year into the markets of the world affected by trichinæ? So long as they could be concealed, what interest did it manifest in any reform of the abominations pertaining to the packing-houses which were revealed to the world during the agitation of 1906? Why is it necessary even to-day for the Department of Agriculture to issue orders that, in the preparation of sausage, the only outer coverings or casings that can be used as containers shall be "those from cattle, hogs, sheep, or goats"¹—unless it had once been the custom to use for this purpose the intestines of other animals? Why should it be required to lay down the rule that "extract of beef" must be actually made from beef;² or that

¹ See Regulations of 1908, Reg. 23, Sect. 5, par. 25.

² Twenty-third Report, Bureau of Animal Industry, p. 380.

when hogs' feet are used in making lard, they must be clean, and the hair and hoofs removed;¹ or that only clean water should be used in the preparation of food-products; or that diagrams of all underground pipes used to carry edible or inedible substances and products must be filed with the Department of Agriculture?² Why was the Department of Agriculture obliged, by written order, to prohibit certain practices in the preparation of meat-food products so abominably loathsome and horrible they cannot here even be described?³ We are not referring to the uncleanness of an ignorant workman. It is because of the turpitude and untrustworthy character of men higher up that such rules are needed. From any such combination, how is it possible to expect anything but unwearied and relentless opposition to every suggestion of reform? Soulless, remorseless, conscienceless, indifferent to everything but that which makes for gain, blind to every consideration for the public health, the Meat Trust, in its relations to human life and welfare, is incomparably the worst of all the combinations which have aimed at the complete control of any branch of American production and industry.

Nor can we see any probability of reform through the co-operation of the United States Department of Agriculture. Organised to protect and advance the interests of the stock-raiser, the meat-packer, the farmer

¹ Regulations of 1908, p. 32.

² Regulations of 1908, Reg. 23, Sect. 4, par. 5. See also Regulations of 1906, Reg. 41.

³ Instructions, etc., issued by U.S. Department of Agriculture, December 10, 1906, p. 6; see final prohibition.

and fruit-grower, it has undoubtedly been assiduous in the promotion of its aims. No greater absurdity was ever enacted into law, than the measure which placed the public health, in any way, under the supervision or control of a bureau which was instituted in order to further the gains of the herdsman and the butcher. More than once in this inquiry it has seemed right to criticise the zeal shown by this department of the Government for packing-house profits, where of paramount import would have seemed the promotion of the public health. Congress passed a Pure Food Law which made it a crime to manufacture an article of food from flesh which was "the product of a diseased animal"; and the Department of Agriculture hastened to issue regulations governing meat inspection, which in a number of instances apparently nullified the law. The favouritism of the Department is evinced, even when it would seem that the slightest consideration for the general welfare would have suggested another course. Sometimes a new meaning is given to words, and then follows gain for the meat-packers. For example, one would suppose that a meat-food product was any article which was to be eaten by human beings as food. Take, for instance, the outer covering of sausage made from the intestines of animals. Of this product of the packing-house, over two million dollars' worth are exported every year. One would think it rather important that the foreign consumer should know that they were from animals which, upon slaughter, were free from cancer, or tuberculosis, or other diseases. But any regulation to that effect would lessen the output; and so by a ruling issued October 29,

1906, it was ordered that "*unfilled casings shall be regarded as containers, and not as meat-food products*";¹ and the reader will not question the ingenuity which could devise such an interpretation of the law—whatever may be his judgment upon the abstract equity of the act. What was the object of that ruling of the Department of Agriculture which specifically exempts from inspection "*ship stores*"—making it possible to furnish to English and American sailors meat derived from diseased animals?² We need to remember that every interpretation seems in accordance with the ideal, that the primary object of that department of the American Government is the advancement of special interests. "It will probably be generally admitted," said Dr. Salmon, while acting as Chief of the Bureau of Animal Industry, "that *the Department of Agriculture exists for the benefit of the agricultural industry.*"³ We do not agree with this statement. We do not understand that the purpose of any department of administrative work in the Government of the United States is other than for the benefit of the nation as a whole. But candour compels us to admit that in every case the Department of Agriculture has acted in perfect accord with the ideal advanced officially. If the framer of the regulations governing meat inspection had actually been

¹ Twenty-third Report, Bureau of Animal Industry, p. 389. See also the ruling issued March 12, 1909, permitting benzoate of soda to be added to meat or meat-food products, without any restriction as to amount of the drug which may be used. The amount used must, indeed, be stated on the label, but the Department of Agriculture does not determine the dose.

² See Appendix, Regulation 25, section 5.

³ Eighteenth Report, B.A.I., p. 9.

on the pay-rolls of the packing-houses, he could not have devised rules which would more certainly have increased their gains than those which require the approval of diseased meat. It cannot be the part of wisdom or prudence to place the health of the nation, any longer than possible, under control of a Department which fancies that it "*exists for the benefit of the Agricultural industry.*"

It is not an easy task to indicate remedies for abuses so long established and so powerfully defended. At the same time, we know that remedies must exist. It is certain that we shall not be obliged to submit to the dictation of the Meat Trust any longer than popular indifference shall permit. All that is requisite is adequate recognition of the evil and a desire to reform it altogether. We may be sure that wholesome meat and meat-food products, derived from healthy animals, may one day be purchased with a surety that does not exist to-day. It may be impossible to expect reform in the immediate future; let us see what can be done when the sleepers awake.

I. A Rigid Inquiry must precede Legislation.

Before any real measure of reform can be carried into effect, there must be a most searching official investigation of the whole subject. To any such investigation on the part of Congress there will, of course, be raised the strongest opposition. The success of any such antagonism may seem doubtful; yet we should not underrate the power which so nearly prevented any reform legislation in 1906, and managed to throw the cost of meat inspection, amounting to

three million dollars annually, upon the people of the United States. Until official testimony, gathered from unwilling witnesses, brings out the facts that are now concealed, it is perhaps only natural that some incredulity should exist. Before a Congressional committee must be brought the men who know the facts pertaining to meat inspection. Who was the author of the Regulations governing inspection which were issued in 1904? In the compilation of these rules, what suggestions, if any, were made by parties in any way connected with the butchers and packers? How does it happen that after the legislation of 1906 the rules permitting this utilisation of diseased meat were practically what they were before, in everything but phraseology and arrangement? How did it come about that the stringency of the law was so frequently relaxed, and that all rulings and interpretations of the law were seldom, if ever, for the benefit of the consumer, and so generally in favour of the pecuniary interests involved?

