KINNEY

ON

SWINE AND THEIR DISEASES,

AND THEIR

BREEDING, REARING & MANAGEMENT.

ALSO HIS

THIRTY-THREE YEARS' SUCCESSFUL MEDICAL TREATMENT

OF

SIXTY-FOUR DISTINCT DISEASES.

BY

GEORGE W. KINNEY.

DIRECT ALL COMMUNICATIONS TO
D. T. MICHAEL, [redacted] Publisher (erased)
TAYLORVILLE, ILLINOIS.

PREFACE.

The continual introduction of and the use of thoroughbred boars will, with a liberal system of pedigree, produce better pork at a far less cost than when we use the common boar, and the farmer who practices this will be more likely to study the principles of breeding with an interest he had never felt before. With the end in view to improvement of the different breeds of hogs and their health, I offer this volume to the public, hoping that into the hands of whoever this work may fall that they will give it a careful perusal.

I give it the name Swine because it applies to all breeds and classes of the hog species.

If I were writing a work on natural history, hog would be the proper word to be used. But this is merely a practical treatise on Swine.

First, the manner and mode of breeding, as given by those who have spent years in the improvement of the different breeds throughout both Europe and the United States, as given by Stevens in his Book of Form, the writers in Morton's Cyclopedia of Agriculture, and Youatt, Martin, Richardson, Sydney, and Darwin, though they speak of the pig and not hog, think that the refined, improved hog of to-day should not receive the rough, dirty name of a thousand years ago, as you will see from the plates in this work which are true copies given by the above authors.

I also offer in this work sixty-four distinct diseases; their symptoms and the remedies that I have used with great success for the past thirty years.

In this work you will find when, where, and by whom all of the different improvements in the different breeds have been made, and our opinion of the best breed to be reared by the farmers of our country.

INTRODUCTORY REMARKS.

The Agricultural Report for the year 1863, issued by authority of the United States Government at Washington, D. C., on pages 206 and 207, contained the following:

"There have, at various times, appeared individuals who claimed to have discovered a specific cure for it, [hog cholera], and holding it a secret while they petitioned State Legislatures and Congress for aid or compensation by large appropriations.

"The latest of these men is one in our own State, Mr. G. W. Kinney, of Albion, Illinois, who has repeatedly presented the matter to our State Agricultural Society's Executive Board and our State Legislature, in order to get an appropriation, which he would deem compensation, when he would make his discovery public.

"The State Board last winter chose a Committee to use his remedies, and report upon the same. We have no knowledge of their ever having made a report as yet. We have, however, learned from them something of the results. Captain James N. Brown, of Sangamon county, who was one of the Committee, administered the medicine as prepared by Mr. Kinney to a lot of hogs, which were dying very rapidly. They at once began to improve rapidly, and soon lost all traces of the disease, which did not appear again for several months, and then slightly. The medicines again administered had the same effect.

"At the last State Fair, held at Decatur, we saw and conversed with several intelligent farmers who had purchased the privilege of using from Mr. Kinney, and had tried it with like results, and highly recommended the remedies.

"Mr. Kinney's theory of the disease, as given by him before the Executive Board, is that the seat of the disease is at first in the lungs of the animal, the lungs of every diseased animal containing a knot of small worms. In the first stages of the disease he gives a medicine to be inhaled as the hog takes to food. In the third and last stage, other medicine is required to regulate the action of the bowels. Mr. Kinney stated that to the 'undetective eye' it was difficult to discover the disease in what he calls the first two stages. The symptoms he describes as follows:

"'The first thing to be noticed in the diseased hog is weakness in the eyes, the water flowing from them, together with the forming of dark spots under the eyes. In the second stage there is discoverable a slight shrinkage of the shoulder, something like that of the shoulder of a horse in case of sweeney, connected with slight coughing. In the third stage there is great thirst, a drawing up of the hindquarters, a sign of great weakness, and a refusal of food.'

"The third stage, Mr. Kinney asserts, is nearly identical with the first symptoms as described by Dr. Snow, of Providence, Rhode Island, and is extremely difficult to overcome."

The Journal of the Illinois House of Representatives for the year 1863, page 65, shows that the Hon. Tom Merritt, of Salem, Ill., introduced the following:

"Mr. Merritt presented the petition of George Kinney, praying that he might be permitted to lay before the Committee on Agriculture his discovery of a cure for hog cholera.

"Referred to the Committee on Agriculture."

Thirty years ago, when I entered upon the investiga-

tion of the disease known as hog cholera, I was not at that time a practicing physician, but was practicing law and trying to raise a few hogs. The loss of my own and neighbor's swine caused me to turn my mind to its investigation. I was recommended by such highly honored and honorable gentlemen as the Honorable Thomas Merritt, of Salem, Ill., who presented a petition to the Legislature of Illinois, asking that such an appropriation should be made as to justify me in making public my discovery, and another petition presented in the State Senate by the Hon. Mr. Tincher, of Edgar county, to the same effect in 1867. See House Journal and Senate Journal of 1863, and Senate Journal of 1861. This was among war times, when excitement ran high and but little else was thought of and what might be its result. But as the tornado has passed with its varying result, some made poor while others were enriched, and the tattered condition of a mighty Nation is again placed in front in all her pristine glory, strength, and beauty, the people are again looking for a little of her rule that they may enjoy some of the comforts which have been so dearly paid for, and are again through our Congress asking for such aid as is at their command for further investigation of the disease known as hog cholera. Much do we hope that it will be a practical benefit to the whole people. Give to us men that investigate from a practical stand point and not men digging with a whole harpoon for a microbe in the hog's blood.

The sick person is credulous about his disease and is alternately buoyed up by his hopes and cast down by his fears. They who promise him health generally obtain his confidence, and this is the reason why so many become the dupes of quacks and patent medicine men, who are unwearied in their solicitations and have their banners unfurled to the breeze with their liver pads and nostrums to dupe the ignorant and unsuspecting. That all diseases originate of, to, for, by, within, into, without, through, above, below, beneath, from,

beyond, at, near, behind and before, every disease originates from some derangement of the liver, and having the person to swallow the entire catalogue of prepositions known to the English language, he is then sick enough to wear a liver-strengthing pad or swallow a liver cure-all made up with some highly stimulating drug or powerful narcotic. The mind feels greatly relieved since he swallowed the gas of that almanac. As its influence dies away, the patient (like the whiskey inebriate) can scarcely wait for second and third doses, it produced such momentary relief and caused him to feel so good. Only notice how closely the patient watches the clock that he may be prompt in taking his dose regularly according to directions, and not unlike the wine bibber the person is now its slave. The opiates contained in that single dose have relieved the pain. See how sweetly he sleeps. Is he not better? Certainly he is. It can be seen in every expression of his countenance. He can no longer labor, eat, sleep or be pleasant without its bracing influence. Often take a pain, probably in the big toe, at night. My disease is working downward. It has got down so low I will soon be a well man or woman. One more dose and I am well. Out of bed to the spoon and bottle, and how soon is the patient, wrapped in the arms of Morpheus, dreaming of the beautiful, handsome, and smart doctor whose picture is labelled upon the bottle. Yes, Doctor, I can endorse all the good that has been said of your medicine. When you are weary I will assist you as standard bearer. It is a noble old flag. You can now note the similarity of the seducer and the seduced.

Such has not been the even, smooth tenor of my course in the pursuit of my investigation of hog disease. I have not as yet been able to discover any one remedy to reach the many diseases to which the hog is heir. Stimulants and narcotics won't work worth a cent with the hog, unless applied in their proper places. While the patent medicine man worked upon the mind of his patient, my

work has been directly upon the deranged carcass of the animal system, where there can be no deception to play upon its imagination, as to whether it is sick or well. If the hog is a willing feeder, all it desires is its food.

We have our hog-cholera patent vendors. Some of them played very successfully upon the imagination of the owner, while the hog has not been so imaginative. It might be imposed upon by sucking the swill containing the cure-all, but not the impression on the mind that it did on its owner. They still sink under the influence of the great remedy. What a fool a hog is to not believe all these nice stories and be saved!

The reader will be kind enough to excuse me for this digression from introducing others and neglecting myself. In behalf of myself, I would say in my thirty-three years' experience and observation I have never been able to find any one medicine or compound that would meet every case of sickness among hogs, nor do I profess to-day to be a cure-all. All that I claim for my skill is this —that after twenty-four to sixty-eight hours, giving me time to place the hog under the influence of my medicine, I seldom lose any hogs. Among unwilling feeders there are some too far gone for me. I take nature as a standpoint, from which I diagnose or judge the character of the disease and its remedy. Give all the surrounding circumstances. If bleeding at the nose or mouth, where or what part of the organism is it from—the lungs, liver, bowels, stomach, or urinary organs, or if it originates from an injury from some external cause, such as a blow, &c. If constipated or running off at the bowels, or with quinsy, or coughing, its origin and cause. If of the nervous system, its locality, cause and remedies. The affected parts cannot all be bunched together, hodge-podge, called by one name, called cholera, and find any one specific compound to meet them. You will find by a perusal of this volume that I have taken great pains to classify each disease under its proper head, giving the name of each disease in

plain language, with the symptoms of each, so that with a little study and practice you can locate where the trouble is and the remedies that I have been using with great success. Should any of you desire my presence, I will come to your assistance at any time if you will advance my expenses to me a Taylorville, Ill. Our interests are one. Mine to make a success of the sale of this book; yours to make a success of swine raising.

This is no jumped-at conclusion of mine, but one that has absorbed my entire mind as a specialty in my own quiet way, causing me to sacrifice comfort, ease, and family, with its surrounding of happiness, and a profession that promised a lucrative practice. All these have I sacrificed only to pursue with a laudable ambition and an unyielding perseverance a path which I hope may yet lead to honor and renown, but which, like all human pursuits, has its progressive and set-back steps. It is my object to leave you in possession of my knowledge of the various diseases herein treated, hoping that you may be so well satisfied to glean from this treatise of the diseases herein discribed and their remedies, you will be anxious to hear from me again on other diseases and treatment in another volume. I would give it all in one, but I am not financially able to do so and must depend upon the sale of this to enable me to publish a second volume, which I shall do if I am ever able through your generous help. I would give a catalogue if it were not that others might anticipate me and place before you a bogus treatise, of which the country has had enough.

CHAPTER I.

HOG RAISING AS A PLEASANT PURSUIT.

What, I ask, can render to the farmer more pleasure—when I say pleasure as a pursuit, I mean it—than the view presented to him in early morn to see a fine clover or blue grass pasture besprinkled all over with a fine herd of fat, healthy, chuffy hogs ready for the market? Nothing, save the good health of his family. How he begins to flatter himself and family with the prospect of the many good things of life from the proceeds of this sale. Nan is coming into notice by the boys, we must have so and so. Wifey has been wanting this and that. John and William need new clothes, and saddles and bridles for their colts. They must look as well as any of the boys at singing, Sunday School, and at church. I believe, too, that Nan ought to have an organ and a teacher and the boys also should have a good watch apiece, not only as an ornament, but as a necessity and study. It will regulate their hours of work. Now let me count up a little:

The organ and appendages	$100
To fit up the parlor with proper furniture	200
The outfit for the boys	100
Other household fixtures	100
Spring wagon	75
Buggy for self and wife	75
Total	$650

Now, as they stand at two hundred and fifty pounds each, at present prices, one hundred of them will bring me $1200, and after making the wifey and dear children happy (and I'll feel happy too), it will leave me $550; and the $50 will meet my little debts, leaving me $500 in clean cash. Yes, that is what I will do. I will market them next week, and then bundle up old woman and children and go on a bum, and we will all have a good time generally. They go and a good time they are having generally, from baby up with its stick of candy in one hand and a rattle in the other to Nan, who dreams of the enchantment she can deal out to her dear ideal fellow. They return. Did you ever see such happiness in any one family as they look and view and review the presents that the hog has bestowed upon the family? Yet the gentleman hog is turned out and neglected by many, mistreated, maltreated, cursed, and damned by many who would have themselves looked up to as humane, benevolent, Christian men and women. To all such I would say, the hog is your superior.

There are your neighbor and family made happy by the brute that you are not worthy of being called its equal as an associate. I have often thought it when I have seen you abusing your dumb animals, especially the hog, though I could not at the time say so, for your inhumanity might call down your vengeance on me.

Let us look for a moment at the surroundings of this thrifty, happy family. How is it that he is so lucky in raising hogs? Every year he has been buying land or making some improvement and always had some money. I work as hard and manage as close as I know how. I cannot live so well nor keep any money by me. Permit me to tell you. You haul your grain to market and bring each load back under your arm, while he feeds his out, and at one swoop loads a car or two and brings his money home in a lump.

That neighbor who makes a home happy is a happy

man and makes everything around him happy. He causes his dumb brutes to be happy and thrifty, because he provides for them. Look over his fine pasture. The pure running water, or that which is furnished by the old pump; instead of trusting to others to feed, he superintends that; the ears of corn are not counted, but the hogs receive the bounty from a bountiful hand. He is the man that feeds money out of his stock Nothing goes hungry or famishing for water. See his winter protection, all made and kept cleanly. His whole surroundings, his house, barn, and outhouses are all tidy and complete and are kept so. He has a place for everything and everything in its place.

The question may be asked. Do you attribute all this to his success in the raising of hogs? I most certainly do. I have known men, and can point them out at any time, who were poor a few years ago, that worked by day for their first brood sow. who have their thousands in bank to-day and are the happy individuals that I now speak of. Show to me the man that has made hogs his business specialty, prices up or down, and I will show to you a man that has money. Show me the man that neglects it, hauls his grain to market, and I will show you the man hard run and without money.

But what is happiness to one
Is but pain to another,
While one's happiness is in prosperity,
The other's is in adversity!

I must acknowledge while I have the greatest sympathy for the poor hog, which is doomed to die to satiate the hunger of his lord and master, who has so cruelly mistreated it, I have but little sympathy for its owner in any adversity, for he is well deserving of such a reward.

CHAPTER II.

THE HOG NEGLECTED, WHO BY, AND HIS SURROUNDINGS.

In my last I gave to you the prosperous and happy situation and surroundings of the special hog raiser. I would now call your attention to the opposite picture—the man who would like to have them by the thousands if he was at no trouble and expense with them. This is one of your chance neighbors, slow-going, easy farmers. He is one that has started out in life with a little fortune and as a show of a man to keep pace with his neighbors in style. His first notion is a fine house, which calls for fine furniture, plenty of convenience and comforts. This done he is out of money, but has a solid base to work on. Let me see. One hundred and sixty acres of land worth $40 per acre, $6,400. His teams, machinery, &c., are worth $800 more, which will make him worth $7,200. Well, he is here without such conveniences as he must have, a good barn for his stock, shelter for his machinery, and storage for grain. There is some fencing necessary. He must have hired help. His wife must have a girl, and thus he enumerates until he sees that it will become necessary for him to have as much as $3,000 or $4,000 to begin business on. The cage is built and the bird is in it. Now to furnish food and somebody to cook food for the

bird has lost its romance and is looking him square in the face. As a business matter the farm must be cultivated, and to do so these necessaries must be furnished, and to get the money he must borrow. He does so. Now he carries an indebtedness on his farm of $4,000, for which he pays eight per cent., the interest amounting to $320. It with hired help, only one hand and a kitchen girl, amounts to $580, which would amount to interest on $2,900. He has not got the money and is closed out or makes a new loan. Ask him if he paid any attention to raising hogs? "No, d——n the hogs! I put my grain in money where I knew it would be safe." Thus you see his management.

The come-and-go-easy farmer that doesn't care a darn which way the world wags, so his wife has plenty of geese, ducks, and chickens for the market claims he is the happiest man in all the land. He just hates a hog or hog meat—until he has the privilege of sitting down to one of his neighbor's tables, which is very often, for he is a visitor, likes to be neighborly. Ask him why he does not turn his attention to hog raising. His answer is that he can make more on poultry; that it doesn't pay to raise hogs. How many geese have you on the farm? About 100. How many pounds of feathers do you market each year? Count one pound to each six geese and they to be picked every six weeks for nine months each year. That gives six pickings, which equals one pound of feathers to each goose each year. Well, how much corn and pasture will it require to feed each goose a day? Half a pint. Then you are out $2\frac{3}{4}$ bushels of corn, to say nothing of pasture. You have realized fifty cents, or about 16 cents, a bushel, for your corn.

Then about that time the old woman flies into your hair, and the conversation closes. Look around the door yard, the pump, in the house, kitchen, and see where the geese have left their mark of decency and politeness. Such are many characters who object to hog raising on ac-

count of their filth. This is a part of the program of Woman's Rights.

> This world is a mighty maze, but not without a plan.
> Man says, "See all things for my use".
> "See man for my use!" says the pampered goose.

The farmer who refuses to feed his hogs wholesome food, but allows them to follow his cattle and subsist on the offal, loses money by the operation. This reminds me of the miller who always had fat hogs, but no one knew whose corn they were fed on. In this instance we can judge it to be the banker's, for he has furnished the money to buy the mill (I mean the cattle) that is to prepare the food for the hogs, the corn, the hogs, and board and pay for hired help. This reverses the old adage of boring a big hole with a small auger, for it is boring a small hole with a big auger. The farmer first pays out a lot of money for a mill and food-cooker—cattle—to prepare the food ready for the hogs. Say he feeds one hundred head of cattle at $40 each. The account will stand thus:

First expenditure for cattle	$4,000 00
75 bushels corn to each steer	2,250 00
Hired help, two hands at $20 a month for six months	240 00
100 tons hay, a ton to each steer, at $8 a ton	800 00
10 barrels salt, at $1.25 a barrel	12 50
Board of hands at $3 a week	144 00
Interest on money	304 80
Cost of cattle	$7,750 30
Food for two teams, four horses, 182 days, 20 ears to each team a day, 91 bushels	27 30
Total cost	$7,777 60

We will now look after the profits and see what the cattle will bring on the market. Conceding a big average

of three hundred pounds gain to each steer and the market price six cents per pound, and presuming the cattle to weigh one thousand pounds to start with, at four cents per pound, this bunch of cattle will now average thirteen hundred pounds each.

100 steers, weighing 1,300 pounds each, at six cents a pound would be worth	$7,800 00
Deduct total cost	7,777 60
Leaving a profit of only	$22 40

As we have all the money that can be squeezed out of the steers under the most favorable circumstances, let us see what would be the profit or loss from the same expenditure for food fed to bought hogs, allowing each hog to weigh one hundred pounds, bought at five cents per pound and sold on the market after fattening at the same price per pound, assuming that each hog will gain twelve pounds of flesh to each bushel of corn it consumes, which is a small average of flesh gained to each bushel, fourteen pounds being looked upon as a standard by all careful feeders who have paid strict attention to weights of food and flesh gained by feeding. Now take two hundred hogs, the number required to follow one hundred head of cattle:

200 hogs, weighing 100 pounds each, (20,000 pounds) at $5 per hundred weight	$1,000 00
20 bushels corn fed to each hog (4,000 bushels) at 30 cents per bushel	1,200 00
Hired man, three months, at $20 per month	60 00
Boarding hand, $3 per week	36 00
Feeding team, 20 cents per day	18 00
Two barrels of salt	2 50
Interest on money	44 33
Total cost	$2,360 83

The above hogs have cost up to the time of putting them on the market $2,360.83. Twelve pounds of fat gained

So we see by the figures while the profit on corn fed to cattle at six cents per pound shows the pigmy profit of $2,240, you have from the same amount fed to the hogs on half the amount of food a profit of $1,545.50. So you see that your mill (I mean your cattle), to prepare feed for your hogs costs you $1,122.15, to say nothing of the difference of the expense of hired help, board, teams, and other incidental expenses. Yes, but hold on, Doctor; I want to add my mill to the price of your hogs. No, sir, I will not allow that; that is throwing too much weight on the tails of my hogs. I will not suffer the weight of your steer to become burdensome to my pig; there is too great a difference in their size. Feed your white elephant and I will feed my ignoble mice; they will cost less and size up the pile of profits faster. Give me the little auger and I will keep boring away until I will make a sizeable hole after while with the little one. You say: Suppose your hogs die with cholera? Well, that may be a supposable case under your damnable care and management, but it is not a supposable case with me under proper treatment and care. Even admit that I lose half I have got, I beat you by a big percentage. Such persons as I here describe remind me of an indolent, idle classmate in school who desired to keep along with his class although at the tail end, as some of our would-be politicians desire to carry a poor pauper of a manufacturer upon the shoulders of the real producers of the country; for the hog is the producer and but a small consumer for its usefulness and profit, for as it were it can be grown out of the ground. The hog is King of the country; it makes up your food that keeps soul and body together. It is upon your table in some shape at every meal; the proceeds of its flesh furnish you with comforts that you could not otherwise have. It not only provides you with food, but with shelter and raiment. The animal despised, objured, neglected by the beautifully painted and powdered young lady and coxcomb of a gentleman, who, looking with

loathing and disgust upon the poor animal while in the mud and mire, or reposing on some dung pile, or in its filthy sty, make a companion of it at your table, or in your bed. Their delicate stomachs receive it with a welcome; their dreams are happy because their appetite is satisfied. Then away with your mock modesty and delicacy of stomach! Come down to naked facts. Learn to treat with decency and humanity so important a factor with that kindness and sympathy that is so justly due his hogship; give to it plenty of good wholesome food, a little of its peculiar kind of nicknacks—good, clean, wholesome house and bed, nice, pure water right from the fountain of life, plenty of fresh air—and you will have no reason to begrudge it; for he will feed you when you are hungry, and clothe you when you are naked, and furnish you with money to make a jingle on a tombstone when your are dead.

CHAPTER III.

THE PIG.

The pig is, agriculturally speaking, alone kept for meat, while all other domestic animals are kept for other purposes, save in a few instances some classes of cattle are kept for beef. The cow is kept for milk, the sheep for wool, the horse and mule for labor, and poultry for feathers. The sole aim of the breeder of the pig is, to obtain one that will produce the largest amount of pork and lard from the least amount of food.

"The same is true of cattle when kept solely for beef. In this case the main difference between the two animals is, that the ox is provided with four stomachs, and is capable of extracting sufficient nutriment, in ordinary cases, from bulky food, while the pig has but one stomach—and that comparatively a small one—and, consequently, requires food containing a greater amount of nutriment in a given bulk. Grass is the natural food of the ox; roots, nuts, and acorns, worms and other animal matter, the natural food of the hog. The pig unquestionably requires a more concentrated food than the ox or the sheep.

"The stomach of an ox weighs about 35 pounds; that of a Southdown or Leicester sheep from 3 to 4 pounds; and that of a pig 1¼ pounds.

"The weight of the ox stomach, in proportion to each

one hundred pounds of live weight, is 3 pounds; sheep 3 to 4 pounds; fat pig, 0.66 pounds. In other words, in proportion to live weight, the stomach of an ox, or sheep, is about five times as great as that of a pig.

"It is quite evident, from these facts, that the pig is not so well adapted to feed on grass or hay as the ox or sheep.

"This is a strong argument *against* the hog as an economical farm animal.

"In proportion to the nutriment they contain, the concentrated foods are more costly than those of greater bulk. Not only is their market price usually higher, but it costs more to produce them. Elaboration is an expensive process. The common white turnip, containing from 92 to 94 per cent of water, can be grown with less labor and manure, and in a shorter period, than the Swedish turnip, containing from 88 to 90 per cent of water, and this less than the Mangel Wurzel, containing only 86 per cent of water. Carrots, which are still more nutritious, are even more costly, in proportion to the nutriment they contain. This is probably a general law.

"As the ox can subsist and fatten on less concentrated and less costly food than the pig, it follows, therefore, that a pound of beef ought to be produced at less cost than a pound of pork.

"There are, however, several circumstances which modify this conclusion. Pigs will eat food which, but for them, would be wasted. Where grain or oil-cake is fed to cattle, a certain number of pigs can be kept at merely nominal cost. We can in no other way utilize the refuse from the house and the dairy so advantageously as by feeding it to swine. On grain farms, pigs will obtain a good living for several weeks after harvest on the stubbles, and in some sections they find a considerable amount of food in the woods.

"Even where we have none of these advantages, the difference in the cost of producing a pound of beef and a

pound of pork is not so great as the above considerations would lead us to suppose. The hog is a great eater. He can eat, and digest, and assimilate, more nutriment in a given time, in proportion to his size, than any other of our domestic animals.

"The extensive and elaborate experiments of Messrs. Lawes and Gilbert show that, notwithstanding pigs are fed much richer food than oxen and sheep, they nevertheless eat about twice as much food, in proportion to live weight, as a sheep. On the other hand, it was found that 401 pounds of Indian corn meal and bran (dry) produced 100 pounds of pork (live weight), while it required 1,548 pounds of oil-cake and clover hay (dry) to produce 100 pounds of mutton (live weight.)

"Why a pig should gain so much more from a given quantity of food, than a well-bred sheep or steer, has not hitherto been explained. It has been attributed to the fact that the pig possesses larger and more powerful as similating organs."

CHAPTER IV.

BREEDS OF PIGS.

Like all other animals, hogs adapt themselves to the circumstances in which they are placed. Where there is uncertainty and scantiness of food, they grow slow and are long in maturing. If they have to travel long distances for food, they grow leggy in proportion. If they are obliged to seek their food under ground, their rooters grow proportionately long and powerful for that purpose. Where they are liable to molestation and attack, they become savage and ferocious in their means of defense. On the other hand, kind treatment, a bountiful supply of food, and provided with confortable quarters, they become gentle and ccmpanionable in disposition and are not disposed to roam. They have finer hair and skin, shorter legs, smaller heads, ears, and snouts; they grow rapidly and mature early. These changes do not take place at once. There must be middle or intermediate changes.

There are nearly as many kinds of hogs as there are different systems of farming. I do not call them breeds, because there is no permanancy of character about them. They are constantly changing just as their managers change them, either by breeding or feeding.

You must remember that a breed has certain fixed characteristics. If fully established, and if the food or management is not changed, all the characteristics of the

breed will be transmitted to future generations. Owing to the fecundity of the pig, it is easy to establish a breed. Nature creates the breed, not man, for all that man can do is to avail himself of that inherent disposition which animals have of adaptation to the conditions in which they are placed. These conditions are under man's control. The first thing that the breeder must do is to make up his mind as to the system of feeding and management he will adopt. Then let him steadily adhere to or follow up that system. A man that is constantly changing his system can never make a successful breeder.

If he desires a breed that will mature in two or three years, let him grow them on a moderate allowance of food and choose his breeders from such as he may think to suit the desired end—those of the lank, runty pigs. In this way he can accomplish the desired end. If any of the pigs manifest a disposition to grow rapidly, they must be registered. This class of pigs are not suited to a moderate allowance of food. Their off-spring will certainly degenerate. Take those of the slowest growth; they will be less likely to experience the injurious effects of starvation. By steadily pursuing this course, the breeder will obtain those of the slowest growth, which will yet remain healthy.

But if heavy weights and rapid growth be the object, the opposite course must be pursued. Do not allow the sow or boar bred until they are fully matured--say from two to four years old. The only advantage would be that they would suffer less from a little starvation than breeds that have been adapted to grow rapidly on liberal food. Such could be profitable only where food costs nothing, and yet it is questionable whether a breed that eats more and gains faster would not be more profitable.

What I desire here to show is, that whatever end the breeder may desire can be attained; that is, the system of feeding and management adopted will accomplish the desired end. In fact, the pig will adapt itself sooner or la-

ter to the supply of food and the means necessary for them to obtain it. The breeder can bring about a great change in the mode of selection, but it is all in food and treatment. In fact, the breed goes in at the mouth.

It is by liberal feeding only that, if it be in good health, you can put on a rapid growth. This being done for several generations, with comfortable, clean quarters, pure, good water, never suffer them to be treated harshly; never in any way neglect them, and you will be sure of succeeding in your object.

It requires much discrimination in selecting the boar. He must have the points in which the sow is most deficient. It is the weakest link that determines the strength of a chain. Inherited qualities have but little to do with the rapidity of growth. It will be influenced more by periods of neglect and starvation than by occasional high feeding. The starving of a well bred sow may not show injurious effects upon herself, but her offspring will show the extent of the neglect that she received. A few month's starvation and neglect will soon counteract all the advantages which the breed has acquired by generations of careful breeding and feeding.

CHAPTER V.

THE FORM OF A GOOD PIG.

Where the aim of the breeder is solely for meat, the body of the pig should approach as nearly as possible the form of a parallelopiped. Animals of this form proportionately always contain the heavier weight. It is nothing uncommon to hear farmers ridicule the idea of a thorough or well bred hog. Such farmers have never kept anything but common stock. They are astonished when brought to the scales to see this chuffy pig so far outweigh their long, bony-backed hazel-splitters, with legs no shorter than the body with its slab sides, apparently of so much greater size. An advantage that the small hog has in another respect is, that it gives a greater proportion of the most desirable parts of the hog. In a pig of this kind the ribs are well arched. It is impossible to have a broad table-back without arched ribs. The muscles running along the sides of the vertebræ are well developed and supply a large quantity of choice meat. Such

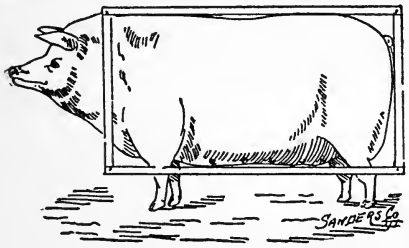

Figure 1.

a formed pig affords abundant room for the lungs, stomach, and intestines, and it is upon the capacity of these organs to convert a quantity of cheap food into a large quantity of flesh and fat that gives to or determines its value, as in figure one (1).

The nearer the pig will fill a rectangular frame, the nearer he approaches perfection of form. It would be well for those selecting a pig to place a straight cane on its back, along the side, shoulders, and hams. In this way you can tell how near they come to filling the desired standard. The length and breadth should be well proportioned. I have often heard farmers offer objections that the hog was too short, while in fact they were longer than their own slab-sided ones. There are as many vertebræ as in the long hog. Breadth and depth are of far greater importance than length. In a common sow to be crossed with a thorough-bred boar, length of the sow is desirable, though doubtful in a thorough-bred, indicating a want of breadth and fineness of bone.

The head of a pig should be set close to the shoulders. The broader and deeper the cheeks, the better, as next to the ham there is no choicer meat on the pig. The snout should be short and delicate, and the ears small and fine. Coaresness of ear is never desirable in a well bred pig; it should be soft, fine, and silky, well set on the head, leaning a little forward, but never falling over. An upright ear denotes an unquiet disposition.

CHAPTER VI.

GOOD PIGS NEED GOOD CARE.

It cannot be denied that a good thorough-bred boar in a neighborhood is capable of greatly improving the qualities of common stock, adding thereby greatly to the profits of feeding pigs, though it is a fact that such boars have been used by some farmers with but little or no benefit.

There are many reasons for this. One is the starving of their sows. Many do this from a conviction that it improves their breeding qualities and that they make better mothers. Farmers often mistake the cause for the effect. A good sow gets very thin while suckling her pigs. The sow becomes thin because she is a good milker, not that her being lean makes her a good milker. It is a great mistake to keep her thin to make a good breeder and a good milker.

I have observed in my thirty-three years of practice among diseased hogs belonging to many farmers of our country, that the farmers who have kept thorough-bred boars and are liberal feeders speak highly of the cross, while those who believe in starving their sows and letting the little pigs get their own living as best they can, say that their pigs from a neighboring thorough-bred boar are no better than from a common boar.

The trouble is not in the boar, but in the starved

sows. I would not have you understand me that I would recommend the keeping of sows up in big pork fat or flesh, but in good living and thrifty order. Where they are kept in big fat they are not likely to bring as many or as fine pigs as when in a good living flesh, and they are much more likely to overlay their pigs, as they become clumsy and indifferent. But there is a medium or standard that your own judgment should fix. After the sow has farrowed she should be kept on light, nutritious food for several days, and her food gently increased from feed to feed until she has about all that she will consume. I would recommend the soaking of corn, as the pigs will begin to feed much earlier, thereby relieving the sow of a great draft on her system.

But, it may be asked, will not this liberal feeding produce good pigs without the use of a thorough-bred boar? It will beat starving, but the use of a thorough-bred will produce wonders in the make up of a good hog.

It would be far better to pay five dollars for thorough-bred pigs than to accept, as a gift pigs from the same sow gotten by a common boar. At one year old we might expect the grades, in proportion to the food consumed, to bring at present prices at least $10 a head more than the common stock. I know of many good farmers who delight in feeding a herd of good pigs, but do not believe in thorough-breeds, yet I have often heard them speak of the fine pigs their neighbors, such as W. W. Whitlow of Harvel, Illinois, Mayfield Truitt of Hillsboro, Illinois, and many other fine breeders raise. After having watched their success in thorough breeding for a number of years, always speaking highly of the several herds which they marketed each year, they finally concluded to try a cross of their ill bred sows to thorough bred boars. They were astonished at the result, though upon half starved sows, while at the same time such breeders as I have spoken of were still far in advance of their neighbors with their thorough-bred, well-fed hogs.

Now, there is nothing remarkable in all this. It goes far toward silencing the sneers of those who are prejudiced against thorough-breeding.

There might be many instances cited where thorough-breeding and liberal feeding have proved profitable in hog raising to our farmers, but—

"Convince a man against his will,
And he will be of the same opinion still."

CHAPTER VII.

THE ORIGIN AND IMPROVEMENT OF OUR DOMESTIC PIGS.

All known breeds of pigs, if Nathusius be correct, are divided into two great groups—one, in all respects resembling, and no doubt decended from, the common wild boar, is known as the *Sus scrofa*. In osteological character the other group differs in several important respects. Its wild parent form is unknown. According to the law of priority, the name given to it by Nathusius is *Sus Indica* of Pallas. This name, though an unfortunate one, must now be followed up. It is an unfortunate name because the aboriginal does not inhabit India. The best domesticated breeds have been imported from China and Siam.

There are many wild hogs yet in various parts of Central and Northern Europe. The wild boar does not attain his full growth under five to seven years, and lives to be from twenty-five to thirty years old. In color, when full grown, he is always black; has a long, strong snout, large tusks, and longer head than the domestic pig; small ears, pointed and upright. The sow breeds only once a year, has seldom more than five or six pigs at a litter, and suckles them from three to four months. She will not allow them to leave her for three or four years, or until they are able to defend themselves. They often grow to a great size, though usually not so large as

our hog. Many of the engravings in this work are selected from different works, the object being to illustrate the changes that have been made in the hog by domestication, breeding, and feeding.

Great changes have been made in the form of cattle, sheep, horses, &c.; but, as the illustrations will show, far greater improvements have been effected in the hog than any other animal. The old original English pig [Figure 4], in form shows a decided improvement over the wild boar [Figure 3]. It has a straighter and broader back, larger hams, shorter legs, shorter head, heavier cheeks, shorter snout, and will afford more meat and less offal than the wild hog.

Figure 2.

The engraving of the old Irish Greyhound Hog [Figure 2] shows an intermediate form between the domestic and wild hog animal. Richardson's Works, from which the picture is taken, gives this description:

"These are tall, long legged, bony, heavy-eared, coarse haired animals; their throats furnished with pendulous wattles and by no means half so much resemble the appearance of the domesticated as they do the wild boar, the great original of the race. Though even in Ireland the old race has been gradually wearing away and is now confined only to the western portion of that country, especially to Galway. They are said to be very active; can clear a five board fence as well as any hunter.

"The picture of the old English pig [Figure 4] shows the improvement that can be made by regular feeding

and judicious selection, though it has probably taken hundreds of years to bring about this change as indicated in the engraving. It undoubtedly might have been effected in a much shorter time, but the fact remains that centuries after the wild pig had disappeared from the Island, the domestic pig derived from them was still a coarse, slow-maturing animal, and of course unprofitable.

The French and Germans, as compared with the English, have made but little improvement. Many of the animals on the Continent are much like the old English hog—bony, tall, gaunt, wiry-haired, slow to fatten. On page (46) we give a portrait of Craonnaire boar, [Figure 6], which took a prize at a French agricultural show in 1856.

CHAPTER VIII.

THE IMPROVEMENTS IN THE ENGLISH BREEDS OF PIGS.

"The improvement in the breeds of pigs has kept pace with the improvement in general agriculture. High breeding is profitable when accompanied with high feeding and high farming; but a highly refined animal is not suited to a rude, primitive system of agriculture. The English breeds of pigs to-day, as compared with those of half a century ago, do not show greater improvement than is found in the general system of farming. There are still poor farmers in England, and there are also poor breeds of pigs; but it must be admitted that we can find in England the best specimens of high farming, and the best specimens of well-bred cattle, sheep, and pigs; and as good culture is rapidly becoming more general, there is an increasing demand for improved breeds, at high prices. There can be no doubt that the general improvement in agriculture, and the more general demand for improved breeds, has greatly stimulated the efforts of the professional pig breeders; and it is doubtless true that several of the English breeds of pigs are to-day superior in form, early maturity, and fattening qualities, than any other breed in the world.

"The early English breeders made great improvements, but being ahead of their times, they met with comparatively little demand for their improved pigs, and no adequate renumeration for their skill and labor.

"It is not necessary to review the means employed by the breeders of the last century to improve the English breeds of pigs. Suffice it to say that it is generally admitted that much of this improvement is due to crossing the large English sow with the highly refined Chinese boars, and in selecting from the offspring such animals as possessed, in the greatest degree, the form and qualities desired. By continued selection, and "weeding out," the breed at length became established.

"The Improved Berkshire is one of the earliest and best known of these Chinese-English breeds.

"The old Berkshire hog has maintained a high reputa-

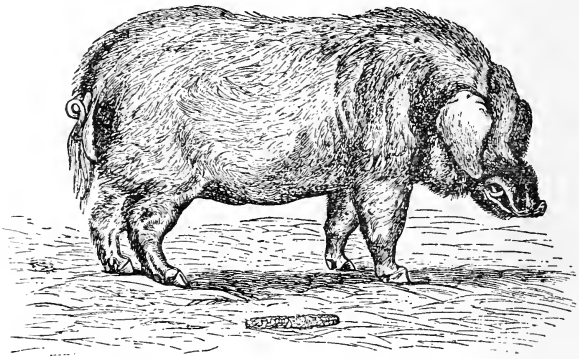

Figure 3.—ORIGINAL OLD ENGLISH PIG.

tion for centuries. It is described as 'long and crooked snouted, the muzzle turning upwards; the ears large, heavy, and inclined to be pendulous; the body long and thick, but not deep; the legs short, the bone large, and the size very great.' It was probably the best pig in England, and was wisely selected as the basis of those remarkable improvements which have rendered the modern Berkshire so justly celebrated.

"It would be interesting to trace the different steps in this astonishing improvement, but, unfortunntely, the necessary information cannot be obtained. We give four en-

gravings from Loudon's Encyclopedia of Agriculture, the first edition of which appeared in 1825, which will give some idea of the change that has been effected. Figure 8 is the Berkshire pig, as represented by Loudon, which is stated to represent 'one of the best of its kind,' and there can be little doubt that it was taken from what was considered a good specimen of the breed at the time the work was written. As compared with the figure of the old original English pig, and also with those of Hampshire, Herefordshire, and Suffolk, given by Loudon [Figures 9, 10,

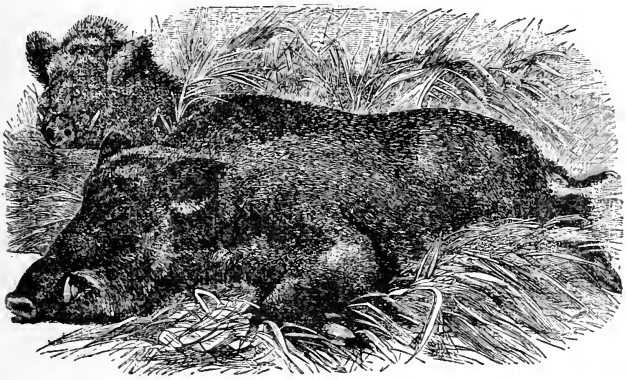

Figure 4.—WILD BOARS.

and 11], it is easy to trace the influence of the Chinese cross. Loudon speaks of the Berkshire, at that time, as a small breed, and it is undoubtedly true that the first effect of an improvement in the fattening qualities and early maturity of an animal is to reduce the size. On the whole, this picture of an improved Berkshire, forty-two or fifty years ago, does not give one a very favorable idea of the breed at that time; yet it was then probably the best bred pig in England. Comparing this engraving with the one given by Youatt [Figure 12], in 1845, and with those given by Sydney in 1860 [Figures 20 and 21], we can from

some idea of the remarkable effects of judicious breeding and high feeding. The engraving, figure 12, indicates the effect of a *cross* with the Chinese; the others show what can be done by persistent efforts in improving a breed of a mixed origin. It is highly probable that boars of the improved Chinese-Berkshires, after the breed had become established, were employed to cross with the large old Berkshire sows, and that the effect of this less violent cross was more beneficial than the direct use of the pure Chinese. Certain it is, that the pure Chinese pigs are now seldom, if ever, resorted to by English breeders. They find it more advantageous to resort to pure-bred boars of some of their own established breeds, although there is probably none of these breeds that have not, at one time or other, been crossed with the Chinese. It is a mistake, however, to speak of them, on this account, as 'cross-bred' pigs, as is sometimes done. They have been bred pure long enough to become fully established.

"The history of the Improved Essex Pig is of great interest, because better authenticated than that of any other breed.

"The old Essex breed is described by Loudon as 'up-eared, with long, sharp heads, roach-backed, carcasses flat, long, and generally high upon the leg, bone not large, color, white, or black and white, bare of hair, quick feeders, but great consumers, and of an unquiet disposition.

"Lord Western, while traveling in Italy, saw some Neapolitan pigs, and came to the conclusion that they were just what he wanted to improve the breed of Essex pigs. He described them, in a letter to Earl Spencer, as a breed of very peculiar and valuable qualities, the flavor of the meat being excellent, and the disposition to fatten on the smallest quantity of food unrivaled.' He procured a pair of thorough-bred Neapolitans, and crossed them with Essex sows, and probably with black Sussex and Berkshires. He obliterated the white from the old Essex, and obtained a breed of these cross-bred pigs that

could scarcely be distinguished from the pure-bred Neapolitans.

"These Neapolitan-Essex had great success at agricultural fairs, but as Lord Western continued to breed from his own stock, selecting the most highly refined males and females, they 'gradually lost size, muscle, and constitution, and consequently fecundity; and at the time of his death, in 1844, while the whole district had benefited from the cross, the Western breed had become more ornamental than useful.'

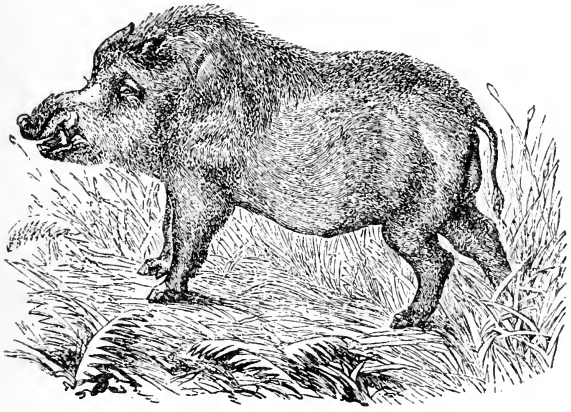

Figure 5.—OLD IRISH PIG.

"In other words, while this highly refined breed was of great value to cross with the large, vigorous sows in the neighborhood, they were not profitable to raise pure. This is the case with all highly refined, thorough-bred pigs. They are not as profitable for the mere production of pork as the pigs from a common sow and a thorough-bred boar. It is as true to-day as it was then, that any highly refined thorough-bred pigs are 'more ornamental than useful,' unless farmers know how to use them; then they are of great value. In the meantime, a tenant

farmer of Lord Western, the late Fisher Hobbs, of Boxted Lodge, had availed himself of the opportunity to use the thorough-bred Neapolitan-Essex boars belonging to Lord Western, and crossed them with the large, strong, hardy, black, and rather rough and coarse Essex sows, and in process of time he established the breed, since become so famous—the Improved Essex.

"The differences between the two breed is shown by the engraving of one of Lord Western's Neapolitan-Essex boars (Figure 23), drawn from the first edition of Youatt on the Pig, and that of "Emperor" (Figure 22), an eight-year-old Improved Essex working boar, taken in 1860 for Sidney's last edition of Youatt on the Pig.

"Sidney, in his last edition of Youatt, says: 'The Improved Essex probably date their national reputation from the second show of the Royal Agricultural Society, held at Cambridge, in 1840, when a boar and sow, both bred by Mr. Hobbs, each obtained first prizes in their respective classes.

"'Early maturity, and an excellent quality of flesh, are among the merits of the improved Essex. They produce the best 'jointers' for the London market. With age they attain considerable weight, and often make 500 pounds at twenty-four months old. 'Emperor' (Figure 22) is 2 feet, 8¼ inches high at the shoulder, and 6 feet, 1 inch

Boars bred at Boxted have been known to reach 36 inches in height.

"'The defect of the improved Essex is a certain delicacy, probably arising from their southern descent, and an excessive aptitude to fatten, which, unless carefully counteracted by exercise and diet, often diminishes the fertility of the sows, and causes difficulty in rearing the young. As before observed, they are invaluable as a cross, being sure to give quality and early maturity to any breed, and especially valuable when applied to black breed where porkers are required. For this purpose they have been extensively and successfully used in all the

black pig districts of Great Britain, where, as well as in France and Germany, and in the United States, they have superseded the use of the imported Neapolitan and Chinese. Many attempts, on a limited scale, to perpetuate the breed pure, have been unsatisfactory, because it is too pure to stand in-and-in breeding. They require much care when young. 'In the sows the paternal f attening properties are apt to overbalance the milking qualities, and make them bad nurses.'