Much valuable information may be obtained from the Government inspectors when it is made certain to them that their evidence in regard to past practices will have no adverse influence upon retention of their posts. In approving certain forms of diseased meat, their decisions have been partly in accordance with written rules, supplemented by personal judgment. The official Regulations since 1904, and perhaps earlier, have distinctly permitted the inspector to decide whether a condition is or is not too "loathsome" to pass as wholesome flesh. "The Department gives us rules," said a Government inspector on one

occasion; "but in the end we have to use our own judgment. When I think that a hog is too bad to be used for lard, I order it into the grease-tank." Would such an official be secure of his place if he should order to the grease-tank all meat so bad that he would not himself partake of it? It is unnecessary to indicate the direction of particular lines of inquiry; a proper investigation will leave no abuse hidden and no wrong concealed.

II. The Control of Meat Inspection must be Transferred.

No conclusion would seem more evident than the incapacity of the Department of Agriculture to give due attention to the public health, and at the same time to promote the ends for which it was established—the advancement of the financial interests of the farmers, the stock-growers, and the purveyors of meat. We need not dwell upon the absurdity of placing medical matters under the control of a Secretary of Agriculture; any reflecting mind can see that there were sure to be divided responsibilities. The reform of present abuses would seem absolutely impossible while the public health remains under present control. We may count with assurance upon the course which will be taken by the meat-purveying industry; through the public press, or by its representatives in Congress, it will urge the retention of present jurisdiction and the continuance of all existing possibilities of gain. Of real reform there is therefore not the faintest hope, so long as the decision of questions vitally concerning the health of a nation of

eighty million people rests with the Department of Agriculture.

It is possible, however, that some day there will be created at Washington, as of equal importance with Departments of Agriculture or Commerce, a Department of Public Health. In co-operation with State Governments, such branch of the national administration may some day enable the people of the United States to know—what they cannot even guess to-day—the number of deaths at each period of life which annually occur from preventable diseases in every state and territory of the Union. Such a department will assuredly forbid that horrible haste in butchery which is alike responsible for atrocious cruelty to animals, and for a resulting spirit of indifference to the interests of human beings. It will ask for such state and national legislation as shall make it a crime to transport on cars animals intended for conversion into meat, without stopping to give them food, water, and rest at least once in every twenty-four hours; a crime to transmute into a food-product the carcass of an animal affected with abscesses or with hog-cholera, with tuberculosis or malignant disease, and to sell such product to an unsuspecting public; a crime for any official whatever to weaken by administrative regulations or orders any provision of a statute intended for the prevention of disease or for safeguarding the public welfare. We do not assert that abuses may be thus made impossible. In every profession there are men who are purchasable. It is conceivable that even at the head of a Department of Public Health one might be placed who would, if he dared, approve of tuberculous and

cancerous flesh as fit and wholesome food. That he could publicly maintain such position in the face of the medical profession of the United States we do not for a moment believe. When to such a department of the Government shall be confided the execution of a Pure Food Law and the inspection of meat, the profits of the purveyors of this article will doubtless be lessened ; but the wholesomeness of American meat and meat-products will be far better assured than it is to-day.

III. Any Adequate Reform of Existing Abuses should prevent the Unconsenting Purchase and Use of Diseased Meat for Food.

This is the most vital condition of any genuine reform. The great wrong of which the packing-house has been guilty was possible only through the secrecy of its acts. Upon unconscious and ignorant purchasers throughout the world, meat and meat-products have been forced, which they would not have touched had they known the facts. We shall have scientific experts presently declaring that tuberculous pork or beef will do harm to the consumer ; but what purchaser would care to have such food placed on his table without his knowledge or consent ?

We must probably take it for granted that at the present stage of civilisation we cannot completely prevent, by legislation, the consumption of meat derived from unhealthy animals. To large numbers of poor people cheapness is a higher consideration than healthfulness. There are savage races, living under the American flag, who see no objection to the flesh of dogs. Beyond a certain point we cannot govern such

tastes. The one thing upon which we should all agree is that the purchaser of meat inspected by the Government of the United States *must be able to know exactly what he is buying, and that the label shall invariably tell the truth.* More than this, perhaps, we may not hope. Less than this will be wholly inadequate and ineffectual.

Any legislation which shall make for reform must provide that meat intended for foreign or domestic use, especially in the form of meat-products, shall be stamped with labels that not only state facts, but permit opportunity of discrimination and choice. This rule must apply not only to fresh meat, designed for consumption at home, but also to every variety of meat-products sent abroad—to bacon and hams, to sausage and canned beef, to beef-extracts and lard.

Let us see what might be done in the way of affixing labels to meat-products which should tell the truth. Take "canned beef," for example; it is one of the leading products derived from beef. In 1904, we exported to all parts of the world over fifty-two million pounds, of which over thirty-six million pounds went to Great Britain. We know now, through the revelations of 1906, that, to an unknown extent, this meat must have been of very questionable character, so far as origin is concerned, and that revolting conditions prevailed where it was prepared. Now suppose that at some future day every tin containing this meat-food product should be officially labelled, so as to make known to every consumer the facts regarding it. A part of it might bear some such label as this :

AMERICAN CANNED BEEF.

First Quality.

This Beef is from Cattle, not over Five Years of Age, inspected before and after Slaughter, and found to be entirely free from any sign of Disease or Injury.

Inspected by the

U.S. DEPARTMENT OF PUBLIC HEALTH.

Quality Guaranteed.

Suppose, however, that meat of an inferior quality is also in demand. What objection should there be to a label like this?

AMERICAN CANNED BEEF.

Inferior Quality.

This Beef, in part, is derived from Cattle found, upon Post-mortem Inspection, to have been somewhat affected by Tuberculosis, Actinomycosis, or other Diseases, or by Injuries.

It has been prepared by processes believed capable of destroying all germs of disease.

Inspected by the

U.S. DEPARTMENT OF PUBLIC HEALTH.

Or take lard. Let us imagine the facts pertaining to origin were truthfully stated on each package in some such way as these labels imply :

PURE LARD.

First Quality.

This Lard is derived only from the fat of Hogs, which were inspected before and after Slaughter, and found to be free from Disease or Injury.

Manufactured under the Inspection of the
U.S. DEPARTMENT OF PUBLIC HEALTH

Now let us suppose another article to bear the following label :

AMERICAN LARD.