"'The Berkshire breed have benefitted much from the improved Essex cross. The best Devonshire pigs have a large infusion of the same strain. The improved Dorsets, the most successful black pigs ever shown at the Smithfield Club shows, have borrowed their heads at least from the Essex breed. The improved Oxfords are the result of a judicious blending of pure Neapolitan, Berkshire, and improved Essex blood; and throughout the midland and western counties, the results of Lord Western's Italian tour are to be found in every parish where a black pig is patronized.

"'The history of this breed affords a good illustration of the advantages of the system under which landlords, stimulated by patriotism or competition, or mere love of things agricultural, breed and experiment with great zeal, varied success, and little or no profit, until they reach the point where the tenant farmer, with sufficient capital, equal zeal, and a clear eye to the £. *s.* *d.*, takes up the work, breeds, and works the problem out with a degree of practical knowledge, personal attention, and enthusiasm, which few, except farmers breeding for a profit, can contrive to combine, and persevere to bestow for a long series of years.

"'Foreign governments endeavor, with very limited success, to produce the effect of our aristocratic breeding enthusiasts by government studs. But an official, however gilded, titled, or crossed, has never the influence of a peer or squire; and besides his name, the raw materials—

the working bees, the great tenant farmers—are wanting on the continent.

"'The improved Essex are ranked amongst the small breeds, and there they are most profitable; but exceptional specimens have been exhibited at agricultural shows in the classes for large breeds, as, for instance, at Chelmsford, in 1856.

"'There is probably no black pig which combines more good qualities, as either porker or bacon hog, than the produce of an improved Essex boar and an improved Berkshire sow.

"The facts here narrated are of great importance as illustrating the principles of breeding which we have endeavored to lay down in the first chapters of this work. The old Essex pigs were *great eaters*. All the authorities mention this fact as one of the *objections* to the breed. The Lord Western Essex were highly refined pigs, of good form, little offal, maturing very early, and fattening with great rapidity, but destitute of size and vigor. Crossed with selected sows of the old, hardy, vigorous race, the offspring possessed the form, early maturity, and fattening qualities of the improved breed, united with the common stock. They had the stomach of the mother, and the refinement of the sire. No wonder that they 'have an excessive aptitude to fatten.' What else can they do with the large amount of food they are capable of eating and digesting except to convert it into flesh and fat? There is a minimum of offal in this breed, and they are exceedingly quiet. There is little demand on the large quantity of food they can eat, and nearly the whole of it must be converted into flesh and fat; and we have endeavored to show the immense advantage of having an animal that will consume a considerable excess of food over and above that required to sustain the vital functions. In this view of the matter it is easy to see why the Improved Essex proved such a useful breed in the hands of intelligent farmers.

"Many other similar instances of the improvement of English breeds might be given, but it is not necessary to do so. The principle which underlies them all is the same. A large, vigorous, healthy sow, crossed with a highly refined, thorough-bred boar, and the offspring carefully bred until the desired qualities become established in the new or improved breed.

CHAPTER IX.

THE MODERN BREEDS OF ENGLISH PIGS.

"English writers on swine, twenty years ago, describe a dozen or more breeds of pigs, then kept in England, and nearly as many more in Scotland and Ireland. Youatt and Richardson, both of whose works on the pig

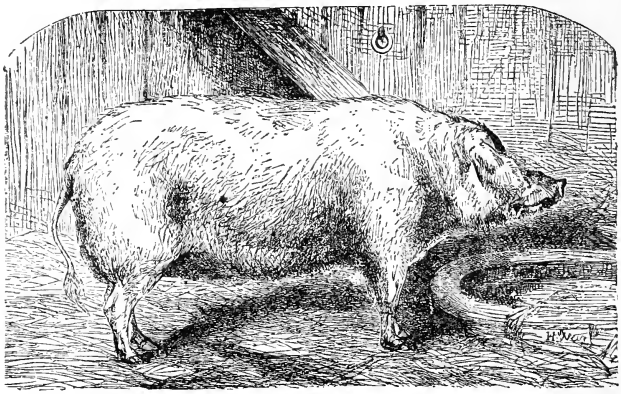

Figure 6.—FRENCH PRIZE BOAR—CRAONNAIRE WHITE BREED.

were reprinted in this country, give a full account of these old breeds. Many of these breeds have been, at one time or another, introduced into the United States and Canada; but comparatively few of them have been kept pure,

either here or in England. The common stock of pigs in America is made up of these old breeds. Occasionally we see a pig that has some distinct characteristics recognizable as belonging to some known breed, but, as a general rule, it is impossible to trace the slightest resemblance to any distinct breed, either of the past or present.

"The same is true, to a considerable extent, in England. The common stock of pigs is of such a mixed character, that it can be traced to no particular breed. Many of the old breeds have become extinct. We have

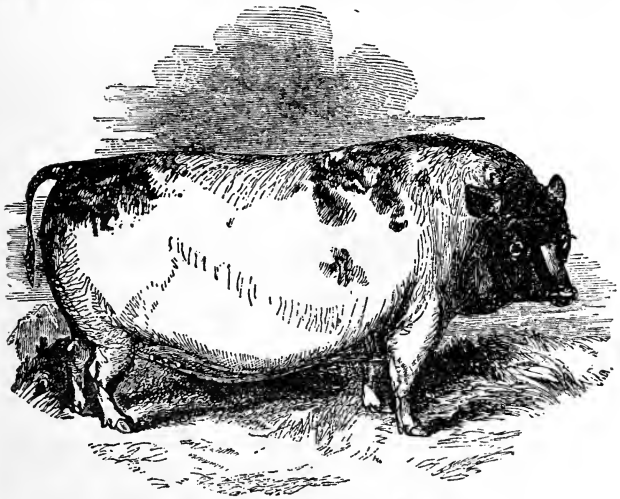

Figure 7.—IMPORTED CHINESE SOW.

so-called 'Cheshire' pigs in America, but there is no such breed raised or known in Cheshire, and has not been for twenty years or more.

"Culley, in his work entitled 'Observations on Live-stock,' published in 1807, gives a well authenticated account of a Cheshire pig which measured, from the nose to the end of the tail, 9 feet, 8 inches, and in hight, 4 feet, 5½ inches. When alive, it weighed 1,410 pounds, and when dressed, 1,215 pounds. The age is not given.

It was probably as fat as it could be made, and yet it only dressed 80½ per cent of its live weight.

"This breed, if we may call it a breed, was evidently

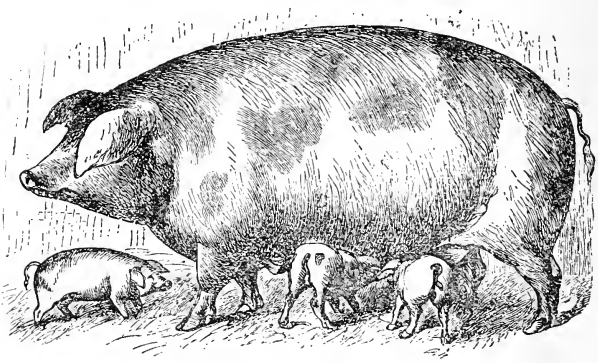

Figure 8.—BERKSHIRE PIG.

very large and coarse. It is described as 'remarkably long, standing very high, on long, bony legs; head large, ears long and hanging; back much curved, and narrow; sides flat and deep; color, white, blue and white, black and white.' This breed has become extinct.

"The old Yorkshire or Lincolnshire breed is described in Morton's Cyclopedia as 'one of the largest breeds in the kingdom, and probably one of the worst; extremely long-legged, and weak loined; very long from head to tail; color chiefly white, with long, coarse, curly hair; tolerable feeders, but yielding a coarse, flabby flesh, of inferior marketable quality.

"It is from this race of pigs that the modern Yorkshire, now perhaps the most popular breed in England, has been derived. This breed is divided into three classes: The Large, Medium, and Small.

THE LARGE YORKSHIRES.—(Figures 13, 14, and 15.)

"We have shown what the old Lincolnshire and Yorkshire pig was before any especial efforts had been

made to improve it. In 1854, Mr. A. Clarke, of Long Sutton, Lincolnshire, the author of a valuable treatise on the breeding and management of pigs in Morton's Cyclopedia of Agriculture, writes: 'In the adjoining county of Yorkshire the breeders have outdone the Lincolnshire breeders in point of size, but not in any other respect. The specimens lately exhibited at our meetings, of the large Yorkshire breed, by Messrs. Abbott, Taylor, Tuley, and others, have attained a size too large for any useful purpose, and would exceed in weight that of a moderately grown Scotch ox. The present taste of the public is

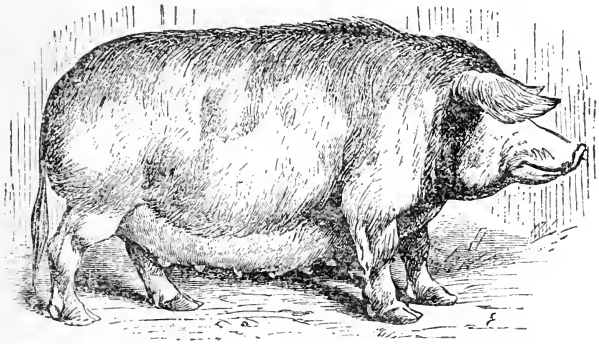

Figure 9.—HAMPSHIRE PIG.

decidedly set against such an overgrown sort; at present, however, they make large prices.' We believe there is now no breed known as the Lincolnshire. It has been merged in the Yorkshire.

"Of the old, unimproved large Yorkshire, Sidney says: 'It was a long time coming to full size, and could be fed up to 800 pounds, but whether with any profit, is doubtful. It was and is still very hardy, and a very prolific breeder. Attempts have been made to improve it by crossing with the Berkshire, Essex, Neapolitan, and other black breeds, which produced a black and white race. Those from the Berkshire are a hardy, useful sort, but

fatten slowly; the other crosses have little or no hair, are too delicate for the North, and are fast wearing out.

"'The first step taken in the right direction for improving the old Yorkshire seems to have been the introduction of the White Leicesters. These were a large sort, with smaller heads than the old York, erect ears, finer in the hair, and lighter in the bone.

"'The improvement in the York large breed commenced early in the century, when the White Leicesters were introduced. The general run of pigs in the grain-

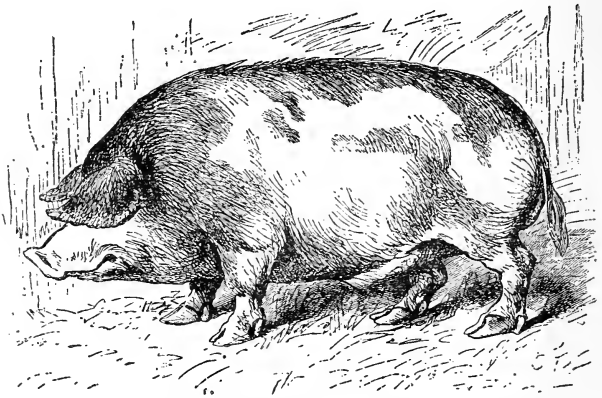

Figure 10.—HEREFORDSHIRE PIG.

growing districts of Yorkshire shows that they partake more or less of this cross. The old sort is seldom seen except in the northern part of the county.'

"A Yorkshire correspondent of Mr. Sidney, writing in 1860, says 'The Leicester cross has been still further improved by putting the largest and best sows of the Leicester cross to boars of the small white breed from Castle Howard (The Earl of Carlisle) and Bransby (Mr. Wyley, of Bransby), breeding from the progeny, and selecting the largest and best of the young sows and the best formed boars for that purpose, taking care that they were not

too nearly related. By this means the size and constitution of the large breed, with the symmetry and tendency to fatten of the small breed, have been, in a great degree, transmitted to the offspring. If a sow shows too much of the old sort, she is put to a boar of the small breed for her first litter.'

"Such seems to have been the origin of the present breed of large Yorkshires.

"'These improved Large Yorkshires,' says Sidney, in 1860, 'are principally bred in the valley of the Aire, in the neighborhood of Leeds, Keighley, and Skipton. They are in great request as breeding stores, and purchas-

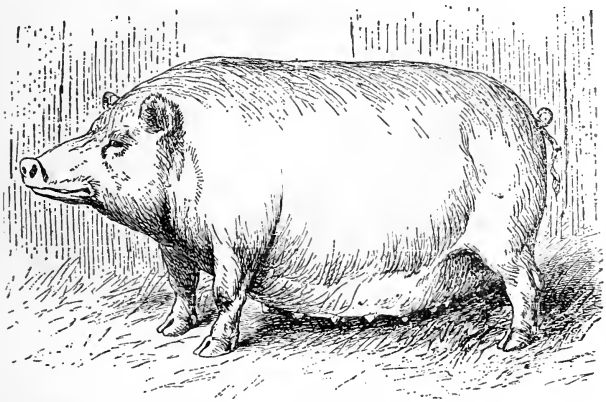

Figure 11—SUFFOLK PIG.

ed for that purpose for every part of the United Kingdom, as well as for France, Germany, and the United States, at great prices.'

"These pigs 'can be fed to 840 pounds, dead weight. The Prize Boar at the Royal Agricultural Fair at Chester weighed, alive, 1,232 pounds. The Prize Sow at the Royal Fair at Warwick, 1,204 pounds. At Northallerton, in 1859, the finest lot of large sows ever seen in one place were collected together. There were at least a dozen, each of

whose live weight would not be much less than half a ton [1,120 pounds]. The Royal Agricultural Prize-winner at Norwich was only just good enough to get second honors.'

"Mr. Wainman, the owner of Carhead Farm, has been one of the most successful breeders of the Large Yorkshires, having won more than 200 prizes, and sold, in the language of one of his Yorkshire admirers, the produce of one sow 'for as much as would build a church.' Mr. Fisher, who is bailiff at Carhead Farm, gives the weight of two of these pigs. One, killed at less than 7 months, dressed 255 pounds, and one at 12 months old, 489 pounds.

THE SMALL YORKSHIRES.

"Mr. Mangles, 'one of the first pig-breeders and feeders in Yorkshire,' gives the following description of the Small Yorks: "The small Yorkshire is peculiar to Yorkshire, and different from any other breed I have seen. It has a short head, small, erect ears, broad back, deep chest, and short legs, with fine bone. It is always ready to fatten, and turn to account either in the way of roasters, small porkers, small bacon, or medium. Three or four of the small breed might be fed well, and kept fresh and symmetrical on the food which would barely keep one lean and gaunt Yorkshire.'

THE SMALL CUMBERLAND.

"'The Cumberland small breed,' says Mr. Sidney, 'are described by Mr. Brown, of Aspatria, who is one of the most noted founders of the modern breed, from whom Lord Ducie purchased some of his most celebrated animals, are not small in reality, but a medium size, short in the legs, back broad, straight, and evenly fleshed; ribs well developed; rump and twists good; hams well down and low; breast and neck full and well formed; no creases in the neck; ears clean, fine, of a moderate size, and stand a little forward; nose short; body evenly covered with short, fine hair.'

"At the Birmingham show, in 1850, Mr. Brown won all first prizes in small breeds for the best boar, best sow, and best pen of pigs with his Cumberland breed; and sold a boar and a sow under six months old for 43 guineas to Earl Ducie. At the sale on the death of the Earl, the sow Miss Brown was sold to the Rev. F. Thursby for 65 guineas. 'She paid me,' he writes to Mr. Sidney, 'very well, having sold her produce for $1,500, and have now (February, 1860,) four breeding sows from her.'

THE YORK-CUMBERLAND BREED.

"Mr. Sidney classes the Small Yorkshire and Cumberland together, "because, although originally, they somewhat differed in size—the Cumberland being the larger—

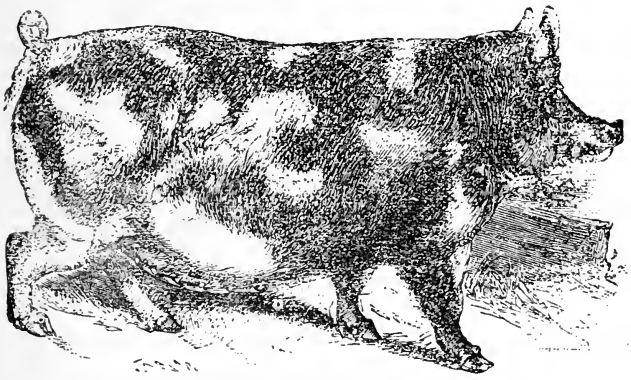

Figure 12.—BERKSHIRE PIG.

they are being continually intermixed, with mutual advantage; [Figure 16] and pigs of exactly the same form, the result of crosses, are constantly exhibited under the names of Yorkshire or Cumberland, according to the fancy of the exhibitor."

"Mr. Mangles writes: 'The Small Cumberland is a great deal larger than the Small Yorkshire. By judiciously crossing the two, I have obtained a breed combining size, aptitude to fatten, and early maturity. From

the Cumberland I got size, and from the Yorkshire quality and symmetry. I have tried a great many breeds of pigs, and, keeping the £ s. d. in view, have found no breed equal to the Yorkshire and Cumberland cross."

A Warwickshire correspondent of Mr. Sidney writes: "No animal of the pig species carries so great a proportion of flesh to the quantity of bone, or flesh of as fine a quality, as the small Yorkshire, or can be raised at so small a cost per pound. With common store food they can always be kept in condition—with common care, and slight addition to food, they are ready to be killed, for porklets, at any age; and if required for bacon, take one farrow of pigs from a gilt. A 'gilt' is a young sow before she has had pigs. The idea here is, when it is desired to obtain bacon from the small breeds, to take one litter of pigs from a young sow, and then fatten her. Ordinarily, it will not pay to keep these pigs long enough to make large pork; but if a litter of pigs can be obtained in the meantime, it is then very profitable. But if we should continue to breed from pigs of the first litter, the size would soon become too small. You ought to have from seven to ten pigs the first time. I have four sisters, gilts, that have brought me 38 pigs this last January. They are as pure as 'Eclipse,' being descended from the stock of Earl Ducie and Mr. Wyley, of Bransby near York, and are of good size. I killed a sow this winter that weighed 26 score—520 pounds.

"'The ordinary weight is from 14 to 17 score—280 pounds to 340 pounds. In some cases, where very thick bacon is required, they may be profitably got to 30 score —600 pounds. The Small Yorkshire owes its present superiority to choice selections and judicious crossing of different families of the same breed; by this means size is maintained with character.'

"These 'Small Yorkshires,' which this gentleman calls as 'pure as Eclipse,' are descended from the stock of Earl Ducie and Mr Wyley; but, as has been already

shown, Earl Ducie purchased Cumberland pigs from Mr. Brown, and Mr. Wyley's original stock were White Leicesters.

FIGURE 13.—YORKSHIRE LARGE BREED.

"Mr. Sidney says: 'The wide extension of this Cumberland and York blood is to be traced wherever the Royal Agricultural Society's prizes for white pigs are won.

"Thus: 'Mr. H. Scott Hayward, of Folkington, a prize winner at Chelmsford, in 1856, in small breeds, with a white sow, states that he has used boars from the following breeders: The late Earl of Carlisle, Castle How-

ard; the late Earl of Ducie; the Earl of Radnor, Coleshill; and at present (1860) one from Prince Consort's stock.

"The card of Mr. Brown's boar 'Liberator' contains the following pedigrees, and shows a distinct connection between Cumberland and Yorkshire and all the most celebrated white breeds in the South:

"'Liberator' was bred by Earl Ducie, got by Gloucester,' dam 'Beauty, by Lord Radnor's boar, grand dam 'Julia Bennett" by Lord Galloway's boar, etc.

"'Gloucester' was bred by the Earl of Ducie, got by 'General,' dam 'Hannah' by the 'Yorkshireman': grand dam bred by the Earl of Carlisle, and purchased by Lord Ducie at the Castle Howard sale.

"'General,' bred by Mr. Wyley, sold to Mr. McIntosh, of London, and hired by H.R.H. Prince Albert, the Earl of Ducie, and Lord Wenlock, was the sire of two pens of pigs, the property of H.R.H. Prince Albert, that obtained the first prize at a Smithfield Christmas show.

"It may, therefore, safely be assumed that all the best white pigs of modern times have been bred from the Yorkshire or Cumberland and white Leicesters, or both; and many breeds, such as Middlesex, Coleshill, etc., may be dismissed as mere variations of the white small Yorkshire.

"Mr. G. Mangles, of Givendale, near Ripon, Mr. Brown writes me, was one of the first to cultivate the cross of the York-Cumberlands."

THE MIDDLE OR MEDIUM YORKSHIRE BREED.

"The Yorkshire medium or middle breed," [Figure 18], says Mr. Sidney, 'is a modern invention of Yorkshire pig-breeders, and perhaps the most useful and the most popular of the white breeds, as it unites, in a striking degree, the good qualities of the large and the small. It has been produced by a cross of the large and the small York, and the Cumberland, which is larger than the small

York. Like the large whites, they often have a few pale blue spots on the skin, the hair on the spots being white. All white breeds have these spots more or less, and they often increase in number as the animal grows older.

"It was not until 1851 that the merits of this breed were publicly recognized at a meeting of the 'Keighley Agricultural Society,' when, the judges having called the attention of the stewards to the fact that several superior sows, which were evidently closely allied to the small breed, had been exhibited in the large-bred class, the aspiring intruders were, by official authority, withdrawn.

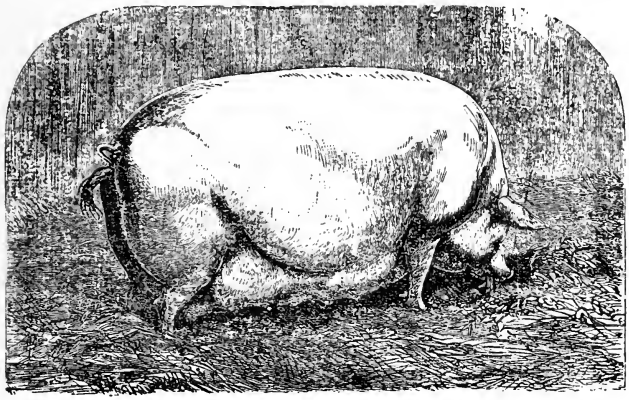

FIGURE 14.—"PARIAN DUCHESS." YORKSHIRE LARGE BREED.

"They included the since celebrated 'Sontag,' 'Jenny Lind,' 'Kick-up-a-dust," and some other distinguished grunters, forming altogether such an imposing troupe that the authorities gave them a performance—that is, a class—to themselves, with a benefit in the shape of first and second prizes, and called them the Middle Breed.

"This example was generally adopted throughout Yorkshire, and at local shows they are the strongest and best filled of all the classes.

"The principal prize-takers amongst the boars in this

breed have been 'Paris,' 'Nonpareil,' 'Lord Raglan,' 'Sir Colin,' and 'Wonder'; and among the sows, 'Zenobia,' 'Lady Airdale,' who held her own during two seasons, in one of which she took ten prizes, 'Craven.' 'Lady Kate,' 'Queen Anne,' and '*Miss Emily*,' [see portrait], who has never found her marrow, having taken nine first prizes in succession, including the champion cup at Caldervale in 1859, for the best pig in all classes. This competition brought all Yorkshire, several Warwick, Royal Highland. Society, Dublin and Royal Irish, as well as Cheshire and Lancashire champions, to the Cloth Hall, Halifax Amongst the rest, 'CARSWELL,' the second winner in the large boar class at Warwick, entered in the middle class and carried off the first prize in that class; but in the trial for the championship, he was beaten like the rest, and the plate with the 'white rosette of York,' went to 'MISS EMILY,' whose girth, taken behind the shoulders, was at this time eighty-five inches. She fully qualified for all the prizes she had taken as a breeding sow, by producing at Carhead, the following October, a fine litter of pigs.