Inferior Quality.

This Lard has been made from Carcasses of Hogs which, upon Official Inspection, were found to have been affected with Tuberculosis, Hog-Cholera, Swine-Plague, Tapeworm Cysts, or other Abnormal Conditions.

It has been rendered by subjection to a temperature not lower than 220 degrees Fahr. for a period not less than five hours, and is believed to be free from the germs of any transmissible disease.

One need not imagine further illustrations of truthful labels. We by no means suggest them as ideal; but, at all events, *they would tell the truth*. To-day the truth is concealed in the interest of trade. In an official circular, issued by the Bureau of Animal Industry, the statement is made that,

“when one purchases a can of lard, bearing the words ‘Pure Lard’ and the legend ‘U.S. INSPECTED AND PASSED, under the Act of June 30, 1906,’ he may be sure that he is actually receiving pure lard, rendered from the clean, sweet *fat of healthy animals*.”¹

Is there not some inaccuracy in this official statement? May we indeed be sure that a can of lard, thus labelled and thus guaranteed, is only “from *healthy animals*”? What, then, is the meaning of the Government Regulations, which again and again, as we have shown, permit the utilisation of *diseased* carcasses in this way? What is the meaning of that defence of the practice of rendering lard from *diseased* animals, quoted in this volume (at p. 119) from the Report of the Bureau of Animal Industry? Errors and contradictions like these tend to make us doubtful of every statement which has for its object the benefit of the meat-producers.

Of course we shall be told that any such labels are absurdly impracticable. Undoubtedly the best qualities of meat-food products would find a ready market; but who would purchase a food where the inferiority of its derivation was so plainly made known? But this objection is a confession that to promote the foreign or home trade in American meat and meat-food products

¹ Circular 101, issued January 4, 1907, p. 9.

it is necessary to conceal the truth. Let us make the experiment. If meat and meat-food products derived from diseased animals cannot be sold as food, the loss will not be absolute. The meat, thus rejected, can be turned into fertiliser ; the lard may find its way to the soap-boilers. Which is the better from every point of view, a label which tells the whole truth, *or one which hides facts which every consumer is entitled to know ?*

IV. Future Regulations governing Meat Inspection, should be drawn wholly in the Interest of the Public Health and Welfare, and without Regard to Private Gain.

It would seem difficult to dispute such a proposition as this. Yet one cannot study the present Government Regulations, with their various rulings and decisions, without feeling that every sentence is more favourable to the producers than to the consumers of meat. This attitude should be completely reversed. If ever a Government Commission be appointed to elaborate new regulations for the inspection of meat solely from the standpoint of the public health, we are confident that the result of their labours will be far different from the rules now in force. It is possible that we are not yet in a position where the law may forbid the utilisation of all unsound animals, where the customer is fully aware of the quality and origin of his meat. Few, indeed, are the reforms that can be completely carried out, until public opinion is vastly in their favour. But if we can take the inspection of meat from the control of those who are interested only in its sale, and place it under the supervision of those whose only interest is to safeguard the

public health ; if at the same time we can see that the label always tells the truth, and that the buyer knows the facts, we may be satisfied that some progress has been made on the road to reform.

Of course, there are many reforms which are within the power of the Secretary of Agriculture to institute at any time. The "grossly inhuman" methods of butchery which were so denounced by the special sanitary commissioner of the London *Lancet* are all due to the greed for increased gain, which esteems cruelty of small account when it conduces to profit. In the great packing-houses there is hardly a single procedure relating to the butchery of animals for food that might not be changed to advantage if more time could be given to the men who do the work.

Equally important, and entirely within the power of a Secretary of Agriculture to have reformed, are the duties and responsibilities of the inspectors of meat. The power of the inspector should be limited to the discovery of unhealthful conditions ; it ought not to be left—as it is to-day—to his judgment to decide whether the diseased carcass is sufficiently "loathsome" to require condemnation, or whether it may not be safely passed for food. "The Federal inspector," says Dr. Jaques, "comes to his task at the request of the owner whose animals he is to inspect, and with whom he comes in daily contact. The packer is a good fellow ; a bright, sharp, generous business man. He may be a millionaire many times over. Around him, at his command, are a thousand conditions which may influence the inspector. To say that he would not be influenced by these conditions, is to say that he is not human. . . . A

man's judgment is the result of his education. With the Government rules permitting the passing of tuberculous meat, and authorities differing so widely regarding what is fit to eat, the inspector can justify himself for various standards. So he is between two interests; on the one hand, the ever-present dominating interest of the packer. To tank a man's sides of beef is like burning his fifty-dollar bills. On the other hand is the absent public—fickle and ignorant. Is it strange that meat which the inspector would not eat himself *goes to the public by theton?*"¹ This is the view of an expert. Yet the only reply which the officials of the Bureau of Animal Industry have been able to make is that the Government inspectors are secured after a Civil Service examination, that they are men of good reputation, and hold degrees conferred by a veterinary college.² We do not regard this as a sufficient reply. There can be no doubt but that vast quantities of meat are now permitted to be transmuted into food-products, which under a better system would at once be sent to the manufacturers of soap or fertilisers. The limitation of the powers of an inspector to approve meat manifestly diseased, will be opposed; but it will meet opposition only from those whose pecuniary interests are concerned, or whose gains may be lessened by any and every reform.

We have by no means considered the entire field of possible reform. It should be possible in some way to lessen the temptation to make a profit by

¹ "A Picture of Meat Inspection," by Dr. W. K. Jaques, formerly head of Meat Inspection at the Chicago stock-yards.

² See Twenty-third Report, Bureau of Animal Industry, p. 449.

the sale and slaughter of diseased animals. Probably, this can only be accomplished by making regulations the infraction of which would be exceedingly unprofitable for any offender. The inter-state traffic in animals manifestly diseased should be forbidden by law. It may be that some compensation should be given to farmers for animals found upon examination to be unfit for human food. Of course, such compensation would appear to be based upon generosity rather than justice. We shall be told that no one suggests that a farmer should receive a compensation for loss of his wheat-crop, or for failure of his corn to ripen. But such losses as these do not affect the general health. We are confronted by peculiar conditions; and it may be that losses pertaining to meat might better be shared by the State than permitted to fall upon the individual producer. In the campaign against tuberculosis, this principle has been recognised; and it may be advisable to extend its application to all other diseases. An opportunity would be afforded the State to prescribe the conditions under which healthy animals could be bred with certainty; and to make refusal of compensation for loss, depend upon the environment which possibly contributed as a cause of the disease, rather than that conducive to maintenance of health. The horrible privations to which cattle are subjected during winter on the Western plains—without shelter, and without adequate nourishment, probably have considerable influence upon subsequent health. Perhaps in no other way could owners so readily be induced to prevent these abuses as by making their

continuance a bar to compensation received by other and more humane cattle-owners.