"The middle Yorkshire breed are about the same size as the Berkshire breed, but have smaller heads, and are lighter in the bone. They are better breeders than the small whites, but not so good as the large whites; in fact they occupy a position in every respect between these two breeds."

WHITE LEICESTERS.

"We can ascertain nothing satisfactory in regard to the origin of this breed of pigs. This is the more to be regretted as the fact that they were "the great improvers of the gigantic Yorks," invests them with more than ordinary interest. [Figure 19.].

"Mr. J. W. Williams, of Somersetshire, is the principal breeder of White Leicesters. He first exhibited in 1852, and has taken the Smithfield Club gold medal,

two gold medals at the Paris Exposition in 1855, and numerous other prizes. The portrait of the Paris Prize Leicesters is given as Figure 19. Mr. Williams states that his fat pigs of this breed generally average the following weights:

5 to 6 months,	7 to 9 score pounds	.....	140 to 180	pounds.
8	"	10 to 12	"	"	.....	200 to 240	"
10	"	12 to 15	"	"	.....	240 to 300	"
12 to 18	"	15 to 18	"	"	.....	300 to 360	"

"The pen of three pigs of this breed which received

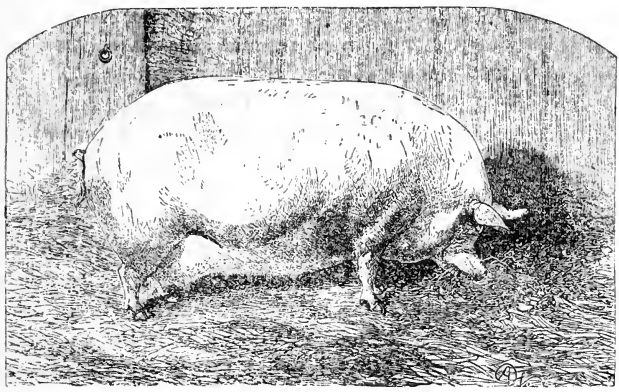

FIGURE 15.—"GOLDEN DAYS." YORKSHIRE LARGE BREED.

the Smithfield Club gold medal in 1854 weighed, sinking offal, at 18 weeks old, 180 pounds each.

SUFFOLK AND OTHER WHITE BREEDS.

"Mr. Sidney says: 'Yorkshire stands in the first rank as a pig-breeding county, possessing the largest white breed in England, as well as an excellent medium and small breed, all white, the last of which, transplanted into the south, has figured and won prizes under the names of divers noblemen and gentlemen, and more than one county. The Yorkshire are closely allied with the Cumberland breeds, and have been so much intermixed

that, with the exception of the very largest breeds, it is difficult to tell where the Cumberland begins, and where the Yorkshire ends. It will be enough to say, for the present, that the modern Manchester boar, the improved Suffolk, the improved Middlesex, the Coleshill, and the Prince Alberts or Windsors, were all founded on Yorkshire-Cumberland stock, and some of them are merely pure Yorkshires transplanted, and re-christened.'

"Speaking of the pigs kept in the dairy district of Cheshire he says: 'White pigs have not found favo- with the dairymen of Cheshire, and the white ones most used are 'Manchester boars,' another name for the Yorkshire-Cumberland breed. 'Mr. Youatt,' he says, in another place, 'and all the authors who have followed him, down to the latest work published on the subject, occupy space in describing various county pigs which have long ceased to possess, if ever they possessed, any merit worthy of the attention of the breeder. Thus the Norfolk, the Suffolk, the Bedford, the Rudywick, the Cheshire, the Gloucester breeds, have each a separate notice, not one of which, except the Suffolk, is worthy of cultivation, and the Suffolk is only another name for a small Yorkshire pig.'

BLACK BREEDS.

"If all the modern white breeds in England, of any special value to the breeder, are Yorkshires, or York-Cumberland and Leicesters, it is equally true that there are but two breeds of black pigs that deserve any special attention—the Essex and Berkshire.

"Black pigs and their crosses," says Mr. Sidney, "occupy almost exclusively the counties of Berks, Hants, Wilts, Dorset, Devon, and Somerset. Sussex has a black county breed, and in Essex a black-and-white pig has become all black. In the Western counties, the prejudice against a white pig is nearly as strong as against a black one in Yorkshire. In Devonshire, white pigs are suppos-

ed to be more subject to blistering from the sun when pasturing in the fields.

"For breeding purposes, the black breed may be divided into two—the improved Berkshire and the improved Essex, because there is no dark breed that has special characteristics so well worth cultivation as these two, and there is no black pig that may not be advantageously crossed by boars of one or both of these breeds. Hampshire has an ancient, coarse, and useful breed of black

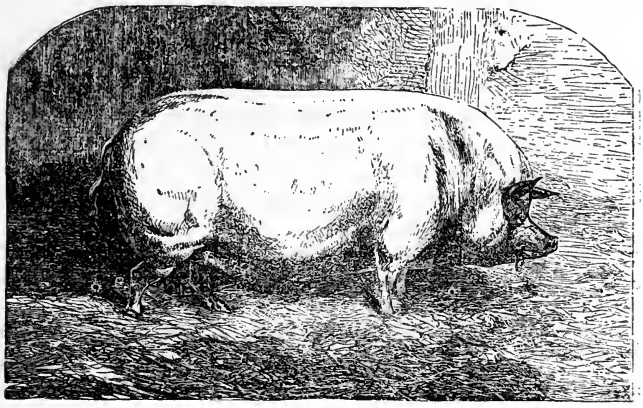

FIGURE 16.—CUMBERLAND YORK BOAR. SMALL BREED.

pigs. They are inferior to Berkshire, and not in the same refined class as Essex, therefore not worth taking from their native county."

BERKSHIRE.

"Among the black breeds," says Mr. Sidney, "by universal consent, the improved Berkshire hog stands at the head of the list, either to breed pure, or to cross with inferior breeds. The Berkshire was originally a large breed (it has very recently carried off prizes in the large classes at Royal Agriculture and other shows) of a black-and-white and sandy-spotted color, as represented in the por-

trait given by Mr. Youatt [Figure 12], in this respect distinctly differing from its neighbor, the old black Hampshire hog, rather coarse, but of general form very superior to the old white and black-and-white farm hog of the northern counties.

"The late Lord Barrington (who died in 1829) did a great deal toward improving the Berkshire breed, and the improved Berkshires are almost all traced back to his herd. They are now considered by Berkshire farmers to be divided into middle (not a large breed) and a small breed. If first-class, they should be well covered with long black, silk hair, so soft that the problem of 'making a silk purse out of a sow's ear' might be solved with a prize Berkshire. The white should be confined to '*four white feet, a white spot between the eyes, and a few white hairs behind each shonlder.*'

"At Mr. Sadler's, Bentham, near Cricklade, one of the most successful improvers of Berkshires, and eminent as a mauufacturer of North Wiltshire cheese, the committee of the Ayrshire Agricultural Association saw '300, every one of which was marked in this manner.'

"Mr. Sadler obtained his original stock from the late Lord Barrington's herd. At Baker Street, he once won the prize for the best fat pig in the yard with a sow nearly four years old, (a portrait of which is given in Figure 20,) which had been the mother of a numerous progeny. She was 6 feet 4 inches in length, 7 feet 6 inches in girth, and weighed 856 pounds—more than many fat heifers. But it seems to be the general opinion of feeders that Berkshires pay best at moderate weights.

"To develop the full size, they must not be allowed to breed until at least 12 months old. Mr. Sadler considers the improved Berks superior to any other (black?) breed, for size, quality, hardiness of constitution, prolificness, early maturity, and aptitude to fatten.

"My friend Mr. Thomas Owen, of Clapton, Hungerford, who has had, in his 40 years' experience as a Berk-

shire farmer, 'some thousand through his hands dead, writes me:

"'I remember the Berk pig a much larger and coarser animal than now; at present they are a medium, not a large breed. They have been improved by judicious selection and distant crosses with the Neapolitan, which have added to their fattening qualities. They are much esteemed by butchers for evenness of flesh (that is, more lean to the proportion of fat) than any other breed—and this is a good recommendation.'

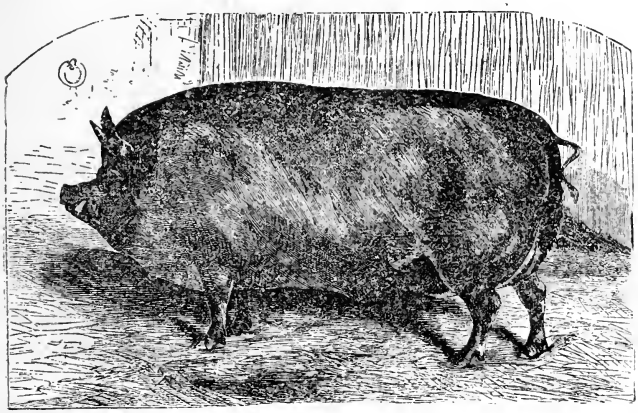

FIGURE 17.—PRIZE YORK-CUMBERLAND PIG. SMALL BREED.

"The late Rev. T. C. James, who was a successful exhibitor of pigs at Chelmsford, and one of the judges of pigs at the Royal Agricultural Society's Show at Warwick, in 1859, wrote: 'The improved Berkshire is a good big animal, well calculated to produce a profitable flitch. A good little pig is very well, but a good big pig is better, if with aptitude to fatten; two exhibited at Chelmsford, in 1856, (of Sadler's breed), each weighed 12 score at seven months old, and with that weight, were of such good constitution that they were well upon their legs. They

had walking exercise in an orchard every day while fattening.'

"One of the most extensive farmers in West Norfolk writes: 'Dissatisfied with the Norfolk pigs, I flew to Mr. Sadler, of Bentham, Wilts, gave him 20 guineas for three sows and a boar. I sold over 100 in the first 18 months for $10 each when 10 weeks old, and the only complaint I have is, that they do not breed so many as the old Norfolks; but I say eight or nine good ones are better than 10 or 11 ordinary ones. They are good graziers, and our butchers are very fond of them. There is plenty of lean meat with the fat, which is not the case with the fancy pigs. The cross between the Berks boar and Norfolk sow (white), like all cross breeds, is most profitable to the dealers, but we must have pure breeds first.'

"This Norfolk opinion," says Mr. S., "is confirmed by all my correspondence. The Berkshire pig is in favor in every dairy district, either pure or as a cross, but chiefly as a cross; he does not fatten so quickly as some other breeds, but his constitution and bacon quality are famous.

"The average weight of a bacon improved Berkshire hog, fit to kill, will be about 400 pounds. The ham-curers who purchase from these farms, prefer the small breed of Berkshires, of from nine to fourteen score.

"The improved Berkshire boar was used to give size and constitution, many years ago, to the Essex; and the most eminent breeder of Essex has informed me that on one occasion, in a litter of Essex pigs, two little pictures of the Berkshire boar, their remote ancestors by at least 28 years, appeared. It seems to be generally agreed that the Berks breed is best adapted for hams and bacon, and not for small fresh pork. As I have already mentioned, the Berks boar has been used to cross the large breed in Yorkshire, but without permanently satisfactory results in establishing a breed; for a first cross with almost any breed, it is sure to produce a well-sized useful animal. In reply to questions addressed through the landlord of the

Arley Hall estate, in Cheshire, to his principal tenants, it seems that the dairy farmer of that county finds it profitable to cross the dark or spotted sows which they have in the county, and also those they purchase largely from Shropshire and Wales, with a Berkshire boar. The produce is all, or nearly all, made into, and sold for making bacon. On the other hand, in Kent, Mr. Betts, of Preston Hall, buys Berkshire sows and crosses them with a white Windsor boar, 'the produce being invariably white.'

IMPROVED ESSEX.

"We have alredy given some account of this celebrated breed, but the American farmer will be glad to read

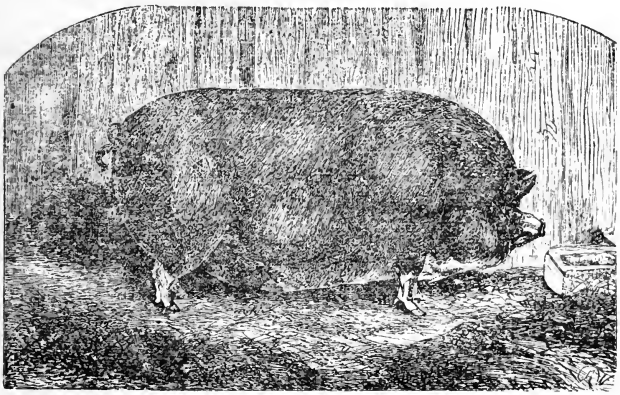

FIGURE 18.—"MISS EMILY." YORKSHIRE MIDDLE BREED.

what Mr. Sidney writes in regard to it. He says: 'The improved Essex [Figure 22] is one of the best pigs of the small black breeds, well calculated for producing pork and hams of the finest quality for fashionable markets; but its greatest value is as a cross for giving quality and maturity to black pigs of a coarser, hardier kind. It occupies, with respect to the black breeds, the same position that the small Cumberland-Yorks do as to white breeds—

that is to say, an improved Essex boar is sure to improve the produce of any large dark sow.

"The original Essex pig was a parti-colored animal, black, with white shoulders, nose, and legs—in fact, a sort of 'sheeted' pig, large, upright, and coarse in bone.

"The first improvement was made by the late Lord Western, when Mr. Western, an Essex squire, who divided his life pretty equally between the cultivation of livestock and the passionate support of the politics of his friend, Charles James Fox. While traveling in Italy (making the grand tour), he observed, admired, and secured a male and female of the breed called Neapolitan, 'found in its greatest purity (according to a letter addressed by Lord Western to Earl Spencer in the *Farmers' Magazine*, January, 1839) in the beautiful peninsula, or rather tongue of land, between the Bay of Naples and the Bay of Salerno.....A breed of very peculiar and valuable qualities, the flavor of the meat being excellent, and the disposition to fatten on the smallest quantity of food unrivaled.'

'From this pair Mr. Western (afterwards Lord Western) bred in-and-in, until the breed was in danger of becoming extinct—a sure result of in-and-in breeding. He then turned to Essex, and, there is reason to believe, to black Sussex and Berkshire sows; and obliterating the white of the old Essex, produced a class of animals of which he says, in the letter already quoted: 'I have so completely engrafted this stock upon British breeds, that I think my herd can scarcely be distinguished from the pure blood' (of Neapolitans). [See Figure 23.]

"The Western Essex pigs had great success at agricultural shows. The old Essex, with its 'roach back, long legs, sharp head, and restless disposition,' was capable of being made very fat, but then it required time and an unlimited supply of food. The advantage of a cross with the Italian was obvious, and the fact that the new breed was in the hands of a popular county squire was no small

help in extinguishing the native and unprofitable parti-colored race.

"But as Lord Western bred exclusively from his own stock—having attained what he considered perfection—always selecting the neatest and most perfect males and females, his breed gradually lost size, muscle, and constitution, and consequently fecundity; and at the time of his death, in 1844, while whole districts had benefited

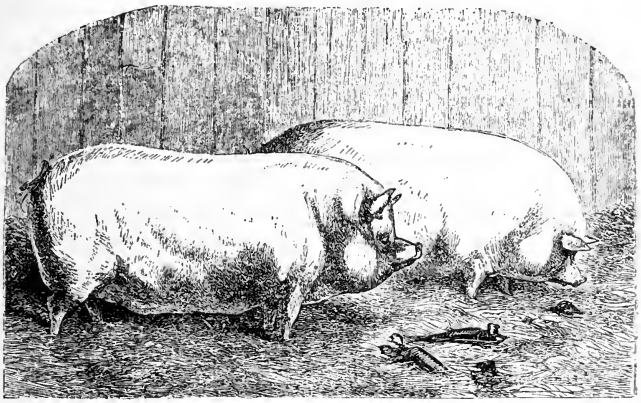

FIGURE 19.—WHITE LEICESTER BOAR AND SOW. SMALL BREED.

from the cross, the Western herd had become more ornamental than useful.

"But, in the meantime, the well-known Mr. Fisher Hobbs, of Boxted Lodge, then a young tenant farmer at Mark's Hall, on the Western estate, had taken up, among other farm live-stock, the Essex pig, and made use of the privilege he enjoyed of using Lord Western's male animals to establish a breed on strong, hardy black Essex sows, even if somewhat rough and coarse, crossed with the Neapolitan-Essex boars. On the carefully selected produce of these, divided and kept as pure separate families, he established the breed that he first exhibited, and

has since become famous as the '*Improved Essex*,' a title which Lord Western himself adopted when his tenant and pupil had successfully competed with him. On Lord Western's death, Mr. Hobbs purchased his best breeding sows. The difference between Lord Western's Essex and Mr. Fisher Hobbs' improved Essex, is shown very plainly by the two portraits which illustrate this section, the one drawn by Mr. Youatt, in 1845 [Figure 23], and the other from 'Emperor,' an eight-year-old working boar drawn for me in April, 1860, [Figure 22].

"The improved Essex, with symmetry, have more size and constitution than the original Essex-Neapolitans, and this has been maintained without any crosses for more than 20 years, by judicious selection from the three distinct families."

Very excellent specimens of the Essex pigs are owned by various breeders in this country. We give engravings [Figures 24, 25, 26,] from photographs of animals owned by L. A Chase, Esq., Northampton, Mass., descended from animals imported by Samuel Thorne, Esq., from Fisher Hobbs' stock. They are in only working condition.

IMPROVED OXFORDSHIRE.

"These black pigs," says Mr. Sidney, "although they are scarcely numerous enough to enable them to claim the title of breed, are interesting, because representing a successful attempt to unite the best qualties of the Berkshire and improved Essex. The old Oxfordshire breed were very like the old Berkshire. The first great improvement is traced to two Neapolitan boars imported by the late Duke of Marlborough when Marquis of Blandford, and presented by him to Mr. Druce, Senior, of Eynsham, and the late Mr. Smallbones, in 1837. These Neapolitans were used with Berkshire sows, some of which were the result of Chinese crosses. Two families of jet-black pigs were formed by Mr. Smallbones and Mr. Druce. On the death of Mr. Smallbones, Mr. Samuel Druce, Jr.,

purchased the best of his stock, and had from his father, and also from Mr. Fisher Hobbs, improved Essex boars. The produce were a decided 'hit,' and very successful at local, Royal, and Smithfield Club shows. The improved Oxfords are of fair size, and all black, with a fair quantity of hair, very prolific, and good mothers and sucklers.

Figure 20.—IMPROVED BERKSHIRE.

"Mr. Samuel Druce writes me: 'I have recently used one of Mr. Crisp's black Suffolk boars. In fact, wherever opportunity offers, I obtain good fresh blood of a suitable black breed, with the view of obtaining more lean meat than the Essex, better feeding qualities than the pure Berkshires, and plenty of constitution. I have never been troubled with any diseases among my pigs. Without change of boars of a different tribe, if of the same breed, constitution cannot be preserved. Where breeding in-and-in from a limited stock is persisted in, constitution is lost, the produce of each sow becomes small in size and few in number.' The Oxford dairy farms have a first-rate market for pork in the University. Porkers at 13 to 16 weeks are wanted to weigh 60 pounds to 90 pounds; bacon pigs at nine to ten months, 220 pounds to 280 pounds, but at that age the improved Oxfords are easily brought to 400 pounds.'

BLACK AND RED PIGS.

"Birmingham has long been one of the greatest pig markets in the kingdom, and the pig-breding of the district has been not a little affected and improved by the

winter fat-stock show, which has for some years past been held there at Bingley Hall, with great success. The town of Birmingham unites Staffordshire and Warwickshire. The old Warwickshire breed was a white or parti-colored animal of the old-fashioned farm-yard type, and has never been improved into a special breed. The Staffordshire breed was the 'Tamworth.' At present the Tamworth are rapidly going out of favor with farmers, from the want of aptitude to fatten, and are being replaced by useful pigs, the result of miscellaneous crosses of no special character. The best are the middle-sized white pigs, a cross of the Cumberland-York with local white breeds, often called the Cheshire. The northern cross improves the constitution, and gives hair of the right quality, 'hard but not too much or too coarse.'

"At Bingley Hall the class of Berkshire breeding-pigs under six months old generally brings from 20 to 25 pens. At present, however, the Berkshires in the Birmingham district are chiefly in the hands of amateur farmers, tenant farmers not having taken very kindly to them.

"But the breed must be spreading rapidly if the ready sale of the young pigs at the Birmingham show be taken as evidence.

"Mr. Joseph Smith, of Henley-in-Arden, one of the most successful exhibitors of Berkshires, keeps three or four sows, and sells all their young; and others find the demand for young pigs constant throughout the year.

"Mr. Thomas Wright, of Quarry House Great Barr, (who did so much toward founding the Bingley Hall show,) considers the cross of the Berkshire with the Tamworth 'produces the most profitable bacon pigs in the kingdom, the Berkshire blood giving an extraordinary tendency to feed, and securing the early maturity in which alone the Tamworth breed is deficient. The cross of the Berkshire boar with large white sows has been found to produce most satisfactory results to plain farmers. My own notion with regard to all agricultural stock is, that

we should abandom crosses and stick to our pure breeds, adapting them to our particular wants by careful selection.'

"The TAMWORTH BREED is a red, or red-and-black pig, hardy, prolific, and the best specimens well shaped, but slow in maturing. It seems a near relation to the old Berkshire; but modern Berks breeders carefully exclude all red-marked pigs from their breeding-sheds. Reddish hairs at the tips of the ears of Essex would be permitted and admired. Mr. Alderman Baldwin, of Birmingham, is a noted breeder of this hardy, useful pig, which, how-

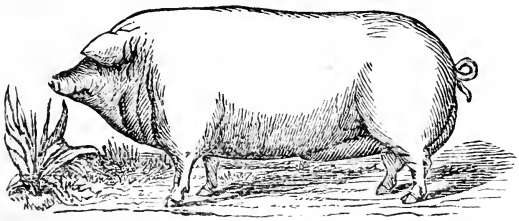

Figure 21.—IMPROVED BERKSHISE BOAR. MIDDLE BREED.

ever, does not seem to have any success as a prize winner. At the Royal Agricultural Show at Warwick, 1859, the Yorkshire and Berkshire breeds divided all the honors.'

DEVONS.

"Devonshire,' says Mr. Sydney, 'has an excellent breed of black pigs, which partake, for the most part, of the character of the improved Essex and Berkshire. The climate seems to require less hair than the northern and midland counties. Mr. George Turner, the great cattle breeder of Devon, has done a good deal in the last forty years towards improving the west country black pigs by his 'stud' and importations.

"The original Devon pigs were valued according to the length of their bodies, ears, noses, tail, and hair; the longer the better, without reference to quality or substance, just like some Devonshire squires of 500 ragged acres, who valued themselves on the length of a pedigree

unilluminated by a single illustrious name or action. 'They were of no particular color or character; but within the last 40 years they have been improved perhaps more than any other stock, by judicious crosses and importations.' Within the last 20 years a good deal of Mr. Fisher Hobbs' stock (Essex) has been introduced, and seem well adapted to the climate. The Berkshires are also much approved. Mr. George Turner's stock 'are black, with short faces, thick bodies, small bone and but little hair, and exhibit as much good breed, shape, and constitution as any tribe of pigs in the kingdom, and have won as many prizes at the breeding-stock shows of the Royal Agricultural Society.'

"At 18 months old they generally make from 18 to 20 score—360 pounds to 400 pounds, sinking the offal.

"Some of the original breed of the country may still be seen in parts of North Devon; they will jump a fence that would puzzle many horses and some hunters. But taken as a whole, the pig stock of Devonshire is far above the average of other counties; the black pig being, perhaps, the only foreigner who has ever been cordially welcomed as a settler in that very exclusive county.'

DORSETS.

"Dorset,' says Mr. Sidney, "has no reputation as a pig-breeding country; but one breeder, Mr. John Coate, of Hamoor, has achieved a reputation for his Improved Dorsets, by winning, amongst other prizes, the gold medal for the best pen of pigs in the Smithfield Club Show not less than five times, viz., 1850, 1851, 1852, 1855, and 1856.

"Mr. Coate writes me that he purchased, about '20 years ago, a boar and sow in Somersetshire, of a breed said to have been sent from Turkey. They resembled, in some measure, the wild boar, (according to this description, they did not in the least resemble any wild boar I have ever seen.—S. S.), being short on the leg, with very

long, wiry hair, black in color, and very inclined to fatten. I was led to believe it was a mixture between the wild boar and Neapolitan breeds. I crossed them with some Chinese I had, and by so doing, *both ways*, produced the animals I named, when first exhibited, the 'Dorset breed,' although not properly; but they had, from their beauty, previously found their way into many farm-yards in the county. I had two distinct breeds to begin with (Mr. Coate means, I presume, the Chinese-Turks and the Turk-Chinese,) which I kept pure a long time for crossing;

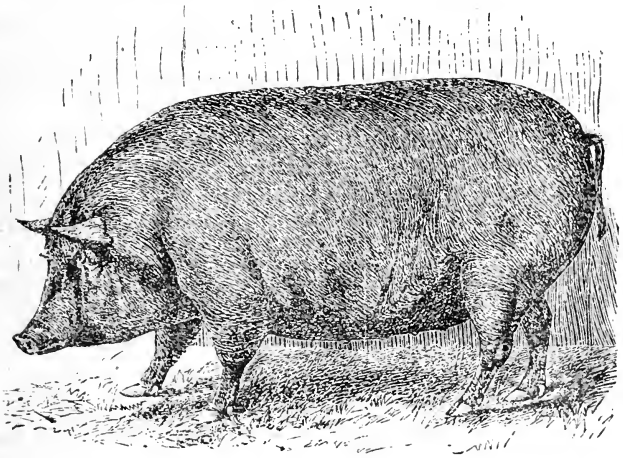

Figure 22.—"EMPEROR." IMPROVED ESSEX.

but as both wore away, have used my own stock as far akin as possible, and have once or twice introduced fresh blood by getting a boar as much like my own as I could. I have tried crosses with other breeds, but not liking the offspring, got rid of them again. Crosses answer well for profit to the dairyman, as you get more constitution and quicker growth; but for me, who sell a great number of pigs for breeding purposes, I find it will not do, as it requires many years to get anything like purity of blood

again. With all animals, the first or second cross is good; but if you ever get away from the pure breed, it requires years and great attention to regain it, as the cross often shows itself in color or shape years after it has taken place, when you fancy you are quite safe.'

"There is no manner of doubt that Mr. Coate's Dorsets have been improved by a strong cross of Mr. Hobbs' improved Essex. Experienced pig judges tell me that they carry the relationship plainly in their faces; and this would be a safe cross, both being derived from Neapolitans.

"But Dorset, as a county, is so far from being celebrated for pigs, that one of the greatest dairy farmers, who feeds whole herds, writes me: 'All I know is, that our breed of pigs is very bad.'

"They are, for the most part, black and white, of a Berkshire character. The ancient Dorset pig is said to have been blue, perhaps the original of the blue boar. One well-known parish in Dorset is called 'Toller Porcorum.'"

Mr. Sidney certainly deserves credit for the boldness with which he endeavors to classify the different breeds of English pigs. It is not an easy or an agreeable task.

It would seem from the facts given above that the White Breeds are decidedly of a mixed origin. The Yorkshire breeders furnish pedigrees, but if we may judge from the specimens given, these pedigrees, when analyzed, show conclusively that the breeders who have been most celebrated as prize-winners, have found it desirable to resort to an occasional cross. They have aimed to produce a pig that will grow rapidly and fat at an early age. In other words, they have aimed, as breeders, to produce what we want as feeders. This we think a mistake. The object of the breeder should be to produce a pig which, when crossed with common sows, will produce the best pigs for fattening.

Agricultural Societies will not allow a grade Short-

horn, or a grade Hereford, or a grade Devon, or a grade Ayrshire, to compete with a thorough-bred. But both in England and America pigs are shown without reference to pedigree; and as long as this is the case, the breeders of thorough-bred pigs receive injury rather than benefit from these exhibitions. None but thorough-breds should be allowed to compete with thorough-breds. The import-

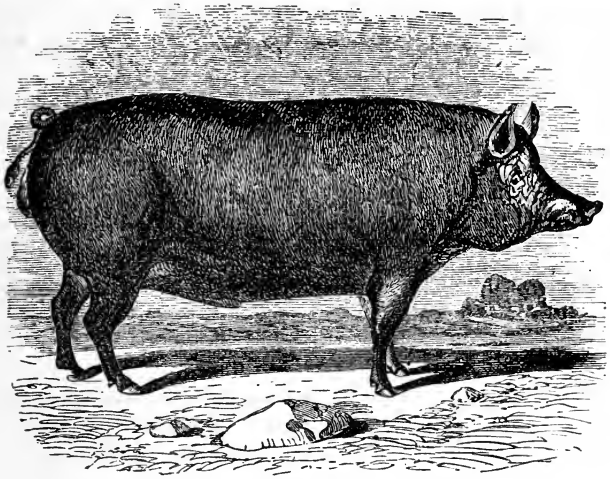

Figure 23.—LORD WESTERN ESSEX,

ance of "pedigree" is admitted, but the Societies do not insist upon it, and the consequence is that nearly all the prizes go to grade pigs, or to some recently made-up breed.

If one of these successful exhibitors of made-up breed is a conscientious man, he endeavors to keep his pigs pure, and every year they become more valuable for the purpose of improving common stock, but less likely to take a prize. Mr. Mangles' York-Cumberlands, of which we give a beautiful portrait, are as handsome pigs as can be desired; but if kept pure for a dozen generations, they will be no better than they now are for "show" purposes;

in fact, they will probably not be as good. Some newly made-up breed, with equal refinement, but with stronger digestive organs, will take on fat more rapidly and will win the gold medal—as they themselves did when not half as valuable for the purpose of improving ordinary stock as they now are.

We cannot better conclude this account of the English breeds than by copying the following remarks from Mr. Sidney's book:

"It will be right to say a few words about two or three county pigs of no particular merit, but which, nevertheless, are familiar in our mouths as household words. For instance, there is the HAMPSHIRE HOG—a name used, very unjustly, no doubt, to designate a county man as well as a county pig. There are some very pretty things to be said about the herds of swine in the New Forest, but they have been said so often that they are scarcely worth repeating. The county animal is black or spotted with red, about the size of a Berkshire, but coarser, and has had less attention paid to its improvement. There are also a considerable number of white pigs in Hampshire. Like every other breed within reach of a good market, they have been much improved within the last 20 years; but no Hampshire man has made himself celebrated as a pig-breeder, and I cannot find any instance of Hampshire pigs taking prizes at the Smithfield Show; therefore, it may be concluded that, although the county abounds in useful animals, it is not worth while to resort to it either for establishing a new or improving an old breed. Of his class, the Berkshire is a better animal than the dark Hampshire hog, both having, when unimproved, a want of thickness through the shoulder, which has been corrected by a cross of Neapolitan or Essex, and both are slow feeders.

"The LINCOLSHIRE PIG cannot now be distinguished from Yorkshire. At the Lincoln Royal Agricultural Society's Show, the prizes were easily carried away by Berk-

shires; but that proves nothing, as some judges never give a prize to a white pig, and others never to a black one.

"The SUFFOLK, a white pig, once appeared frequently in the catalogues, and in the prize-lists of the Smithfield Club Show, but of late years it seems to have given way to more popular names. Suffolk has a leading breeder of pigs in Mr. Crisp, of Butley Abbey; but he breeds both black pigs and white pigs, and calls his black pigs Suffolks, being a sort of cosmopolitan breeder, a purchaser of the best pigs he can find of any color. His most cele-

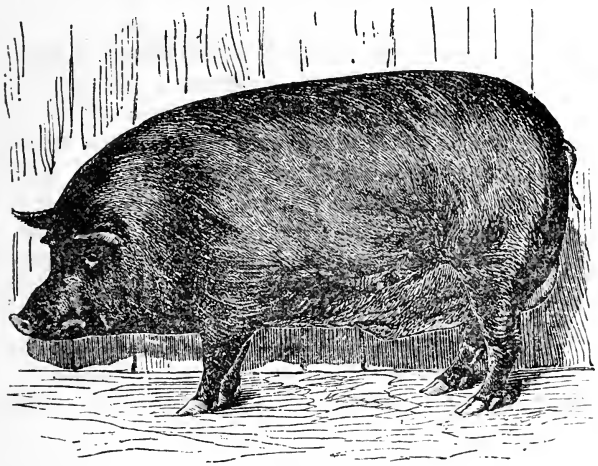

Figure 24.—ESSEX BOAR.

brated pigs are quite black. Mr Barthropp, of Cretingham Rookery, celebrated for his Suffolk horses, but not a pig-breeder, writes of the swine of his native county in terms which might be applied to almost every district not distinguished by a thorough-bred sort. 'The old Suffolks were white, with rather long legs, long heads, flat sides, and a great deal of coarse hair; they made good bacon hogs, but were not so well adapted for pokers as the present improved Suffolks are. These are the white,

with short heads, long cylindrical bodies upon short legs and fine hair, which breeders try to get long, fine, and, thin. These are the best Suffolks; but there are a great many about the county, the result of crosses with the black Essex, which have 'no character, although they are useful animals.' The best Suffolks, as before mentioned, are Yorkshire-Cumberlands, that have emigrated and settled in Suffolk, and thence been transported to Windsor.

"The NORFOLK PIG, as described by Youatt, is, according to the report of one of the best farmers in the county, 'an indescribable animal, the result of the mixture of many breeds in a *hocus pocus* or *porkus* style; and although they have improved of late years, the county stands very low in that division of live stock.' 'They really are (writes another Norfolk farmer) a disgrace to our county. The only thing to recommend them is, that they are great breeders. If they would have three or four less, and better quality, it would pay better.' In the days of the first Earl of Leicester, he had, of course, some good pigs for the time, and they then found their way into book, and haye remained there ever since. The only noted pig-breeder in Norfolk cultivates the improved Ber k shire.

"BEDFORDSHIRE cannot boast of a county pig, but a pig was bred at Woburn, white, with occasional brown spots, which I have the very best Bedfordshire authority for saying, was 'a good sort of pig, without any particular character, good feeders, but bad swillers, and they were therefore allowed to die out, and replaced by Berkshire sows, crossed with Suffolk boars. Indeed, the Bedfordshire breed were so little known, that a tenant of one of the first-class farms of that county told me that 'he didn't know that they had a breed until he saw it marked over one of Prince Albert's pens, about 10 years ago, at the Smithfield Club.'

"At present a white breed is the most fashionable, which means salable, in Bedfordshire.

"Another very eminent Bedfordshire farmer says: 'The breed of pigs in this country is wretchedly bad, and has been ever since I have known it.'

"A third writes me: 'The Woburn breed, described by Youatt, was a good sort of pig, of no particular character, except great aptitude to fatten. They were discontinued in consequence of the sows being very bad sucklers, in favor of a cross-bred animal, the produce of Berkshire sows and white Suffolk boars, the best that could be

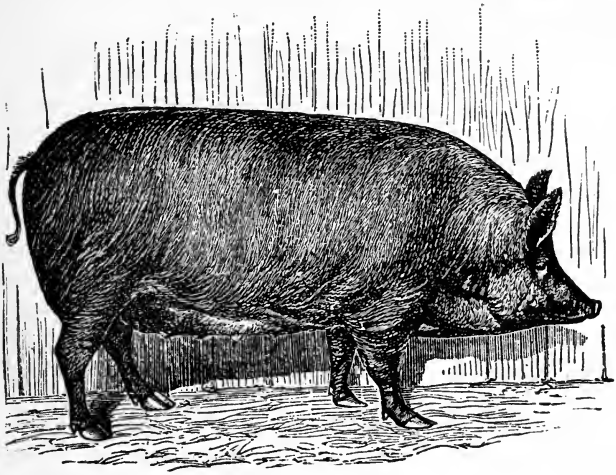

Figure 25.—ESSEX SOW.

got. These are prolific, of good quality, can be fed at any age, and to a fair medium weight. A cross like this pays the farmer best.'

"Herefordshire has a useful white pig, but no attention has been paid to it.

"The dairymen in Cheshire breed and buy a great many dark pigs, black, black-spotted, and red-and-black, of the Shropshire and Welsh breeds, using Berkshire boars, and also Manchester or Yorkshire boars.

"A tenant of R. Egerton Warburton, Esq., of Arley

Hall, writes in answer to a set of questions which that gentleman was kind enough to circulate among his tenants:

"'There is no distinct Cheshire breed. The pigs are mostly cross-bred, short-eared, and long-sided. The favorite breed is a cross between Berkshire and Chinese.'

"The Shropshire, of which great numbers are introduced into Cheshire by traveling pig-jobbers, are of a dark red-and-black color, long-snouted and lengthy; not very fine in the coat.

"The Welsh pigs are generally a yellow-white, but some are spotted black-and-white.

"The (Cheshire) dairymen depend more on these Welshmen and proud Salopians than on breeding. The cross of the Manchester boar with the Shropshire and Welsh produces a larger and coarser breed than the small Yorkshire.

"The Cheshire farmers buy in their stores at about 16 weeks, feed them from 8 to 12 months, and sell them weighing from 240 to 300 pounds. These are considered in Cheshire the best selling weights for bacon. I observe that the farmer who uses most Welsh pigs keeps them 12 months, and sells them at 300 pounds, which will scarcely pay for 4 months more keep than the Yorkshire, Manchester, and Shropshire sold after 8 months.

"An immense improvement has taken place in Cheshire pigs within the last 30 years, in quality and weight. They are made fat at least 6 months sooner than 30 years ago.

"One farmer says few or no Irish pigs are brought into Cheshire; another, a good many, but not many as formerly. The great importation is of Shropshire and Welsh. Yet a county member, who ought to be an authority, writes me that 'Shropshire cannot boast of a county pig.'

"As a general rule, dark pigs would seem to be in favor on English dairy farms.

"The MIDDLESEX is a name which has become known from winning prizes at the Smithfield Club in 1841, 1848, 1850, 1851, 1854, 1856. It is not a county pig, but of the same class as the Windsor. Mr. Barber, of Slough, Buckinghamshire, is the principal breeder and exhibitor of Middlesex. Captain Gunter used to show it before he settled permanently in Yorkshire.

"The NOTTINGHAMSHIRE BREED, whatever that may be, has won one prize in Baker-street, and the Warwickshire crossed with Neapolitan two, many years ago.

CHAPTER X.

FANCY BREEDS.

"By fancy breeds, I mean pigs named after a person or place. The prizes awarded to pigs at the Smithfield Club Shows are a very good evidence that the breed, if a breed, had good feeding qualities, although it may not have been suited for the ordinary work and treatment of a farm. Cross-bred animals have had the greatest success Pure Essex and Berkshire, and large Yorkshires, have not met as much success as at breeding stock shows. The most successful animals at Smithfield have been cross-bred. The prize-winning white pigs, under whatever name, have all had a large dash of Cumberland-York-Leicester; the black pigs, of Neapolitan-Essex.

"Among the most successful exhibitors at the Smithfield Club Shows, has been H. R. H., the Prince Consort, with what has lately been called *the Windsor breed.*

"This is a white pig, the result, apparently, of many crosses, the prevailing blood being small York-Cumberland. Thus, H. R. H. won, according to printed prize-list, in

1846, with Bedfordshires.
1847, " Bedfordshire and Yorks.
1848, " Suffolks.
1849, " Suffolks.
1850, " Yorkshires.
1851, " Bedfordshire and Suffolks.

(These were, all but one, second prizes.)

1863, with Suffolks.

(First prize and gold medal for best pen of pigs in any class.)

1854, with Windsors.

"And since that time only the breed has been called Windsors. His Royal Highness took a first prize in small boars at Warwick with his Windsor breed, and a commendation for a Berkshire sow.

"It is a tribe greatly in demand among gentlemen pig-breeders, and crosses admirably with strong country sows.

"The COLESHILL is a white pig, closely connected with the York-Cumberlands bred at Coleshill, by the Earl of Radnor, who had stock from Earl Ducie, who had stock from Mr. Wyley, of Bransby, Yorkshire, and Mr. Brown, of Cumberland, for more than 20 years. The Coleshills, between 1847 and 1850, had great success at the Smithfield Club Shows; since that time, they seem to have somewhat lost their reputation, and two of my Yorkshire correspondents describe them as 'toys.' 'At one time they were of a good size, but they have by no means maintained the even character that would entitle them to the name of a breed.' When any of Lord Radnor's stock pass into other hands in England, the produce generally ceases to be called Coleshills. They became Suffolks, Yorkshires, Middlesex, according to the fancy of the breeder. They are esteemed, and much better known among the fashionable pig-breeders in France than in England, and there their opponents term them 'drawing-room pigs'—(*cochons de salon*). The Coleshills carried off first prizes and gold medals at the Smithfield Shows in 1846 and 1849, and second prizes in 1844, 1845, 1847, and 1850.

"The BUSHEY BREED are white, bred by the wealthy banker, Mr. Majoribanks, and were long called Yorkshires, and have recently been named after their place of

birth. They have no distinctive character to distinguish them from their competitors.

"The BUCKINGHAMSHIRE took the first Smithfield prize in 1840, but in these and many other names it is difficult to find any distinctive character.

"This is additional evidence, if any were needed, that the most successful prize-winners resort to crossing. The whole system of awarding prizes to pigs needs a thorough revision. As it now stands, it is simply a means of enabling breeders to sell highly fed, cross-bred 'toys' at high prices. The "Prince Albert Suffolks," which we now learn are nothing but high-bred grades, have been introduced into the United States. Perhaps the writer has less cause than he supposed, to regret that one which he kept until four years old, finally found her way to the pork barrel without ever breeding a single pig.

CHAPTER XI.

BREEDS OF PIGS IN THE UNITED STATES.

"We have no 'native' American pig. Our stock originally came from Europe, and principally from Great Britain. And it is highly probable that the largest and best specimens of the period were brought over by the colonists; and as improvements were afterwards effected in England, good animals of the improved breeds were imported.

"Attempts have also been made to improve our pigs by using Chinese boars and their crosses; and there can be no doubt that individual breeders in this way succeeded in effecting a great improvement in the early maturity and fattening qualities of their stock. But although these attempts attracted considerable attention at the time, the pigs so obtained were never generally popular. They were too small and delicate for the prevailing taste of the period.

"In 1832, the Improved Berkshires were introduced into the United States, and soon attracted the attention they so well deserved. In the course of half a dozen years, they were introduced into nearly every State in the Union. Breeders became excited. The agricultural papers were filled with communications extolling the merits of the Berkshires—and after a careful perusal of these

articles at this time, we find that the statements were not as highly colored as might have been expected. As a rule, the pigs were quite as good as they were represented to be. It was hardly to be expected that breeders should say to intending purchasers, 'It is of no use for you to get a well-bred pig unless you are prepared to give it better treatment than you do the common sort.' The trouble was not in the pigs, but in the farmers. Berkshires were fully as valuable as the breeders claimed, and yet a great

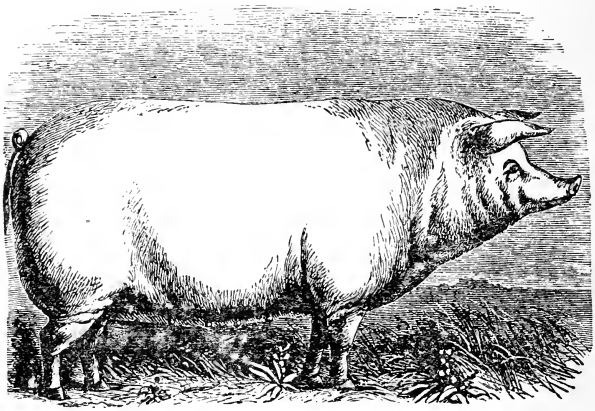

Figure 26.—CHESTER COUNTY WHITE.

and wide-spread disappointment soon manifested itself. For a time the supply was not equal to the demand, and doubtless hundreds of pigs were sold as 'pure Berkshire' that were nothing but grades. But the general complaint was that the Berkshires *were not large enough*. The advocates of the breed met this complaint by statements of weights, giving many instances where the Berkshires and their grades dressed 400 pounds at a year old, and that at 18 or 20 months old, they could be made to weigh 500 or 550 pounds, dressed. One of the prominent breeders stated that he had a thorough-bred Berkshire

that gained 496 pounds in 166 days, and when killed, dressed 626 pounds.

"To meet the demand for large pigs, fresh importations were made of the largest Berkshires that could be found in England. One boar, 'Windsor Castle," imported in 1841, by Mr. A. B. Allen, it was claimed would weigh, at 2 years old, when in good flesh, 800 pounds. At the same time, Mr. Allen deprecated the prevailing taste for such large hogs, and very justly argued that smaller pigs, with less offal, would mature earlier and fatten more rapidly on a given amount of food. But then, as now, the demand was for the largest pigs that could be found, and it is said that this very boar was afterwards sold to a gentleman in Ohio for $1,000.

"But the excitement soon began to abate. Farmers who had paid $50, $100, and, in one instance we have met with, $250, for a single pair of Berkshires, found that their neighbors did not like the looks of the new comers. Ordinary pigs were selling at from $1 to $3 per cwt., and few could be persuaded to pay even $10 for a pair of thorough-breds. Thus ended the Berkshire excitement. The reaction was so great, that for years afterwards there were farmers who would not have received as a gift the best Berkshire in the world. And to this day, thousands who do not know a Berkshire pig when they see it, have a very decided prejudice against the breed.