The inexpediency of creating suspicion concerning an article of food of such general use, will undoubtedly be urged by the defenders of the Trust. We cannot deny the inconveniences which will be experienced by those who shall lose faith in everything that proceeds from American packing-houses. There may be some who would have preferred to remain in contented ignorance; it is probable, however, that the great majority of us prefer to know the facts. Are we not thus more certain, in the end, to attain reform of existing abuses than by a confidence that rests on untruth? Is it possible that in the matter of food, anyone prefers to be deceived?

CHAPTER XV

CONCLUSIONS

IN the preceding pages, we have assumed that the use of animal flesh as food for human beings is a practice so interwoven with our present civilisation that, in all probability, it must continue for some ages to come. If this be true, the chief problem of Society, in this matter, is to make sure the sanitary condition of the creatures which man sacrifices for his food. Some of the dangers inherent in present methods have been indicated, and the lines of reform, most urgently necessary through legislative action, have been in part pointed out. The question of individual co-operation still remains.

For large numbers of men and women in all conditions of life, the only test of food is its appetising quality. When it satisfies the taste, it will continue to be eaten, no matter from what disgusting sources it may have been derived, if only these are half hidden, or unrecognised by sight. There are others, however, to whom the question of health is of far greater importance than the gratification of appetite. Granting the existence of the dangers, how may they be avoided by individual action? What course is open to everyone, by which, to the lowest

point, he may reduce for his family and for himself the chance of injury? May one wisely make distinctions in this matter of food? If certain articles of animal food should be avoided, are there others which may be eaten with comparative impunity? Upon these questions there will be, very naturally, differences of opinion. The conclusions which the writer has reached are as follows:

1. It seems probable that fresh beef and mutton, sold at the highest price, and served in restaurants and hotels of the first class, is—as a rule—derived from sound and healthy animals.

In this matter, as in others, price tends to denote quality. At one of the principal meat-producing establishments of Chicago, the writer was informed that all beef was graded, and that the best meat goes to dealers willing to pay the highest price.

2. On the other hand, the cheapest kinds of meat, such as is served in eating-houses of the lowest rank, or which is purchased at a cost far below that which obtains in butcher-shops of the better sort—meat such as is consumed by the very poor among the dwellers of our great cities—is, at least, likely to be derived from animals whose diseased condition, in the opinion of the Government inspector, did not require the total condemnation of the affected carcass.

3. Between these extremes, is the meat furnished to the great majority of consumers in England and America. That a considerable proportion is as wholesome as any flesh of animals can be, is probably true. But some portion is doubtless derived from questionable sources. Unfortunately, for the average

consumer at hotels or restaurants, it is not possible to determine where to draw the line. With the selection of the viands placed before him, he had nothing to do; and, if he eats meat, he is forced to take his chances. What these possibilities are, it has been the purpose of these pages to disclose.

4. The kinds of meat which are most likely to be derived from sound and healthy animals, are undoubtedly lamb, veal and mutton.

5. Pork, more than any other form of meat, is derived from animals which at the time of slaughter, were probably suffering from some form of disease, capable of being transmitted to human beings. It may be questioned whether ancient prejudices were not founded upon wisdom, and whether from an animal so tainted, any part of the food of human beings should be derived.

6. Concerning the various food-products, composed wholly or in part of meat, packed in tins and so sent throughout the world, what is the judgment of the investigator? Ought they to be regarded with suspicion or confidence? Are they likely to be derived from the best kinds of meat, such as command the highest price, or from that class of animals, which, more or less diseased, the Government Regulations permit to be "passed" for purposes of food, provided the diseased parts are condemned? To the writer, there seems no escape from absolute distrust. However attractively put up, however delicately spiced and flavoured, however extensively advertised, every "mixture," whether in form of sausage or packed in tin, *in the composition of which the Federal Government permits the utilisation of*

diseased meat, may have been manufactured in accordance with such permission. They are composed, at least, of questionable materials. The tinned beef of the Chicago packing-house may cheaply feed a workhouse population of paupers, or an army in the field; but that does not demonstrate the excellence of the "canner cow." There are few intelligent mothers who would give their children pastry made from "pure lard," if they knew from what sources the present regulations permit it to be derived. For its use to-day, there is not the slightest necessity; a perfect substitute is now available.¹ From what kinds of meat it is permitted to manufacture American sausage, we have seen. Some of it may be good: we cannot tell. Under the spur of public indignation and criticism, within the past three years, the great slaughtering establishments of the United States have cleaned their floors, painted their ceilings, arrayed in white aprons and gowns many of their workmen and work-women, and carried out certain sanitary improvements; but nothing they have done can change the quality of the manufactured product, so long as the Government regulations remain as they stand to-day. How is it possible for anyone, partaking of packing-house delicacies, to escape the danger of eating loathsome stuff, so long as the present official rules and regulations are in force?

It would appear to have been the aim of the Trust, in every way possible, to discredit meat and

¹ Within recent years a vegetable cooking-oil has been placed upon the market which is wholly free from any admixture with animal fats. Extended experiment has demonstrated its suitability for every purpose where lard is now used.

meat-products which have not passed Government inspection. Regarding the products of the non-inspected packing-houses in large cities, the justice of such criticism cannot be questioned. We doubt if it can apply to the majority of country butchers. Take the man who supplies meat in a small town, and who carries on his trade as his father and grandfather carried it on, fifty years ago—the man who kills his own meat, and sells it from his own stand. Such men are not graduates of veterinary colleges; but they know the evidences of disease. However tempted by desire for gain, the country butcher cannot afford to buy and kill “lumpy-jaw” cattle, and sell the meat to his neighbours; his trade would be destroyed in a day, if it became known that he had butchered and sold to customers, without their knowledge or consent, animals such as the ten “lumpy-jaw” cattle which twice passed the inspectors of the United States Government at Chicago in March, 1906, as “sound, wholesome and fit for human food.”¹