"A few years later, the Suffolks were introduced by the Messrs. Isaac & Josiah Stickney, of Boston. These gentlemen unquestionably procured the best specimens of the breed that could be purchased in England, and they bred them with great care and skill. Other importations were made, and the Suffolks have probably been more extensively diffused throughout the New England, Middle, and Western States than any other improved English breed.

"About the same time, the Improved Essex were introduced, but, being entirely black, they never became

popular in the Northern States. They are principally in the hands of our large stock breeders, and other gentlemen of wealth, but are rarely found on ordinary farms. Being in the hands of men knowing the value of pedigree, they are probably, to-day, as '*pure-bred*' pigs as can be found in the United States or in England.

"The large Yorkshires were introduced soon after the breed became noted in England, and importations have been made from time time. But no special efforts have been made to create an excitement in regard to this breed, and it has not been extensively diffused. The small Yorkshires, or Prince Albert Suffolks, were introduced about

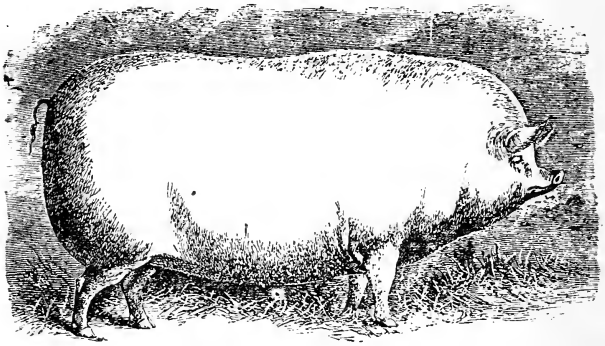

Figure 27.—JEFFERSON COUNTY PIG.

10 years ago, and, for a time, attracted considerable attention. But they are not favorites with the majority of farmers.

"The above comprise the principal English breeds that have attracted any special attention in this country, and before alluding to breeds originating in the United States, it may be well to inquire why these valuable English breeds have never been favorites with the generality of our farmers?

"That these breeds are not now, and never have been popular, is unquestionably a fact. Except some kept by

the writer, we do not know of a single thorough-bred Berkshire, Essex, Suffolk, or Yorkshire pig within 10 miles, and it is doubtful whether there are any in the county, although they have been repeatedly introduced. As a general rule, these thorough-bred pigs are kept only by persons who raise them to sell for breeding purposes. They are not kept for the sole object of making pork. For the latter purpose they are seldom as profitable as the offspring of a good common sow and a thorough-bred boar.

"The handsomest pigs we have ever seen were so obtained; and one would think that farmers, seeing such a result, would continue to use thorough-bred boars. But such is seldom the case. They prefer to use one of these large handsome grades, rather than the smaller and more refined thorough-breds, and in this way the beneficial influence of the improved blood is soon lost.

"We think this is the principal reason why these highly-refined English breeds are not favorites with ordinary farmers. Their real value consists in their perfection of form, smallness of bone and offal, and the great development of the ham, shoulder, cheeks, and other valuable parts; and added to this is their ability to transmit these qualities to their offspring. This ability is in proportion to their purity, and hence the value of pedigree. When one of these pure-bred boars is put to a good grade or common sow, we get precisely what we want—pigs having the form, the refinement, the early maturity, smallness of offal, and tendency to fatten of the thorough-breds combined with the vigor, constitution, appetite, and great digestive powers of the larger and coarser sow. In other words, as far as the production of pork is concerned, we get a perfect pig—and there the improvement ends. We have attained our object, and all that we have to do is to repeat the process. To select boars from these grade pigs and to use them in hopes of getting something better is mere folly. It can lead to nothing but disappointment,

and yet this is the common practice of those who are, once in a while, induced to try the thorough-breds. They soon find themselves possessed of a stock of non-descript pigs, none of them equal to the first cross, and some of them inferior to the sow first put to the thorough-bred boar. Then we hear complaints of the 'degeneracy' of the improved breeds, when, in point of fact, no sensible man could expect any other result. Another cause of the unpopularity of the thorough-bred English pig is, the wretched treatment to which they are often subjected. When we first commenced keeping thorough-bred pigs, a farmer of the neighborhood who, some years before, had paid a high price for a pair of Suffolk pigs, and who failed to raise a single thorough-bred pig from them, remarked: 'You will soon get tired of this business. I have tried it. They won't breed. You are keeping them too fat. The only way to treat them is to turn them to a straw stack, and let them live on that.' The fact that *he* never raised a pig from his sow did not commend his treatment, and we continued feeding our pigs sufficient food to keep them growing rapidly, and have had no cause to regret it. The only sow that has ever failed to breed with us was a Prince Albert Suffolk, purchased in the neighborhood from a farmer who had probably tried the 'straw-stack' mode of feeding.

"The aim of a good breeder of pigs is to get a breed that will grow rapidly and mature early. And the better the breed, the more rapidly they will grow. But the best stove in the world cannot give out heat without a supply of fuel; neither can the best-bred pig in the world grow rapidly without food; and the more thoroughly the power to grow rapidly has become established by long and careful breeding, the less capable does the pig become to stand starvation. It may sometimes be necessary to starve a pig for a short time when it has become too fat. In this case the pig gets food from its own fat and flesh, and sustains no permanent injury. But to starve a young

growing pig is always injurious—and the more rapidly the pig is designed to grow, the more detrimental and permanent will be the effects of such treatment. The handsomest lot of white pigs we have ever raised were from a sow got by a thorough-bred Earl of Sefton (Yorkshire) boar. She was a very large sow, and not coarse for her size. This sow we put to a thorough-bred highly, refined Prince Albert Suffolk, and had a litter of 'beauties.' There was not a poor pig among them, and they were so uniform that it was difficult to tell one from another. The sow had been liberally fed, and at the time of pigging was very fat, and we continued to feed her and the little ones all they could eat The result was a lot of pigs that we have never seen excelled. Encouraged by this result we purchased from a neighbor, at an extra price, a litter of pigs got by the same thorough-bred boar, and at the same time another litter of common pigs from another neighbor. Both litters ran together, had the same food and treatment, and the common pigs did better than the grade Suffolks.

"The grade Suffolks were, in fact, decidedly poor pigs —a very different lot from the pigs from our own sows; got by the same boar. One cause of the difference must probably be assigned to the fact that the sow was not as large or as good as ours, and was not as well fed. And another reason for the difference was, the pigs, for the first two months, had not had all the food they were capable of eating. They never recovered from this neglect, and the common pigs were a stronger, more vigorous, and healthier lot, and ultimately made much the heaviest pork. If we had had no other experience than this, we should certainly condemn thorough-bred pigs. But we *know* the fault was not in the breed, but in the treatment that the sow and her young litter had received. Common pigs are better than improved pigs that have been injured, while young, by neglect and starvation, but the improved pigs, if the mother has been liberally fed, and

they themselves are allowed as much food as they require to grow rapidly, will be found altogether superior to the common pig, and vastly more profitable.

"To say that, up to the time they shut them up to fatten, the majority of farmers half starve their pigs, will not be considered too strong an assertion by any one who has turned his attention to the subject. And this being the case, it is very evident that the improved English breeds cannot be popular—and the same is true of all other improved breeds of animals. We must adopt a better system of farming before we can hope to see the improved breeds of cattle, sheep, and pigs generally introduced and fully appreciated. Improved breeds necessitate improved farming, and improved farming cannot be very profitable without improved breeds, improved seed and improved implements. To tell a poor farmer that 'it is just as easy to raise a good animal as a poor one,' is telling him what, in his case, is not true. If he thinks he can do so merely by buying one or two improved animals to start with, he will soon find out his mistake. He should first improve his farm, adopt a better system of feeding and management, and then he will find it nearly as easy to raise good animals as poor ones, and vastly more profitable.

CHAPTER XII.

BREEDS MOST POPULAR IN THE UNITED STATES.

"We are now prepared to consider the breeds of pigs which are most popular in the United States, and may be able to discover the cause of their popularity.

CHESTER COUNTY WHITE PIGS.

"The most popular and extensively known breed of pigs in the United States at this time is, unquestionably, the Chester County breed, or, as they are generally called, the "Chester Whites." The rearing and shipping of these pigs have become a very large and profitable business. One firm alone in Chester Co., Penn., informs us that, for the last 3 or 4 years, they have shipped from 2,500 to 2,900 of these pigs each year, and many other breeders have also distributed large numbers of them.

"There are several reasons why the Chester Whites [Figure 26] are more popular than the English breeds. In the first place, they are a large, rather coarse, hardy breed, of good constitution, and well adapted to the system of management ordinarily adopted by the majority of our farmers. They are a capital sort of common *swine*, and it is certainly fortunate that they have been so extensively introduced into nearly all sections of the country. Wherever Chester Whites have been introduced, there will

be found sows admirably suited to cross with the refined English breeds. No cross could be better than a Chester White sow with an Essex, Berkshire, or Small Yorkshire thorough-bred boar. We get the form, refinement, early maturity, and fattening quaalities of the latter, combined with the strong digestive powers, hardiness, and vigorous growth of the Chester Whites. If the first cross does not give pigs possessing sufficient refinement, and early maturity, a good, thrifty, well-formed sow should be selected from the litter and put to a thorough-bred boar, and this second cross will, so far as our experience goes, be as refined as is desirable for ordinary farm pigs. When the pigs are to be killed at 4 or 5 months old for fresh pork, a sow may be selected from this second cross, and again put to a thorough-bred boar. This is probably as far as it is desirable to carry the refining process. The pigs from this third cross would have 87½ per cent of thorough-bred blood in them, and so far as the production of pork is concerned, would be more profitable than the thorough-breds.

"We think this is the proper use to make of the Chester White pigs. They have many excellent qualities. They are large, hardy, strong, vigorous, have good constitutions, breed well, and are good mothers. Whether, as a breed, they are *thoroughly established*, is rather doubtful. There are probably families among them that have been bred long enough to permanently establish their good qualities. But it is certain that many Chester Whites have been sent out that produce litters, the pigs of which differ from each other as widely as the litters of common sows—and far more widely than the litter of a common sow put to a thorough-bred boar.

"Paschall Morris, of Philadelphia, who had bred Chester Whites for many years, and who is thoroughly acquainted with the breed, describes them as follows: 'They are generally recognized now as the best breed in this country, coming fully up to the requirments of a far-

mer's hog, and are rapidly superseding Suffolks, Berkshires, and other small breeds.

"The best specimens may be described as long and deep in the carcas, broad and straight on the back, short in the leg, full in the ham, full shoulder, well packed forward, admitting of no neek, very small proportionate head, short nose, dish face, broad between the eyes, moderate ear, thin skin, straight hair, a capacity for great size and to gain a pound per day until they are 2 years old. Add to these, quiet habits, and an easy taking on of fat, so as to admit of being slaughtered at almost any age, and we have what is considered in Chester County, a carefully bred animal, and what is known elsewhere as a fine specimen of a breed called 'Chester County White.' They have reached weights of from 600 to 900 pounds.

"We have recently heard of a case where a farmer in the West had purchased some pigs from Chester County, and wrote back that part of them were full-blood, part half-blood, and part no Chesters at all. We know of another case where a purchaser insisted that a pig from Chester County was half Suffolk.

"There is considerable misapprehension about the Chester County breed, so-called. It is constantly forgotten that it is not an original, but a made up breed. They differ from each other quite as much as any one known breed differs from another. We have often seen them,—and the offspring, too, of good animals,—with long noses, which would root up an acre of ground in a very short time, slab-sided, long-legged, uneasy, restless feeders, resembling somewhat the so-called race-horse breed at the South, that will keep up with a horse all day on taking much trouble to go through it. They show more development of head than ham, and as many bristles as hair, and are as undesirable a hog as can well be picked up. Any traveler through Chester County can see such specimens continually. The standard of excellence in all animals, no matter how high or how pure may be the breed, so-

called, is only to be kept up by judicious care in feeding, breeding and management. If either is neglected, they are sure to run out, and go down hill. With swine most especially, 'the breed is said to be in the trough.'

"When persons speak, therefore, of a pure Chester hog, or a half-blood, or a quarter blood, we consider it only absurd. There is no such thing. By an original breed is meant, one that has been long established, and of which there are peculiar marks and qualities by which it has been long known, and which can be carried down by propagation. Such is the Devon cow and the Southdown sheep The difference in results between an original and a recently made up breed may be compared to that between a seedling and a grafted variety of fruit. If the seed of a very fine pear or apple is planted, there is no certainty, perhaps no probability, that the fruit will be the same as the parent. A graft of the parent tree, however, always produces the same. The results of the other are accidental. The law of breeding domestic animals, that 'like produces like,' applies more certainly to distinct and original breeds, like Devons or Southdowns, than to a made up breed of recent origin, like the Chester County hog. The owner of a very fine animal, who, for several years, has been selecting his stock carefully, and feeding them liberally, has the chances greatly in his favor that 'like will produce like,' but there are very often to be seen very poor specimens from good parentage, and also very good individual animals from very inferior parents. We have one now which, at a year old, will not weigh over 250 pounds; she is the offspring of large and well-shaped parents. In adjoining pens are others which, at the same age, will weigh about 400 pounds. The hair, sometimes, is straight, at others, waved or curly. The ear is often small and erect, then again large, thick, and lopped, like that of an elephant. Blue spots often appear on the skin, and sometimes black spots on the hair. These and other great variations, in external form and

other qualities show that the Chester County pig represents his individual self, and is not a type of a well established breed.

"In the best specimens there are, however, a contribution of more valuable points than belong to any other. As Ellman and Webb and Bakewell did with sheep, and with a far less favorable starting point, it is hoped some one may be found to take up the Chester County hog, and, by a persevering course of careful selections, breed him up to a still higher standard, and give him a more definite type and character.

"Any one can do this for himself, but the constant variations in their appearance would seem to show that it has not yet been done by any one. An impure Southdown lamb cannot be produced from a full-bred dam and sire; and yet a misshapen and ill-shaped pig is sometimes produced from what are called 'pure Chesters.'

"Coming from a distinguished advocate and breeder of Chester County pigs, this statement is as candid as it is explicit. We may take it for granted that the Chester Whites are not an established breed, like the Berkshires or Essex. They will not breed true. This would not be so very objectionable in itself, but it follows that, when we wish to improve our common stock, we should not resort to a Chester County boar. It is an axiom in breeding that we should use nothing but thorough-bred males. Chester County sows, when judiciously selected, are far superior to our ordinary run of pigs, and this breed will long continue valuable for the purpose of furnishing good breeding sows to cross with some good thorough-bred boar of the English breeds.

"And it may be, as Mr. Morris suggests, that we shall be able to so improve the Chester County pigs by such 'a persevering course of careful selections,' as to give the breed a better and 'more definite type and character,' and to so thoroughly establish these characters, that we may use the boars with a reasonable prospect of improv-

ing any common breed with which they are crossed. Until this is done, however, it will be a mistake to use Chester County boars, except for the purpose of obtaining large, vigorous sows, to be crossed with some thoroughly established breed.

"The 'Hog Breeders' Manual,' a little work published in the interest of Chester County pigs, says: 'The Chester and Suffolk make a very fine cross. If a new breed could be made by crossing these two breeds, and continuing, and the offspring were a uniform mixture of the two, I should consider it the maximum of perfection.'

"In other words, the Chester Whites are too coarse, and need to be refined by crossing with some of the thorough-bred English breeds. This is undoubtedly true; and coming from a prominent breeder of Chester Whites, may be regarded as decisive on this point. But why should a farmer wish for a 'new breed' when, by using a thorough-bred Suffolk boar on a Chester White sow, he can attain at one step the 'maximum of perfection?' True, he cannot breed from these perfect pigs. He cannot hope to make them 'more perfect;' but by continuing to use thorough-bred boars, he is always sure of obtaining good pigs. What more is needed? We think it would be a mistake if the Chester White breeders should refine their pigs too much. The chief value of the breed consists in its size and vigor, and in furnishing strong, healthy sows, to be crossed with thorough-bred boars of a refined breed. There is no object to be gained by refining, or, in other words, reducing the size and vigor, of the Chester Whites.

"CHESHIRE" OR JEFFERSON COUNTY PIG.

"This breed of pigs originated in Jefferson County, N. Y. For a dozen years or more they have been exhibited at the Fairs of the New York State Agricultural Society, and for the last 6 or 7 years have carried off nearly all the prizes offered for pigs of the large breed. They were first exhibited, to the best of our recollection, under

the names of "Cheshire and Yorkshire," and afterwards as "Improved Cheshires," and in 1868, one of the largest breeders exhibited them as Improved Yorkshires. These different names, in different years, indicate the nature of the breed. They have been very extensively distributed throughout the country, and especially in the West, under the name of 'Cheshires.' It would be better,we think, to call them the 'Jefferson County' pigs, as indicating the place rather than the nature of their origin. The latter is uncertain, while there can be no doubt that Jefferson County is entitled to the credit of establishing a very popular and valuable breed of pigs.

"The old Cheshire pig was one of the largest and coarsest breeds in England, but Sidney says 'these unprofitable giants are now almost extinct.' A Cheshire, England, correspondent of this author writes, under date of March 17, 1860, as follows: 'The old, gigantic, long-legged, long-eared pig, of a large patched black and white color, is almost extinct. My son met with a fine specimen last year in a sow which he brought to breed with our boar of the Berkshire small breed, but changed his mind and fed her. She showed no propensity for fattening at 2 years old. She weighed, when killed, 852 pounds; but as 6½ cents was the best we could get for her, we took her for the family, and the meat was surprisingly good. She was lean fleshed· Each ham weighed 77 pounds.

"It is said that a large sow of the old Cheshire breed was taken from Albany to Jefferson County, and about the same time some thorough-bred Yorkshires were introduced into the same neighborhood from England. We have not been able to definitely establish the fact, but it is highly probable that the pigs which were first exhibited at the N. Y. State Fair as 'Cheshire and Yorkshire' were from Yorkshire boars, crossed with the descendants of this sow. The pigs, as we recollect them when first exhibited, were very large, rather coarse, but well shaped. Since then, they have, from year to year, approximated

more closely to the Yorkshires. They are still large, but have finer bones and ears. The best specimens, as shown by the leading breeders, are as handsome pigs as can be desired. Color, white; small, fine ears, short snout, with a well-developed cheek; long and square bodied; good shoulders and hams, and very small bones for such large hogs.

"As compared with the Chester County breed, they are nearly or quite as large, have finer bones, ears, and snout, and are altogether superior in form, beauty, and refinement to any Chester Whites we have ever happened to see. They have doubtless obtained this refinement from the Yorkshires. The leading breeders in Jefferson County admit very freely that the breed is of mixed origin, but it is claimed that they have been kept pure sufficiently long to thoroughly establish the breed. We believe that this, at any rate, has been the aim of some of the breeders. When thoroughly established, the breed will occupy a similar position to pure-bred large Yorkshires. The boars will be useful to cross with coarse Chester White sows, where larger hogs are desired than can be obtained by using Berkshire, Essex, or Suffolk boars.

THE MAGIE (OHIO) PIGS.

"The Hon. John M. Millikin, in his Prize Essay on the Agriculture of Butler County, Ohio, gives an account of a large breed of pigs which have obtained considerable celebrity in some parts of the West. He says:

"No county in the United States, of equal area, has produced so many hogs of superior quality as the county of Butler. The breed which is so highly esteemed by our farmers is the result of careful and judicious breeding, conducted by our best breeders in this county, and the adjoining county of Warren, for the last 40 years.

"The precise history of the method adopted to produce this popular breed of hogs cannot be given as fully and as reliably as its present value and importance de-

mand. The best information, of a reliable character, which can be obtained, gives us to understand that as early as about 1820, some hogs of an improved breed were obtained and crossed upon the then prevailing stock of the country. Among the supposed improved breeds of hogs, there were the Poland and Byefield. They are represented as being exceedingly large hogs, of great length, coarse bone, and deficient in fattening qualities. Subsequently more desirable qualities were sought for, and the stock produced by the crosses with Poland, Byefield, and other breeds, underwent very valuable modifications by being bred with an esteemed breed of hogs then becoming known, and which were called the Big China. They possessed important qualities in which the other breeds were sadly deficient. At a later period, Mr. Wm. Neff, of Cincinnati, an extensive pork packer, and fond of fine cattle and hogs, made some importations of fine stock from England. Among them were some Irish Graziers. They were white in color, of fair size, fine in the bone, and possessing admirable fattening qualities. Berkshires, about the same time, were attracting much attention, and both breeds were freely crossed with the then existing stock of the county. The result of these crosses was highly advantageous in the formation of a hog of the most desirable qualities. The Berkshires had obtained, with many breeders, great favor, while others objected to them, because they thought them too short, and too thick in the shoulder. Neverthless the Berkshire blood was liberally infused into our stock of hogs, but in such a judicious manner as to obviate the objections urged against them, and to secure their conceded good qualities.

"Since the formation period of our breed of hogs, as above stated, there have been no material or decided innovation upon the breed thus obtained. Our breeders have carefully selected and judiciously bred from the best animals thus produced among us. Where defective points have been apparent, they have been changed by

careful breeding. There has not been, for many years, any admixture of other breeds of hogs. Our own breed is now, and has been for nearly 30 years, the stock predominant in this county. Our breeders believe that they have a well established breed of hogs, which is unsurpassed in the most desirable qualities of a good hog. This breed of hogs, although of recent origin, may be regarded as thoroughly and permanently established. They have been bred so long, and with such judgment and uniform success, that they may be confidently relied upon as possessing such an identity and fixity of character as a distinct breed as to give assurance that they will certainly and unmistakably propagate and extend their good qualities.

"They can scarcely be said to have a well-established distinctive name. They are extensively known as the 'Magie stock.' They are sometimes called the 'Gregory Creek hogs,' but more generally they are known as the 'Butler County stock.' It will be doing no one injustice to say that D. M. Magie has bred these hogs as extensively and judiciously as any other man in the county. He has not only bred them for his own use, but also to supply the extensive demand that has been made upon him from all parts of the West and Northwest.

"While we claim that Butler County has more good hogs than any other county in the State, we do not desire to do our neighbors any injustice by appropriating all the credit for this breed of hogs to ourselves. Warren county assisted in the formation and establishment of this breed of hogs. They continue to raise them in their purity and full perfection, and take into the market as fine lots of hogs as have ever been raised and sold.

"In verification of what we claim, we propose to show the averages of hogs sold and delivered to packers—not isolated cases, nor single specimen hogs, but the lots of hogs raised by our farmers and sold in the market. These hogs are usually wintered over one winter, and are sold at ges ranging from 18 to 21 months.

Mr. Magie has made the following sales:

One lot of 63 Hogs	.....	Average weight	.....	444	pounds.
" " " 40 "	.....	" "	.....	417	"
" " " 80 "	.....	" "	.....	433	"
" " " 60 "	.....	" "	.....	400	"
" " " 72 "	.....	" "	.....	413	"
" " 100 "	.....	" "	.....	408	"
" " " 43 "	.....	" "	.....	467	"
" " " 35 "	.....	" "	.....	451	"
" " "120 "	.....	" "	.....	458	"

Thomas L. Reeves sold	39	head,	17½	months old,	averaging	459	pounds.
Jeremiah Beatty	"	35	"		"	438⅔	"
L. Miltenberger	"	35	"		"	449	"
Abraham Moore	"	40	"		"	466	"
William Gallager	"	71	"		"	473	"
" "	the first 22 of same,				"	528	"

"These are individual lots, among many which have been noticed as remarkable for their high average. Although they never have been equalled, so far as the public know, yet some may regard another kind of evidence as more conclusive. To such we submit the following facts, kindly furnished by Mr. Chenoweth, who, for many years, has weighed the hogs packed by Jones & Co., at Middletown, in this county. The hogs there packed are mainly furnished by citizens of this county, and Warren County.