“When I go into the country to get a calf or some lambs for my market,” said a village butcher to the writer, “I am especially careful to avoid everything that shall cause an animal to become excited or overheated. Whenever possible, I get permission to kill on the farm; the creature is feeding one minute; in two or three minutes it is dead. Between the flesh of such an animal, and one killed in the slaughter-house, one can see a distinct difference when it is cut into meat.” We hardly need the testimony of an expert to assure us that animals thus slaughtered

¹ Twenty-third Report, Bureau of Animal Industry, pp. 420-421.

are, if free from disease, in a far better condition than those killed in the great packing-houses, after long journeys, without rest, or food, or water. The Government Regulations provide that if any disease is suspected in which the question of temperature is important, the exact temperature must be taken at the ante-mortem inspection ; yet the official is warned that he must give "due consideration" to the fact "that extremely high temperature may be found in otherwise normal hogs when subjected to exercise or excitement, and a similar condition may obtain to a less degree among other classes of animals."¹ It may be that one way of escape from the tyranny of the Meat Trust will be a return to the simpler methods of meat production and distribution which in this country formerly prevailed. Even if we were suddenly forced to relinquish dependence upon the monster packing-houses, probably only temporary inconvenience would be experienced. It was by the farmers that the country was supplied with its meat before the advent of the Trust. Even to-day, in many cities and towns, the small farms of the country supply a considerable proportion of certain kinds of meat. The sausage or lard which was made by the farmer's wife fifty years ago, was by no means so attractively packed, or so widely advertised as are products of the great packing-houses to-day ; but the farmer was more honest than the Trust, and the purity of his goods was better assured. Of course there should be inspection. It might be well if each town or village had its abattoir, to which all animals were taken. And when properly

¹ Regulations Governing Meat Inspection, 1908, p. 14.

inspected, solely in the interest of the public health, and wholly without regard to any pecuniary considerations involved, we believe that the meat products of the farm, as a whole, will be of far better quality than those ever supplied by the great packing-houses of the Western States.

There is yet one more aspect to this perplexing question. We have seen that the utilisation of diseased animals for food purposes is a practice permitted by the United States Government, and made possible only by the apathy or the ignorance of the consumers of American meat. We have noted some of the dangers which necessarily pertain to this custom, in the deprivation of the health, and in the increase of fatal ailments. We have shown that it is quite within the power of any Government, awakening to a realisation of existing horrors, to eliminate from the meat-supply of the nation all flesh of animals destined for human food which is found upon inspection to be otherwise than sound and good. We have seen, too, that meantime it lies within the power of every man so to govern his choice of meat foods, or his abstinence from certain meat-food products, as very greatly to lessen the risks of injury in this regard.

But there is one absolute solution of all difficulties and perplexities pertaining to this question. Every reform, as we know too well, must be an experiment at the outset. Here, for instance, are great abuses, strongly entrenched behind corporate greed—abuses which have lasted for many years, and which may possibly endure for many years to come. We may

hope and believe that by such revolution of public sentiment in England and America as shall compel certain changes, the evils here exposed may be eliminated. Yet after all, this conviction is rather a matter of faith than of certainty. Granting that the utmost is done by legislative interference in the direction of reform, can we be assured, even then, that a vast aggregation of pecuniary interests shall not find a way, under new masters, to continue every gainful abuse? Suppose we increase surveillance, can we neutralise the power of the purse?

There are those who believe, therefore, that no matter how watched or with what ingenuity it is seemingly controlled by law, the Meat Trust, like the Slave Power, will only cease to be dangerous to Society when it ceases to exist. No imagination can even faintly conceive the sum of torment which pertains to the sacrifice of animals for food, in America alone, not only at the shambles, but by starvation on the Western plains or in the journeyings from pasture to slaughter-house. With all its evils, butchery exists to-day solely because we demand its victims. We have inherited the custom from barbarism; there can be no doubt but that it will be discarded altogether by the higher civilisation of the future race. There is no thoughtful man but would welcome the end of what may seem to him a necessary evil. We are apt to assume the present impossibility of our ideals. Are we right? Is each of us so dependent upon bloodshed for existence, that it must always continue for him?

We do not believe it. Science and experience testify that abstinence from flesh as an article of food is com-

patible with the highest degree of intellectual vigour and physical endurance. Sometime, surely, the day will dawn when a more enlightened Humanity will cease to require the sacrifice of blood. It may be at an epoch far beyond our own, when human life and health shall have a value unrecognised to-day, and when the conquest of disease and premature death shall have been attained, not so much by the discovery of "cures," as by the discovery of causes, and the avoidance of every condition that tends to deprave. Meantime, do any of us wish now to escape from enslavement to the slaughter-house? Nothing but our own will prevents complete emancipation. We have but to renounce what it tenders. The shambles cannot hold us in subjection a day longer than we consent. Before each one of us is the open door.

APPENDIX

Extracts from the "Regulations governing the Meat Inspection of the United States Department of Agriculture," issued April, 1908.

THE official regulations governing the inspection of meat make up a pamphlet of more than forty pages. Regarding the sections which pertain to cleanliness in processes of manufacture, or the rules, which, in certain cases, require the destruction of diseased meat, no criticism is suggested, and there is no need to quote them here. Any reader interested can probably obtain a copy of the complete Regulations by application to the Secretary of Agriculture, at Washington, D.C.

In the preceding pages, attention has been called to certain paragraphs of the official Regulations, particularly those which permit the use of diseased meat as food, or those which appear to favour rather the interests of the meat-packers than the public health. These are here reprinted for reference. Certain other paragraphs here given convey information concerning which criticism is not necessarily suggested. Unless otherwise noted, the italics are not in the original Regulations. They are here employed to direct the special attention of the reader to words or phrases, some of which may be of peculiar or sinister significance.

REGULATION 3.

SECTION 3. "**Inspected and Passed.**"—This phrase, or any authorised abbreviation thereof, shall mean that the carcasses, parts of carcasses, meat, and meat-food products so marked have been inspected *and passed for food* under these regulations.

SECTION 4. **Rendered into lard or tallow.**—This phrase shall mean that the carcasses, parts of carcasses, meat, and meat-food products so designated are allowed to be made into *edible* lard or *edible* tallow.

SECTION 5. "**U.S. Inspected and Condemned.**"—This phrase shall mean that the carcasses, parts of carcasses, meat, and meat-food products so marked are unfit for food and shall be destroyed for food purposes.

SECTION 6. **Carcass.**—This word shall apply to the carcass of an animal that has been killed under these regulations, and shall include all parts which are to be used for food.

SECTION 8. **Meat-food products.**—*Paragraph 1.* A meat-food product, within the meaning of the Meat Inspection Act and of these regulations, is considered to be any article of food intended for human use which is derived or prepared in whole or in part *from any edible portion of the carcass* of cattle, sheep, swine, or goats, *if the said edible portion so used is a considerable and definite portion* of the finished food.

Paragraph 2. Mixture.—A mixture of which meat is an ingredient *will not be considered a meat-food product* unless the meat contained therein is a definite and considerable portion of the said mixture. But where such mixture is prepared in a part of an official establishment, the sanitation of that part of the establishment will be supervised by the Department, and the meat or meat-food product will be inspected before it enters the said mixture. The mixture shall not bear the meat-inspection legend or any simulation thereof. If any reference is made to Federal inspection it shall be in the following form: "The meat contained herein has been inspected and passed at an establishment where Federal inspection is maintained." *Mixtures such as mince-meat, soups, etc., which come under this description and which are not officially labelled, are allowed in inter-state and foreign commerce without*

further inspection, and without certificates, subject to the provisions and requirements of the Food and Drugs Act of June 30, 1906, and the regulations made thereunder.

SECTION 9. **Medical meat-products.**—Products such as *meat juice, meat extract*, etc., which are intended only for medicinal purposes and are advertised only to the medical profession, *are not considered meat-food products within the meaning of this order.*

REGULATION 13. DISPOSAL OF DISEASED CARCASSES AND ORGANS.

SECTION 1.—The carcasses or parts of carcasses of all animals slaughtered at an official establishment, and found at time of slaughter or at any subsequent inspection to be affected with any of the diseases or conditions named below, shall be disposed of according to the section of this regulation pertaining to the disease or condition. It is to be understood, however, that owing to the fact that it is impracticable to formulate rules covering every case, and *to designate at just what stage a process becomes loathsome or a disease noxious, the decision as to the disposal of all carcasses, parts, or organs not specifically covered by these regulations shall be left to the veterinary inspector in charge.*

SECTION 9.—Carcasses of animals affected with *malignant epizootic catarrh and showing generalised inflammation* of the mucous membranes shall be condemned.

SECTION 10. *Paragraph 1.*—Carcasses showing well-marked and progressive lesions of hog cholera or swine plague *in more than two* of the organs (skin, kidneys, bones, or lymphatic glands) shall be condemned.

Paragraph 2.—Provided they are well nourished, *carcasses showing slight and limited lesions of these diseases may be passed.*

Paragraph 3.—Carcasses which reveal lesions more numerous or advanced than those for carcasses to be passed, but not so severe as the lesions described for carcasses to be condemned, *may be rendered into lard*, provided they are cooked by steam for four hours at a temperature not lower than 220 degrees Fahrenheit, or at a pressure of four pounds.

Paragraph 4.—In inspecting carcasses showing lesions of hog

cholera or swine plague in the skin, bones, kidneys, or lymphatic glands, *due consideration shall be given to the extent and severity of the lesions found in the viscera.*

SECTION 11. *Paragraph 1.*—If a carcass affected with actinomycosis or lumpy-jaw is in a well-nourished condition, and there is no evidence upon post-mortem examination that the disease has extended from a primary area of infection in the head, *the carcass may be passed*, but the head, including the tongue, shall be condemned.

Paragraph 2.—Carcasses of animals showing uncomplicated localised actinomycotic lesions other than, *or in addition to, those specified in paragraph 1* of this section *may be passed after the infected organs and parts have been removed and condemned.*

Paragraph 3.—Carcasses of animals showing a generalised actinomycosis shall be condemned.

SECTION 12.—When the lesions of *caseous lymphadenitis* are limited to the superficial lymphatic glands or to a few nodules in an organ, involving also the adjacent lymphatic glands, and the carcass is well nourished, *the meat may be passed after the affected parts are removed and condemned.* If extensive lesions, with or without pleuritic adhesions, are found in the lungs, or if *several* of the visceral organs contain caseous nodules and the carcass is emaciated, it shall be condemned.

SECTION 13. *Paragraph 1.*—The following principles are declared for guidance in passing on carcasses affected with tuberculosis :

Principle A.—The fundamental thought is that meat should not be used for food if it contains tubercle bacilli, if there is a reasonable possibility that it may contain tubercle bacilli, or if it is impregnated with toxic substances of tuberculosis or associated septic infections.

Principle B.—On the other hand, *if the lesions are localised and not numerous, if there is no evidence* of distribution of tubercle bacilli through the blood, or by other means, to the muscles or to parts that may be eaten with the muscles, and if the animal is well nourished and in good condition, there is no proof, or even reason to suspect, that the flesh is unwholesome.

Principle C.—Evidences of generalised tuberculosis are to be

sought in such distribution and number of tuberculous lesions as can be explained only upon the supposition of *the entrance of tubercle bacilli in considerable number* into the systemic circulation. Significant of such generalisation are the presence of numerous uniformly distributed tubercles throughout *both* lungs, also tubercles in the spleen, kidneys, bones, joints, *and* sexual glands, *and* in the lymphatic glands connected with these organs and parts, or in the splenic, renal, prescapular, popliteal, and inguinal glands, when several of these organs and parts are coincidentally affected.

Principle D.—By localised tuberculosis is understood tuberculosis limited to a single or several parts or organs of the body without evidence of *recent* invasion of numerous bacilli into the systemic circulation.

Paragraph 2.—The following rules shall govern the disposal of tuberculous meat:

Rule A.—The entire carcass shall be condemned—

(a) When it was observed before the animal was killed that it was suffering with fever.

(b) When there is a tuberculous or other cachexia, as shown by anæmia and emaciation.

(c) When the lesions of tuberculosis are generalised, as shown by their presence not only at the usual seats of primary infection, but also in parts of the carcass or the organs that may be reached by the bacilli of tuberculosis only when they are carried in the systemic circulation. Tuberculous lesions *in any two* of the following-mentioned organs are to be accepted as evidence of generalisation when they occur *in addition to local tuberculous lesions* in the digestive or respiratory tracts, including the lymphatic glands connected therewith: Spleen, kidney, uterus, udder, ovary, testicle, adrenal gland, brain, or spinal cord or their membranes. *Numerous* uniformly distributed tubercles throughout *both lungs* also afford evidence of generalisation.