In the season of	1862-3,	there were packed	4,956	hogs,	averaging	305	pounds.
" "	1863-4,	" "	5,538	"	"	276	"
" "	1864-5,	" "	5,370	"	"	282	"
" "	1865-6,	" "	6,003	"	"	345	"
" "	1866-7,	" "	5,013	"	"	335	"

In 1867-8, a dozen of the best lots averaged 459 pounds.

"'These figures,' says Mr. Millikin, 'must decide the superiority of our breed of hogs over all others. To produce such averages, the stock must be of the best quality, and then care and judgment in breeding must be practiced, and good attention given in raising and fattening.'

"It is evident that the Butler County farmers know how to raise and fatten hogs. But it does not follow, from the figures given above, that there is necessarily any special merit in the Magie breed. We know farmers who

take great pride in having heavy hogs, who make them weigh from 450 to 500 pounds at 18 or 20 months old. And yet these very hogs are of such a kind, that no inteligent man, who is acquainted with the merits of the improved breeds and their grades, would tolerate on his farm for any other purpose except to cross with some highly refined thorough-bred boar. We are not acquainted with the Magie hogs, and would not be understood as saying that they are of this kind. They may be the best breed in the world, but the fact that the credit of the breed is awarded to the county, and not to individuals, does not indicate any special and decided characteristics. Breeds do not originate in this way. It is not to the farmers of Leicestershire that we owe the Leicester sheep, but to Robert Bakewell; it is not to the farmers of Durham, but to the Messrs. Collins, that we owe the Durham or Shorthorn cattle. The farmers of Sussex are entitled to no credit for the Sussex or Southdown sheep. Ellman did more to improve these sheep than all the other Sussex farmers had to accomplish in 1,000 years. We owe the Essex hogs to Lord Western and Fisher Hobbs, and not to the farmers of the county—and so it always is. The old Essex pig is one of the worst in England; Fisher Hobbs made it one of the best in the world.

SECOND DIVISION.

DISEASES OF THE SEPARATE ORGANS.

CHAPTER XIII.

INFLAMMATION OF THE STOMACH.

Inflammation of the stomach does not occur very often as an independent or primary affection; but it is usually the result of, or connected with, some other disease.

Causes.—Caustic and irritating substances taken into the stomach. Some corrosive mineral or vegetable poison often prove fatal by causing inflammation, or some foreign substance lodged in the stomach, such as cockleburrs, wheat or rye beards. The drinking of cold water when the hog is very hot is also among the causes.

Symptoms.—In severe cases there is burning pain in the stomach, with constant nausea and vomiting, and a great desire for water. The pain is increased by pressure on the stomach, and by a deep inspiration. The hog can not bear a warm drink, for it will be immediately thrown up; and even cold water, if much is taken, soon produces distress by distending the stomach.

The tongue is either red at the tip and edges, with a whitish fur in the middle, or is red all over.

The bowels are always constipated, unless they are inflamed. The pulse is frequent, small, and corded; breathing short and hurried; skin hot and dry, and the urine highly colored.

If the disease grows worse, the tongue becomes smooth, red, and dry; the skin becomes smooth and pale; pulse more frequent, feeble, and thread-like. The body becomes much emaciated; debility and restlessness increase, and delirium sets in. Hiccough, vomiting of dark colored matter, cold extremities, or a complete cessation of pain, without improvement in other respects, are to be regarded as fatal symptoms.

In milder forms of the disease, of course, the symptoms will be of a milder character also. Milder cases usually yield very soon to proper treatment; but, if neglected, may run on for weeks. In the treatment of this disease the bowels must be opened, and if it cannot be done by cathartics, it must be done by injections; and, as the hog is always thirsty, if it be a grown one, mix about three or four teaspoonfuls of Mandrake, to one quart of water, left in a small trough or vessel for it to drink If it refuses the water, mix the above with one gill of castor oil. Repeat this dose every two or three hours until you have obtained a passage, after which feed some nutritious slops. Nothing but the most bland and least irritating food should be used.

CHAPTER XIV.

BLEEDING FROM THE STOMACH.

This disease is generally known as vomiting blood, and consists in a discharge of blood by the mouth, usually in considerable quantities, attended with vomiting. It may be caused by blows on the region of the stomach or anything that will cause a determination of blood to that organ. It may also arise from ulceration of the stomach Most usually, perhaps, it arises from debility and relaxation of the blood vessels of the inner coat of the stomach.

Bleeding from the stomach may be distinguished from that of the lungs by the discharges being preceded by pain and anxiety in the stomach, unaccompanied with cough. The blood is discharged by vomiting, and in greater quantity. It is also of a darker color, and is usually mixed with the ingesta or food.

If the infection be but slight, a few doses of table salt and vinegar may be sufficient to suppress it. Alum water is good. If this fails, give a strong tea of Beth Root. Bugle weed is good. A strong tea may be given cold from time to time until the discharges of blood have ceased.

CHAPTER XV.

INFLAMMATION OF THE BOWELS.

Inflammation of the bowels is characterized by acute pain in the abdomen, costiveness, more or less fever, and sometimes vomiting.

Causes.—The disease may be caused by obstinate and long-continued costiveness; by wounds and injuries to the intestines; by the eating of some irritating food, or by cold.

Symptoms.—Burning and acute pains in the bowels, usually obstinate costiveness, vomiting of dark billious matter, urine highly colored, pulse quick, hard, and contracted; some fever, thirst, and great loss of strength.

Treatment.—Give one gill of cold-pressed castor oil, with half as much olive oil, and a big spoonful of spirits of turpentine, to grown hog: two big spoonfuls to shoats; half a big spoonful to pigs. Repeat it every two hours until there is an operation. Should repeated efforts prove vain, then use the following injection: Milk, molasses, and salt water, dissolved together, and you will not fail.

CHAPTER XVI.

DIARRHŒA.

The discharges in this complaint are more copious, thin, and watery than in dysentery, and there is much less pain, griping, fever, and tenesmus, or straining at stools. A predisposing cause of diarrhœa, is the eating of green vegetable matter, such as young tender clover and other food, such as green fruit where they may have an opportunity or access to orchard, or any irritating, or indigestible matter, especially where they may not be accustomed to that kind of food. Sour slops will almost universally create this disease among very young pigs, when fed to the sow. Diarrhœa is not as dangerous as dysentery—indeed, seldom dangerous, unless permitted to run too long.

Where the stomach is thus deranged, it will be well to commence the treatment by a good emetic of lobelia, to unload the stomach. The action of the emetic will check the inordinate action of the bowels, produce a determination of blood to the surface, open the pores of the skin, and excite a more healthy action of the digestive organs. I have found in my pretice a good emetic will always render the cure more speedy and certain. Then give to them or in their drink a decoction or tea of black-

berry root and white oak bark. Dose, one quart to grown hog or even one quart to shoats, and to pigs in proportion. Be careful not to check the bowels too quickly. At any time you see the stools change to a healthy color, cease giving the medicine.

If mortification should be apprehended, give a teaspoonful of Wild Indigo (Captista Tenctaria), to pigs; two teaspoonfuls, to grown hogs, every two hours. This is good in all putrid affections.

CHAPTER XVII.

DYSENTERY OR BLOODY FLUX.

This disease usually comes on with a frequent desire to go to stool, and with severe pains in the belly. The stools are usually small in quantity and often mixed with blood. There appears to be some peculiar sensation of bearing down as if the whole bowels were falling out, accompanied with extreme pain.

This disease, which has engaged the attention of so many Medical writers, is more frequent in the autumnal months than during any other season of the year. The animal frame at this time is generally relaxed and debilitated by long exposure to the stimulus of a high atmospherical temperature, when the digestive organs and intestinal canals necessarily partake of this debility, and are more easily irritated than they would be under other circumstances.

Dysentery, occurring in its simple form, generally arises from diet, either in the shape of too rich or some unwholesome food, or in improper quantities; often from exposure as the nights turn cool. After a hot day, the hog, like a person, feels these changes, and their general system becomes affected in like manner by these changes. Dysentery is either direct or sympathetic. The direct

arises from improper diet or food; the sympathetic or indirect causes are those which operate on the bowels through the medium of other organs, chiefly of skin, liver, and lungs.

Remedies.--I have found in this disease, when not accompanied by fever, that simple remedies would relieve it in a short time. Rhubarb, burned to ashes in any old iron vessel, stirred until it turns to a black color or is well burned, is an excellent remedy. Give two teaspoonfuls to a shoat; double the dose for a grown hog, three or four times a day, by mixing it with a little water. Half a gill of castor oil, with one to three or four teaspoonfuls of laudanum, taken once each day, will often be all that is required. In administering the last prescription, be careful as to quantity to pigs—big spoonful of castor oil to 20 or 30 drops of laudanum.

This disease is often very prevalent among hogs, and, in fact, is the disease so widely known as Hog Cholera—the same disease that was reported by Dr. Snow, of Providence, Rhode Island, as reported to the Department of Agriculture, Washington, D. C., in 1861.

A writer in the *Country Gentleman* found a drench of alum-water effective, which is certainly excellent in this disease as an astringent. In fact, almost any astringent in connection with a light cathartic and febrifuge will quiet the bowels.

The most reliable remedy that I have discovered in practice is the following:

Bicarbonate of Soda, 1 pound;
Senna Leaves, ¼ pound;
Seneca Snake Root, (Polygala Senega) ¼ pound;
Red Root (Ceonothus Americanus) ¼ ponnd;
Alum, ¼ pound.

These should be finely pulverized and well mixed, to be fed from two to three times each day until the bowels are checked. It should be fed dry if they will eat it; if not, mix it with water for them.

Dose.—Three teaspoonfuls to grown hogs.
Two teaspoonfuls to shoats.
One teaspoonful to pigs.

Allow them no water without medicine mixed in it, and but little of that.

CHAPTER XVIII.

CONSTIPATION OF THE BOWELS.

Constipation with some hogs, as it does with some persons, becomes a habit, especially through the winter season, where the farmer permits his hogs to bed or lie about old barns, straw piles, and around heaps of manure or any other place of that kind. The hog dislikes the cold, and consequently it keeps its bed, week in and week out, through a long winter of four to six months, emerging from its bed only long enough to swallow its food, then retire again; and thus go on for a week without a single evacuation. The consequence is that before the spring opens, the liver and lungs become affected, constipation and fever set in, and he has a herd of diseased hogs; and constipation becomes the leading cause of other diseases. It then becomes of the utmost importance to attend to this matter strictly.

To prevent your hogs becoming thus constipated, have a lot to feed in separate from the one in which they sleep. Call them from the lot or pen where they sleep into the next before you feed them. See to it that they all come. If there be any missing, drive them out. See that there is not one left, then feed. Close the gate and let them remain out during the day, or, if there should be

cold, sleety rains, hold them out for an hour or two, giving them time to evacuate or urinate before letting them back to their bedding. Also, give them the following prescription, finely pulverized and well mixed:

Bicarb. Soda, 1 pound;
Mandrake, $\frac{1}{4}$ pound;
Scammony, $\frac{1}{4}$ pound;
Blood Root, $\frac{1}{4}$ pound;
Pink Root, $\frac{1}{4}$ pound.

Feed in same proporiton as in former prescription.

CHAPTER XIX.

PROLAPSUS ANI

Is a protrusion of the fundament. Though not a dangerous disease with the hog, if taken in time, it has become very common of late years, and is so well known that it is not worth while to describe it. I might say, however, that it is usually brought about by constipation, and is most generally found among pet pigs where women have the feeding from the offal from the table or gorged with milk, where there is no discretion used in the amount fed, and the intention is to "make the pig spread itself." After the job is accomplished by turning the pig inside out, the fun is up. They take no further interest in it. This disease is easily cured if you will observe the following directions:

Stop feeding until the pig is shrunk, then lay it upon the board or platform, then bathe the protuberance with warm soapsuds until it becomes perfectly soft, then wash it well with a strong solution of Sulphate of Zinc, replace it by gentle pressure until it is taken up. Be certain that it is entirely replaced, then feed light, and use the following: A small portion of salts and castor oil. Exercise some judgment in getting a slight evacuation of the bowles. If the first dose does not accomplish this, repeat it

until you do succeed. Quit gormandizing. Feed liberally, but not extravagantly, and it will need no further treatment.

CHAPTER XX.

DISEASE OF THE LIVER.

Disease of the liver, in the minds of many—I may say, a majority—of the people, is the great scapegoat for many or all the ailments to which the person is liable. Liver complaint is the banner unfurled to the people by the patent medicine men and vendors of liver pads, electric belt makers, etc., who thus assail the pocket-books of the people. This disease of the hog I find to be a complication of other diseases or complaints. Primary diseases of the liver are limited to the liver alone, though they are usually divided into two classes—acute and chronic.

The symptoms of the acute form of the disease, as it manifests itself with the hog, is great uneasiness, a sense of pain; it is of pale complexion, has great depression of spirits, is disposed to be inactive and lie up, loses its appetite, is costive, its urine is highly colored and deposits a red sediment and ropy mucus, accompanied by more or less fever, a dry heat, apparently attended with much pain, a dry cough, sometimes attended with sickness at the stomach, with vomiting.

The chronic form, which means of long-standing, may be accompanied by flatulency, pain in the stomach; the hog seems to prefer to lie on its stomach; there is foul

mouth, bad breath, the tongue much coated, the skin and white of the eyes a yellow color; the stools or evacuations are of a clay color, attended with great weakness and emaciation. These symptoms are generally so mild and gradual that they pass unnoticed by the owner until great boils or abscesses, or collections of matter are formed by the disease called hectic fever, and the hog sinks without the abscess bursting.

When the constitution, not otherwise impaired, is good and the strength sufficient, it often happens that the adhesions formed between the parts where the abscess is and some part near to it, where the pus or matter is discharged by various processes with which the organ is connected, by vomiting or purging, and not infrequently by the abscess breaking, the hog under such circumstances generally recovers. This disease is more frequent than is generally supposed. We find fully 50 per cent of the hogs slaughtered have these abscesses (or as the farmer calls it, boilly or bad liver). There are few instances of the stomach or bowels being diseased without the liver being implicated with it. The avoidance of those billiary diseases is certainly to a great extent under our control by change of feed from heavy to light, that which is easily digested; change of lot or pen; change of pasture, with fresh, pure air and water. Medicine may certainly be required, but not to the extent that it is so often used. As I said, the change of diet, from corn to oats, wheat, shop stuff, slops, etc., given when fresh and sweet—especially to sows nursing—with a good supply of pure, fresh water, and a supply of salt and wood ashes before them, with a good pasture of white clover, is preferable to any other for health. For fall and winter, feed pumpkins, artichokes, and a good rye pasture, besides a dry shed for night lodging, without bedding. Should they be bedded, let it be of corn fodder, renewed frequently. The shed should be often disimpregnated with slaked lime. Through the summer and fall season hogs need no

protection whatever, except from the scathing heat of the sun. By following these suggestions you will find your swine less liable to disease than under the present fancy mode of treatment. If God had intended in the beginning, or in the creation of all things, that they should have such shelter and protection as is now given, He would have furnished them with the physical and mental structure to provide for themselves all that we deem so comfortable and conducive to health.

But often, under the most favorable treatment, an adjutant—that is, an assistant—is necessary to expel or repulse some lurking disease, which, if left to its course, will prove destructive to life. Thus far only are medicines necessary. Show to me a know-all man, or a cure-all medicine, and I will show you an impostor and a fool and a medicine not worth a grot.

To illustrate this, I would point out the great braggadocio Prof. Haas, with his millions in bank to back his statements, and also Hubbell's Farm Stock Powder, that you may see the imposition practiced upon you, not only by them, but by some of the leading agricultural papers and stock journals of the country, who should have been your protectors, and warned you against their imposition, instead of giving assistance by encouraging their nefarious mode of robbery. Here are their recipes, as analyzed by the United States Chemist at Washington, D. C.:

Prof. Haas's recipe is as follows:

10 parts powdered soap,
5 parts potassium carbonate,
12 parts red ochre,
50 parts chalk,
10 parts quick lime,
13 parts calcined magnesia.

Prof. Hubbell's recipe:

6 parts common salt,
2 parts sulphur,
2 parts spent cloves,
1 part ammonium carbonate,
1 part wood charcoal.

I present these recipes to the reader that he may see that there is nothing in them that would render any assistance to nature in expelling such diseases from the system.

I will now submit to you my mode of treating the diseases of the liver. As I said before taking up the thread of my subject, it can, in a great measure, be avoided. The question really is not one of medicine, but of diet and regimen. Medicine may indeed be required, but change the diet and location of the hog on different ground. Keep the skin as clean as possible. A bath of coal oil over the hog occasionally, poured over it with a common water-sprinkler, will clear the surface of many impurities. Powdered sulphur sifted over it will destroy any deposit of vermin, open the perspiratory pores between the skin and internal organs, particularly the lungs, liver, and kidneys. They all sympathize and intimately co-operate one with the other, being alike subsidiary to the grand object of removing impurities of the blood. This is the reason why in this state of the system alteratives and evacuants—or, in plain words, purgatives—are so frequently given.

The medicines used by me in this disease are as follows:

Bicarbonate of Soda, 1 pound;
Mandrake, ¼ pound.
Scammony, ¼ pound;
Dandelion or Nitre (Saltpetre), ¼ pound.

Finely pulverize and mix thoroughly. Feed in a trough, allowing sufficient room without being crowded. Sprinkle it over shelled corn or oats.

Dose.—For a nursing sow, 3 teaspoonfuls; for other grown hogs, 2 teaspoonfuls; for pig or shoat, 1 teaspoonful.

To be fed twice each day until the bowels are freely moved.

CHAPTER XXI.

JAUNDICE.

This disease is occasioned by some derangement in the secretions of the liver, by obstructions in the tubes or gall ducts, or by the bile becoming so thick that it cannot flow freely into the intestines. In this case the bile, not being appropriated to its natural use, is absorbed into the vescular system and diffused through the blood, which is quickly manifested by the yellowness of the skin and the whites of the eyes, by loss of appetite, loathing of food, disinclination to move or stir about; sickness of the stomach and vomiting. The urine is of a yellow color; the stools, instead of the yellow-billious color which they naturally possess; are of a clay color; the bowels are costive; and the strength and energy of the body are greatly weakened The pulse is not often much changed, either in frequency or strength.

The most remarkable appearance in this disease, which can be easily observed, is the yellow appearance of the eyes and skin, the yellow color of the urine, and white color of the stools. This disease should not be neglected. If properly treated it can be easily cured, but if neglected and permitted to run its course, it often produces a permanent and frequently a fatal disease.

On dissection of those that have died of the disease,

the whole body is found filled with bile. The fatty portion of the body, as well as the bones, muscles, and membranes, are found of a deep yellow color. In this complaint, the bile is diverted from the bowels—its natural passage—and absorbed or taken up by the lymphatic vessel, or the secretory termination of the veins, and diffused over the whole system.

Remedies.—½ gill of Tincture Lobelia before the following, in slop or water.

Bicarb. Soda, 1 pound;
Mandrake, ¼ pound;
Indian Hemp, ¼ pound;
Niter or Saltpetre, ¼ pound;
Gum Arabic, ¼ pound;

To be fed in doses as before mentioned.

CHAPTER XXII.

DISEASES OF THE ORGANS OF RESPIRATION.

Coughs are the cause of obstructed respiration. The causes and symptoms of this disease are so well understood that little need be said. Stopping of the nose, sneezing, and coughing are the usual attendants. But few diseases require more attention than this, and yet few are more generally neglected. How many, when they take cold, consider it of no importance and let it run on, without reflecting a moment upon its consequences. These colds are dangerous, and often result in incurable diseases among your swine, as it does to thousand of people, yet you think it amounts to nothing to hear your hogs coughing. A cold produces a cough, next a fever and difficulty in breathing, and finally settles, producing lung fever, typhus, billious, or typhoid fever.

When your hogs are coughing use the following:

Bicarb Soda, 1 pound;
Epsom Salts, ½ pound;
Indian Hemp, ¼ pound;
Capsicum, 1 ounce

Mix and feed in slop, after being well stirred. Remember to feed three times each day until cough ceases or the bowels are well evacuated.

CHAPTER XXIII.

INFLUENZA.

This disease is characterized by an increased secretion of mucus from the membranes of the nose, mouth, and bronchial tubes, attended with sneezing, coughing, fever, and loss of appetite.

It is generally epidemic or endemic, prevailing through a certain district, and usually affecting a large proportion of the hogs. Hence it is supposed, in such cases, that it is the result of a certain peculiar condition of the atmosphere at the time. This disease is very common among swine. When it appears in a mild form, it is not dangerous; but when it rages as an epiddmic, with highly inflammatory symptoms, and is not attended to in time, unfavorable and often fatal consequences may be the result.

Symptoms are sneezing, coughing, sore throat, with increased exspectoration of mucus, running at the nose; the eyes become red and blood-shot, with general debility and weakness.

Remedy.—Epsom Salts, 1 pound.
Soda, 1 pound.
Indian Hemp, ½ pound.
Blood Root, ½ pound.
Ipecac, 1 ounce.
Capsicum, 1 ounce.

To be given as in other cases, already mentioned.

CHAPTER XXIV.

QUINSY, OR INFLAMATORY SORE THROAT

This disease is very common among swine, especially among shoats. It is a disease of the tonsils and mucus membrane of the throat. The most common causes are a sudden cold or a check of perspiration. The disease appears generally in the spring, during cold, damp weather, and sometimes like influenza prevails as an epidemic.

Symptoms.—The more common symptoms are sore throat; difficulty in swallowing; redness and swelling in one or both the tonsils; dry throat; foul tongue; hoarseness in squealing; difficulty in breathing, and more or less fever.

As the disease advances, the throat swells, and swallowing and breathing become more difficult; the dryness of the throat and thirst increases; the tongue swells, with a dark, crusty coat; the pulse is full, hard, and very frequent; hearing becomes impaired; sometimes complete deafness occurs, owing to the swelling of the tonsils—or, as they are sometimes called, the almoids of the ears; sometimes swallowing is impossible. The hog is now in great danger. Sometimes the throat gathers and breaks.

Treatment.—Administer lobelia until you have secured a thorough vomit, then with a sharp knife blade punc-

ture the swollen portion in several places, avoiding any of the vital parts. After the swelling has subsided, give a thorough purge with mandrake and senna.

CHAPTER XXV.

PUTRID SORE THROAT.