(d) When the lesions of tuberculosis are found in the muscles or intermuscular tissue or bones or joints, or in the body lymphatic glands as a result of draining the muscles, bones, or joints.

(e) When the lesions are extensive in one or both body cavities.

(f) When the lesions are multiple, acute, and actively progressive. (Evidence of active progress consists in signs of acute

inflammation about the lesions, or liquefaction necrosis, or the presence of young tubercles.)

Rule B.—An organ or a part of a carcass shall be condemned—

(a) When it contains lesions of tuberculosis.

(b) When the lesion is immediately adjacent to the flesh, as in the case of tuberculosis of the parietal pleura or peritoneum, not only the membrane or part affected, but also the adjacent thoracic or abdominal wall is to be condemned.

(c) When it has been contaminated by tuberculous material, through contact with the floor, a soiled knife, or otherwise.

(d) All heads showing lesions of tuberculosis shall be condemned.

(e) An organ shall be condemned when the corresponding lymphatic gland is tuberculous.

Rule C.—*The carcass, if the tuberculous lesions are limited to a single or several parts or organs of the body (except as noted in Rule A), without evidence of recent invasion of tubercle bacilli into the systemic circulation, SHALL BE PASSED* after the parts containing the localised lesions are removed and condemned in accordance with Rule B.

Rule D.—Carcasses which reveal lesions more numerous than those described for carcasses to be passed (Rule C), but not so severe as the lesions described for carcasses to be condemned (Rule A.), *may be rendered into lard* or tallow if the distribution of the lesions is such that all parts containing tuberculous lesions can be removed. Such carcasses shall be cooked by steam at a temperature not lower than 220 degrees Fahrenheit for not less than four hours.

SECTION 14.—Carcasses showing lesions *to warrant* the diagnosis of Texas fever shall be condemned.

SECTION 16.—Carcasses of animals affected with *mange, or scab, in advanced stages*, or showing emaciation or extension of the inflammation to the flesh, shall be condemned. *When the disease is slight the carcass may be passed.*

SECTION 17. *Paragraph 1.*—Carcasses of animals affected with *tapeworm cysts*, known as *Cysticercus bovis* and *C. celluloseæ*, shall be rendered into lard or tallow, unless the infestation is excessive, in which case the carcass shall be condemned.

Paragraph 2.—Carcasses of animals found infested with gid

bladderworms (*Cœnurus cerebralis*, *Multiceps socialis*) may be passed after condemnation of the infected organ (brain, spinal cord).

Paragraph 3.—Carcasses or parts of carcasses found infested with the *hydatid cyst* (echinococcus) may be passed after condemnation of the infected part or organ.

SECTION 18.—All carcasses of animals so infected that consumption of the meat or meat-food products thereof may give rise to meat poisoning shall be condemned. This section covers all carcasses showing signs of—

(a) *Acute* inflammation of the lungs, pleura, pericardium, peritoneum, or meninges.

(b) Septicemia or pyemia, whether puerperal, traumatic, or without any evident cause.

(c) *Severe* hæmorrhagic or gangrenous enteritis or gastritis.

(d) *Acute* diffuse metritis or mammitis.

(e) Polyarthrititis.

(f) Phlebitis of the umbilical veins.

(g) Traumatic pericarditis.

(h) Any other inflammation, abscess, or suppurating sore if associated with acute nephritis, fatty and degenerated liver, swollen soft spleen, marked pulmonary hyperæmia, general swelling of lymphatic glands, and diffuse redness of the skin, either singly or in combination.

SECTION 19.—Carcasses affected with icterus and showing an intense yellow or greenish-yellow discoloration after proper cooling shall be condemned. Carcasses which exhibit a yellowish tinge directly after slaughter, but lose this discoloration on chilling, may be passed for food.

SECTION 21.—Hogs affected with urticaria (*diamond skin disease*), *Tinea tonsurans*, *Demodex folliculorum*, or erythema, may be passed after detaching and condemning the skin, if the carcass is otherwise fit for food.

SECTION 22.—Carcasses of animals showing any disease, such as generalised melanosis, pseudo-leukemia, etc., which affects the system of the animal, shall be condemned.

SECTION 23.—Any organ or part of a carcass which is badly bruised or which is affected by tumours, malignant or benign

abscesses, suppurating sores, or liver-flukes, shall be condemned ; but when the lesions are so extensive as to affect the whole carcass, the whole carcass shall be condemned.

SECTION 26.—Carcasses of animals in advanced stages of pregnancy (showing signs of parturition), also carcasses of animals which have within *ten days* given birth to young, and in which there is no evidence of septic infection, may be rendered into *lard or tallow* if desired by the manager of the establishment ; otherwise they shall be condemned.

SECTION 27.—Carcasses of animals too immature to produce wholesome meat, all unborn and stillborn animals, also carcasses of calves, pigs, kids, and lambs *under three weeks of age*, shall be condemned.

SECTION 28.—In all cases where carcasses showing localised lesions of disease are passed or rendered into lard or tallow, *the diseased parts must be removed* before the "U.S. Retained" tag is taken from the carcass, and such parts shall be condemned.

SECTION 29.—*Hogs which have been allowed to pass into the scalding vat alive, or have been suffocated in other ways, shall be condemned.*

SECTION 30.—All animals that die in abattoir pens, and those in a dying condition before slaughter, shall be condemned and tagged as provided in Regulation 17, Section 2. In conveying to the tank animals which have died in the pens of the establishment, *they shall not be allowed to pass through compartments in which food-products are prepared.* No dead animals shall be brought into an establishment for rendering from outside the premises of said establishment *unless permission is first obtained from the Chief of the Bureau of Animal Industry.*

SECTION 32.—*Portions of intestines* that show evidences of infestation with esophagostoma or other nodular affections shall be condemned.

REGULATION 16.

SECTION 1.—All tanks and equipment used for rendering and preparing edible product shall be in compartments separate from those used for rendering inedible product, and *there shall be no connection by means of pipes or otherwise between the tanks or*

departments containing *inedible product* and those containing *edible product*. This provision must be complied with *on or before October 1, 1908*.

REGULATION 20.

SECTION 1.—Carcasses of animals which have had no ante-mortem inspection by inspectors of the Bureau of Animal Industry will not, except as hereinafter provided, be admitted into an official establishment. *The exception to this rule applies only to carcasses to which the head and all viscera, except the stomach, bladder, and intestines are held by the natural attachments. Such carcasses, if offered for admission into official establishments, shall be inspected, and if found to be free from disease and otherwise sound, healthful, wholesome, and fit for human food, they shall be marked "Inspected and Passed" and admitted. If found to be diseased, unsound, unhealthful, unwholesome, or otherwise unfit for human food, they shall be marked "U.S. Inspected and Condemned," and the proprietor of the establishment shall be required to destroy them for food purposes, as provided in Regulation 16, Section 2.*

REGULATION 23.

SECTION 4, *Paragraph 5*.—Blue-prints or other accurate diagrams *showing all underground pipe lines* or other conveyers used to conduct *edible and inedible products* at official establishments, and also those extending from official establishments to other establishments, either official or unofficial, with a description giving the exact location, terminals, and dimensions of such pipes, or other conveyers, and of all gates, valves, or other controlling apparatus, *shall be filed with the Department.*

SECTION 5.—*The only animal casings* that may be used as containers in the manufacture of *sausage* under these regulations are those from cattle, hogs, sheep, or goats.

REGULATION 25.

SECTION 5.—No master of any steam or sailing vessel shall receive for transportation or transport from the United States to Great Britain or Ireland, or any of the countries of Continental

Europe, or to Argentina or Mexico, any carcass, part of carcass, or meat-food product of cattle, sheep, swine, or goats, *except ship stores*, unless and until a certificate of inspection covering the same has been issued and delivered as provided in this regulation. The requirement of export certificates is waived for meat and meat-food products to foreign countries *other than those hereinbefore named*.

Extracts from Report of Committee of the American Humane Association on the Humane Slaughtering of Animals, presented at the Annual Convention, New Orleans, November 17-19, 1908.

“In no other country has so much attention been given towards improving slaughtering methods as in Germany, and where such gratifying progress has been made in the discovery and adoption of new devices as well as an improved system and the consequent elimination of suffering. On the other hand, it is with a sense of deep humiliation that your committee are forced to the conclusion that *in no other civilised country is the taking of animal life for food purposes attended with more cruelty than in the United States*. Absolutely no progress whatsoever has been effected on the humane side of the question, for methods still prevail here which were discarded in Europe over a quarter of a century ago as brutal and inhuman. Whatever changes have taken place in our abattoirs in slinging and hoisting the animals have only greatly added to their sufferings, the one governing object being to reduce them to the various marketable products with the greatest possible saving of time and expense.

“It is not the purpose of your committee to enter into the question of religious belief as affecting humane slaughtering; but, without in any wise doing so, we must condemn as extremely cruel the practice of suspending animals in the air by reeving chains fastened around the hind ankles until the knife is applied and life gradually becomes extinct. . . . It will be said that the European system of applying slings and casting the animal is too slow. The answer to that argument is — let the packing-houses employ a

sufficient number of men in the killing rooms to utilise such methods as do not involve great and needless suffering, and such as are adopted in other civilised communities. Cruelty is so carefully guarded against in the abattoirs of Southern Germany that the animals are placed in a suspended girth, the feet secured, and then lowered by a windlass to the floor, before being bled."

The committee quote part of a letter received from Mr. Hugo Heiss, director of the abattoir of Straubing, President of the South German Municipal and Abattoir Veterinarians, and author of a work on humane slaughtering. Mr. Heiss says:

"We have to-day throughout Germany about seven hundred modern slaughter-houses in which the slaughtering with the shooting apparatus has been introduced and successfully practised for many years.

"In our abattoir all large cattle have been killed by means of the shooting apparatus for the past nine years. Since their introduction in 1904, the bolt-shooting weapons have been used exclusively, and have given perfect satisfaction. The bleeding-out occurs faultlessly, and the preservation of the meat is at least as good as with former methods. All assertions to the contrary are untrue, and uttered without experience. The wildest cattle can be killed perfectly with the Behr system of shooting apparatus. There is no death-struggle, and the animal drops to the ground without uttering a sound.'

"In most of the European states, calves, sheep, and pigs are generally stunned with a hammer having a spherical metal head before being bled. In many of the abattoirs the bolt-pistol and the striking-bolt apparatus are employed for such small animals with much success. Pigs especially are so easily stunned that the present method of killing with the knife thrust in the body, which is so universal in America, appears like vandalism. . . . 'They use everything about the hog except the squeal' is, apparently, typical of the principle which has engrossed the attention of our large packing-houses, and caused them to retain those primitive

methods for killing which have been discarded in Europe for nearly half a century.

“Let us contrast this policy with that which is exemplified in the inscription over the entrance to a German abattoir :

“Thine is a task of blood ; discharge that task
With mercy ; let thy victim know
No pain, but let the sudden blow
Bring death, such death as thou wouldst ask.’

Some of the conclusions of the committee were :

“ 1. *That all animals should be stunned before being subjected to the bleeding operation.*

“ 2. That the ‘ shooting-bolt ’ weapon should be used for the stunning of cattle, horses, and, as far as practicable, the smaller animals.

“ 3. That if, for economical reasons, the shooting-bolt apparatus be not employed for small animals, calves, pigs, and sheep should be stunned before bleeding by a blow from a special form of club having an iron knob at the end. . . .”

(Signed) HENRY BERGH,
Chairman.

Concerning the Mortality from Malignant Disease in England and Wales. (Hitherto Unpublished.)

1. During a period of twenty-seven years (1881-1907), a vast multitude numbering over *six hundred thousand men, women and children* perished in England from malignant disease.

2. The majority of these deaths occurred at the prime of life for both men and women. The number dying at each of four age-periods is given herewith :

AGE-PERIOD.	MALES.	FEMALES.
Under 25 years	5,634	4,759
From 25 to 44, inclusive	22,921	55,435
From 45 to 64 „	112,989	185,192
At 65 and above	89,675	125,257
Total	231,219	370,643

3. The death-rate from malignant disease, in 1881, was, per million of the male population of England, 365. In 1907 the rate had advanced to 781.

The corresponding death-rate for the female population was 670 in 1881. In 1907 it had advanced to 1,026.

4. During the first seven years of the present century there perished in England, from malignant disease, 207,764 persons.

Among males, the seat of the disease, in over one-half of all cases, *was some part of the digestive system.*

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