This disease differs from quinsy in the fact that there is not so much swelling in the throat, consequently not the same difficulty in breathing or swallowing. There are also cankers or sores in the back part of the mouth and throat. It is also attended with more or less fever, chilly sensations, and sometimes vomiting and purging. This disease is often very malignant and dangerous. The ulcers change from an ash-color to a lived red, then to a black, when, if not checked, putrid symptoms appear, followed by gangrene, resulting in death. The symptoms are very similar to those of malignant scarlet fever.

Causes.—I suppose this disease to be a specific contagion. At any rate it is often communicated in this way. It will also arise from cold where there is a predisposition to disease.

Treatment.—This is a dangerous disease, and yet if properly treated can be easily cured.

In the early stage, give an emetic of ½ gill tincture of lobelia and ipecac, equal parts, in one pint of water, and if the bowels are not quite loose, a cathartic of mandrake and scammony of equal parts, say one big spoonful in

enough water to dissolve the powders—probably half a pint. Bathe the throat with turpentine.

As a specific, take a teaspoonful of capsicum, and as much common salt, simmer them a few minutes in a pint of water and good vinegar, equal parts, and when cool give one gill of this every hour to the grown hog; less to shoats and pigs.

CHAPTER XXVI.

PLURISY.

Plurisy is an inflammation of the pleura or membrane which lines the internal cavity of the chest. This disease prevails most in the spring season, though it may occur at any other season, and hogs that are exposed to the vicisitudes of heat and cold are most liable. Hence the necessity of uniformity of open, fresh air.

Causes.—Sudden cold coming in contact with the skin or surface of the body, by warm sleeping houses, or about straw piles and barns. Heated by profuse perspiration and then exposed to sudden cold, damp air, checks the perspiration, and anything that thus checks it may produce plurisy.

Plurisy, like most other forms of inflammation and fever, commences with chilly sensations, followed by heat, thirst, and other febril symptoms. In a few hours the hog is seized with sharp, acute pains in the region of the short ribs, in one or the other side, sometines in both, which soon extends toward the shoulder blade and the fore part of the breast. It may or may not be attended with coughing and expectoration. The matter coughed up is more or less mixed with blood. The pulse is strong and vibrating, feeling like a tense cord.

Treatment.—Give a quarter gill of tincture lobelia,

every 20 minutes, until you have fairly evacuated the stomach; 10 to 20 drops of laudanum might be added to the above. After which give to it a strong tea of plurisy root, boneset, and blood root. Remember that the emetic —the puke—is necessary in the treatment of this disease. Furnish to it a warm bed.

By following this treatment closely, using judgment when to cease giving the medicine, you will scarcely ever lose a hog. Give also a mild cathartic of mandrake and scammony afterward.

CHAPTER XXVII.

INFLAMMATION OF THE LUNGS.

When the substance of the lungs or the mucous membrane which lines the air cells and passages of the lungs, is the seat of the inflammation, it is called pneumonia, and when the membrane which covers or envelopes the lungs (the plurie pulmonalis) is inflamed, it is called peripneumonia. The treatment is about the same in both cases, however, and does not require separate description. This disease is common among all ages and classes of hogs, more general than any other one disease in some seasons and in some sections of the country. When it occurs, it is in winter or early spring as a general thing, though very common at any time, though known as winter fever.

Causes.—It is caused by cold that settles upon the lungs. This means a check of perspiration, which closes the capiliary vessels of the skin and determines the blood upon the lungs.

Inflammation commences with dull pain in the chest or in one side of it, but one lung is affected. There is difficulty of breathing, with cough, dryness, and heat of skin and more or less thirst. At first the pulse is full and hard, strong and very frequent, but as the disease advances, it grows weak and soft, but continues very frequent.

The cough is usually moist and the matter thrown up by vomiting is white, tough, and frothy, sometimes streaked with blood.

As the disease progresses, the face of the hog becomes a dark purple; the vessels of the neck becomes turgid and distended with blood; the breathing becomes quick, short, and very difficult, threatening suffocation.

When death takes place, it is generally from infusion of blood in the cellular substance of the lungs, preventing circulation through those organs, and producing suffocation. It may also prove fatal by terminating in suffocation and gangrene.

When suppuration takes place, it may be known by a slight shivering and a sense of feeling in the part. When the disease proves fatal, it is between the third and seventh day, sometimes the ninth or tenth.

If, in the course of the disease, a copious flow of urine or a diarrhœa sets in, or a moist skin or hemorrhage from the nose, they are favorable symptoms, showing that the disease has most likely passed its crisis. Also a copious expectoration of thick whitish or yellowish matter from the lungs is to be regarded as highly favorable.

Treatment.—The treatment in all cases of inflammation of the lungs should consist of emetics, expectorants, cathartics, and diuretics, and in case the tongue be coated dark brown or yellow, cathartics that act on the liver. I lay this down as a proper course to be pursued. In bad cases it is to be varied according to circumstances.

Prescription.—The following prescription will prove effective:

Bicarb Soda, 1 pound;
Mandrake, ¼ pound;
Jalap, ⅛ pound;
Indian Hemp, ¼ pound;
Wahoo, ¼ pound;
Blood Root, ¼ pound;
Black Cohosh, ¼ pound.

Finely powdered and well mixed, to be fed three times each day in desperate cases. I mean those that refuse any food. In these cases mix it with water or slop and leave it by them until they become thirsty. Allow them no water except with medicine and then but little.

Dose.—3 teaspoonfuls to grown hogs, 2 to shoats, and from ½ to 1 teaspoonful to pigs.

CHAPTER XXVIII.

BLEEDING FROM THE LUNGS.

This complaint consists of coughing up small quantities of bright red blood, often quite frothy, and is often preceded and accompanied by heat and pain in the chest. irritation in the windpipe. Hemorrhage from the lungs may be easily distinguished from that of the stomach, as in the latter the blood that is vomited up is usually in larger quantities of a much darker color and more or less mixed with the contents of the stomach; whereas the blood from the lungs is of a florid color and is thrown up in small quantities by coughing.

Bleeding from the lungs, as a matter of course, is owing to the weakness of those organs or to the tender, delicate character of their structure, allowing of easy rupture of the air cells and small capillaries. It may be brought on by violent exertion in such cases, as running or dogging the hog. Also by plethora, hectic fever, coughs, and colds upon the lungs. It may also be induced by the suppression of some accustomed discharge, particularly that of the urine.

Spitting of blood is not always to be considered a primary disease, nor is it necessarily connected with consumption. It is often only a symptom of some other disease, as plurisy and lung fever. In some fevers it ap-

pears merely as a crisis denoting a favorable termination. Occasionally the blood thrown up is of a dark, blackish color. This only shows that it has remained a long time in some of the air passages before being thrown up. The complaint is not attended with any immediate danger where it is not attended with consumption, or where it leaves no cough or other affections of the lungs.

Treatment.—One of the best and most common remedies is salt and alum, mixed equal parts, or either will do. Give it dry over shelled corn or oats. Where there is a tendency to consumption, equal parts of black cohosh root and blood root is also a valuable remedy.

CHAPTER XXIX.

CONSUMPTION.

In so small a treatise we do not anticipate that justice can be done to a subject of such extent and importance as the one before us, but if by suggestions we are able to point out danger before it is too late, to the unsuspecting, negligent, careless hog-man, something will be accomplished in warding off an enemy that is very fatal and that, too, among the swine of our country. The only way to meet this disease is to arrest the cause while it is in its incipient or first stage. When once seated for any length of time it is foolishness to undertake a cure.

This disease has its origin more from art than from nature. Its origin is from the abuses of domestication of the animal. In a state of nature, they are free of all such diseases. Climate, over-feeding, bedding, want of cleanliness, and fresh air and range for exercise are the foundation of causes that lead to this disease—of which more hereafter under its proper head. To disobey any of Nature's laws, the penalty will surely follow. To change those laws we cannot. It, then, has become one of the settled diseases among the swine of this country, and is being transmitted from generation to generation among them.

That this disease is hereditary among swine there is no doubt, or at least this is my observation and experience, which confirms the truth, among the brute creation as well as that of man, that "the sins of the father shall be be visited upon the children to the third and fourth generation," and is caused by the abuse of Nature's laws. As I said, I have no cure for it when once seated in the system. To avoid is the only safety. Wholesome diet, pure water, comfortable sleeping quarters, free of dust or bedding, fresh air, and all the salt they wish to consume, with wood ashes as the necessary alkali, are the best preventives.

CHAPTER XXX.

DISEASES OF THE URINARY ORGANS—INFLAMMATION OF THE KIDNEYS.

This disease is characterized by pain in the region of the kidneys, shooting down toward the bladder or lower part of the abdomen; sometimes vomiting; the urine highly colored and frequent discharges; constipation of the bowels, attended with more or less fever.

It is often produced by formations of stone or calculus in the kidneys or by cold settled upon the kidneys. The first thing to be done is to relax the system and produce perspiration. This may be done by giving an emetic of lobelia in slop and pouring over the back, on the surface, turpentine; then giving sweet spirits of nitre and turpentine in slop. A purgative of equal parts of mandrake and jalap should be given until the bowels are freely evacuated.

CHAPTER XXXI.

INFLAMMATION OF THE BLADDER.

This disease will be known by frequent and painful discharges of urine and almost constant desire to make water; hard pulse and symptoms of fever. Sometimes there is great difficulty in voiding the urine or a total stoppage; often a frequent desire to stool, with sickness and vomiting. Sometimes there is a discharge of mucus and blood along with the urine.

Causes.—Stricture in the urethra; irritation by a stone lodged in the bladder; mechanical injuries, and the usual cause of inflammation.

Treatment.—The treatment should be about the same as inflammation of the kidneys and adding marsh mallow to the above prescription. It should be given instead of water or mixed with water.

RETENTION OF URINE.

Use the prescriptions as for inflammation of the bladder.

STONE IN THE BLADDER.

Treatment.—It should be treated as the last two diseases; to reduce any or all inflammation, then use the following to dissolve the stone:

Queen of the Meadows, 1 pound;
Horse Mint, ½ pound;
Nitre, 2 ounces;
Carbonate of Soda, ¼ pound.
Castile Soap, finely shaved and well mixed, 1 ounce.
Juniper, 2 ounces;
Gravil root, 4 ounces.

To be well mixed and fed three times each day until the obstruction is removed.

Keep the bowels open by a dose occasionally of jalap and mandrake, equal parts.

CHAPTER XXXII.

DIABETES—EXCESSIVE FLOW OF URINE.

This disease is characterized by an excessive flow of urine and that very frequent. It is usually attended with costiveness, voracious or increased appetite and with debility, emaciation, and more or less hectic fever. The urine is sweet, containing a large quantity of saccharine matter or sugar. The quantity of urine is often enormous, being sometimes greater than both the food and water taken into the stomach.

The causes of this disease are not, so far as I know or am informed, well known; but I think that it may be produced by various causes. At least my observations have led me to this conclusion, so far as it applies to swine. First, predisposition to disease; excessive use of food containing saccharine matter, such as corn, clover, pumpkins, ship stuff, etc. When fed upon such sugary or sweet food, I find it more common--especially clover when in full bloom, as the bloom contains a great amount of honey. This, together with other disease working on them, may be a direct or primary cause.

Symptoms.—The most striking symptoms in the early stage of the disease is an increased quantity of urine, accompanied by a frequent desire to pass it. The deeire

appears to come on very insidiously and gradually, and may progress for weeks before any notice is taken by the owner, until other symptoms begin to succeed.

The appetite is greater than in health, while digestion is imperfect. Great thirst is a never failing attendant. The hog wishes to drink all the time, and this disposition attracts the owner's attention sooner than any thing else. Perspiration becomes entirely suppressed; the skin becomes dry and harsh; the gums red and swollen, and very often ulcerated; the tongue white and foul in the center, with red edges; the mouth dry and parched. As the disease progresses, there is discoverable a weakness in the loins and regions of the kidneys with general debility, emaciation, hectic fever, and difficulty of breathing; easily fatigued and general langor.

Treatment.—Restoratives constitute the principal medicines or agents to be used in this disease. The following remedies have been very successful in my practice in its early stages, and some, too, that had far advanced.

Bicarbonate Soda, 1 pound;
Beth Root, 1 pound;
Black Cohosh Root, 1 pound;
Geranium Root, 1 pound;
Cherry tree Bark, 1 pound.

Let the whole be powdered, well mixed, and given in water. At the same time use a cathartic of the following:

Mandrake, 1 part;
Scammony, 1 part;
Uva Ursi 1 part.

To be fed on dry feed, corn. or oats, to keep the bowels freely open.

CHAPTER XXXIII.

DISEASE OF THE SKIN.—ERYSIPELAS.

This disease is characterized by a shining red inflammation of the parts affected, accompanied with more or less swelling and a distressing irritation. The irritation is so great as to almost set the pig crazy. It is generally superficial—that is, only affecting the skin. It is generally local, affecting some one part, as the head, legs, and sometimes may extend over the whole body. It occasionally becomes deep seated and is apt to gather and break. It is then called phlegmonious erysipelas.

In the progress of the disease, where it is local, after a few days it is apt to form vesicles or blisters containing a yellowish fluid, which is sometimes thin and watery, at other times tough and sticky, adhering to the parts. Sometimes, in severe cases, these vesicles will run together, forming a complete mass of scab. Fever, thirst, and restlessness all accompany it, as well as sickness at the stomach.

Causes.—This disease undoubtedly arises from impurities of the blood, caused by morbid matter being retained in the secretions. It may be induced by derangement in the function of digestion, by suppressed perspiration, and by over heat of the blood, as it prevails oftener in the summer months among hogs.

I have no doubt in my own mind that the digestive apparatus is more or less deranged in this disease, and derangement the exciting cause. It is always well to commence the treatment of this disease with a thorough emetic. It will do good, beside cleansing the stomach, by rousing the organs of secretion and excretion to a more healthy action, after which a purgative as follows should be given:

Scammony, ¼ part;
Leptander, ¼ part;
Bicarbonate Soda, 1 part;
Magnesia, 1 part;
Soda, 1 part.

With a water sprinkler pour over the surface some one of the following washes: Solution of borax, sugar of lead, sulphate of zinc—the zinc being preferable. Bathe it thus two or three times each day. Its drink should be of burdock root, sasafras bark, and elder flowers, made into a tea, given cold in their troughs. If too strong, weaken it with water or a little slop of ship stuff, milk, or house slop—anything that it will drink freely of. These I have found to be infallible remedies.

CHAPTER XXXIV.

BLACK TONGUE ERYSIPELAS.

This is a detestable disease and makes its appearance very frequently among hogs. It is an epidemic and proves very fatal among swine. It usually commences with sore throat. Soon the tongue, throat, and whole neck begin to swell; then the tongue and inside of the mouth turn black; the outside of the neck becomes of a livid purple in spots, which gradually change to a dark green or black, when, if relief is not soon obtained, mortification closes the scene, or the hog dies of suffocation.

In this disease the most thorough and vigorous treatment must be employed from the very first symptoms. A thorough emetic of lobelia and ipecac, of equal parts, must be given, or lobelia alone if the ipecac cannot be procured. This should be given with frequent doses of tincture of myrrh on tincture capsicum or red pepper. Bathe the neck frequently with turpentine. oil sasafras, oil pennyroyal, and tincture of red peppers. In case gangrene or mortification should set in, bathe it with strong lye, which should be kept hot for the purpose. If you have or can get it, make a decoction of wild indigo, giving one gill to grown hogs, and decreasing the amount as to size and age; to be given every hour or two. Pursue the above course in the most efficient manner and you will seldom lose a single hog.

CHAPTER XXXV.

TETTER OR SALT RHEUM.

This is an inveterate and very troublesome breaking out, which is very common among pigs and very destructive, killing them off year by year by the thousands, and no notice is taken of it. I have often pointed it out to the farmers in my practice. They laugh at the suggestion, calling it only a patch of black mud sticking to the nose, lips, and face of the pig. On catching one or two and removing the scab, which would hide the ulcer, they would arrive at the same conclusion that there was some mischief in them. It appears at first in very small vesicles around and in the mouth, lips, nose, and on the face and ears, then spreading over the entire body and legs of the pigs. It often seats itself on the gums and tongue, completely destroying them.

It appears in very small vesicles, which break out and discharge a thin, corrosive, and irritating fluid, attended by itching. Scab forms invariably upon the affected part, which dry up, forming a hard, black crust, resembling a patch of black mud sticking to the part. It continues its course of eating like a cancer until it has entirely destroyed that portion of the organ on which it may have located itself, causing it to slough off large

portions of the skin and flesh similar to a scald. Where the gums become infected, they are destroyed until the teeth become loose, the tongue sloughs off, and the pig becomes all the while more and more emaciated, losing flesh from day to day, until relieved by death. This disease usually makes its appearance on the pig at from one to four weeks old, at least so far as can be detected by the natural eye. With the aid of a magnifying glass it is decernable much sooner.

Causes.—The disease is caused by a mite or microbe that forms itself upon, or is a deposit upon, the belly and teats of the mother, apparently doing her no injury, but it soon develops by the millions on the pig. This, no doubt, may be something new to my readers. It can be easily investigated by you by catching a pig and examining it. You will find the deposit, after a careful examination on the inside or the outside of the mouth, inside or outside of its nose (on the inside of either mouth or nose the deposit will have the appearance of cankered matter) and over the whole surface of the pig. If you find a single pustule, give it the following treatment: Remove the scabs by bathing or washing the pig all over with strong soap suds; then grease it well with lard mixed with equal portions of sulphate of zinc and powdered sulphur. After which notice your pigs closely for a few days, and if you discover any new formation, give to them another greasing of the ointment and you will find that they are entirely relieved. Your pigs will become thrifty and do well afterward, while, if neglected, it is sure to prove destructive to the entire herd, and no body will be to blame but yourself, you being as badly diseased as your pig with the disease known as negligence or laziness, which is too common among hog raisers. Wherever I find this disease among men I find them without hogs and without money.

CHAPTER XXXVI.

COMMON ITCH OR SCABIES.

The itch, scientifically called scabies, is an eruption or breaking out of small pointed vesicles, containing a watery fluid, causing at times a most violent itching. It first makes its appearance in the flanks, on the shoulders, and about the ears, and continues to spread over the whole surface of the body.

Cause.—It is usually the result of filth and being permitted to bed about old straw piles, barns, and other places of filth. Hogs can never become thrifty with this disease tormenting them, causing them so much uneasiness.

Treatment.—Crowd them into some close place, saturate them well with coal oil by pouring it on to them from a common water sprinkler; then sprinkle over the entire surface, through a common seive, powdered sulphur. This done, you rid them of this torment, and at small cost you do them a great service and make a big profit to yourself for the time spent and outlay. This can be done almost any rainy day or when too wet to do anything else but go to town, which too many of you do instead of doing such chores as this. Hence your bad luck at hog raising, and the reason why you have no

money and are in debt. These little neglected things amount to the loss of big ones after a while, when the baby needs a new dress or there is a call on you for rent or interest on borrowed money. You will excuse me for giving you a raking occasionally, for you need it.

CHAPTER XXXVII.

DISEASE OF THE ORGANS OF MOTION.—RHEUMATISM.

There are two forms of this disease, differing from each other and easily known, one of which is called acute, attended with fever, and the other chronic, which means lingering, and without fever. The acute is known by sharp pains, which may be known by the grunt or squeal of the hog when moved. This disease makes its appearance in the joints, muscles, back, knees, ankles, and hips, extending usually over the whole system. Loss of health, heat, thirst, and general restlessness, tongue white, skin dry and hot; the bowels generally costive or bound, and the pulse hard and full.

In the chronic form, this disease is not accompanied by fever. The joints are severely pained, swollen, very tender, and usually stiff; sometimes hot, then again cold. After this disease has been of long standing the joints become enlarged and distortion takes place.

There are few diseases so distressing and tedious as acute rheumatism. It may disappear quickly, possibly in a week or two; then again it may linger for a long time in spite of the best treatment. Much depends upon the constitution of the hog as well as that of a person. In many instances it is brought on by exposure, cold,

and damp weather, checking perspiration. I find this more common among brood sows (the reverse of that in the human family.)

Treatment.—In acute rheumatism excite the free action of the skin. To do this I would use the following liniment: Equal parts of spirits camphor, spirits of hartshorn, spirits turpentine, extract cayenne or hot drops, a sufficiency of neat's foot oil and beef's gall. Let the green stuff of the gall run into a bottle, then pour it in with the mixture. Apply this two or three times each day.

Rheumatism of long standing is always chronic. The above remedies should be used at the same time with cathartics, diuretics, sudoriffics, nervines, and expectorants.

Bicarbonate Soda, 1 pound;
Tamarac Bark, 1 pound;
Nitre, ¼ pound;
Mandrake, ¼ pound;
Bloodroot, ¼ pound;
Stillingia, ¼ pound.

Powder finely and mix well.

Dose—3 teaspoonfuls to nursing sows; 2 to other grown hogs; 1 to shoats; ½ to pigs.

To be fed on corn or oats two or three times each day until you secure a free evacuation of the bowels and discharge of urine.

CHAPTER XXXVIII.

WHITE SWELLING AND HIP DISEASE.

White swelling most generally appears in the knee joints, though it may sometimes attack other joints, as those of the hip and ankle. It commences with pain in and around the joint, which gradually increases with swelling or hardening of the part. It is called white swelling because the skin does not, as in other swellings and inflammations, turn red, but remains either of a natural color, or, as is frequently the case, assumes a shining whiteness as the swelling advances. The pain is deep-seated, and though it may be but slight when the limb is in a state of rest, yet on moving the joint it becomes almost intolerable. The parts around the joint become hard and calloused, the swelling increases, until finally, if not checked, matter forms and discharges from perhaps several openings. The disease being seated in the periosteum or covering of the bone, that is apt also to become diseased, so that not infrequently crumbling and wasting away of the bone takes place. When the disease is seated in the hip joint or socket, it is apt to fill up with osseous or bony matter so as to displace the thigh bone.

When openings and ulcerations take place, fleshy excrescences are apt to protrude through the openings of

the ulcers, small pieces of detached bone pass out, the flesh wastes away above and below, the joint is liable to become permanently stiff, perhaps dislocated; the pig becomes emaciated with hectic fever and great constitutional debility, and in this condition often dies.

I was, while writing this, treating some hogs suffering with this and other diseases, for Mr. John F. Aull, of Harvel, Ill. Out of 60 odd swine, 5 had this disease, Some in the ankle or joint that unites the foot to the shin bone, and others in the knee and shoulder joints.

Remedies.—Take enough concentrated lye, such as is used for breaking hard water by washer women, to make a strong solution. Dip the part affected into the solution and let it remain a moment or two, then pour a little turpentine. This I find to be all that is necessary if taken in time.

If it has become very much swollen, so much as to form pus, it should be opened with a keen blade, then use the alkali, and afterward sprinkle a small portion of burnt alum or powdered mandrake over the sore. Give half a teaspoonful of powdered mandrake and blood root mixed with water. This should be done twice each day until the swelling is reduced; or, if broke, once a day until the inflammation has subsided. It will then soon heal. I might add other modes of treatment, but it is unnecessary, as this will prove to be all that is needed.

CHAPTER XXXIX.

INFLAMMATION OF THE BRAIN.

Inflammation of the brain is of two kinds—that which affects the substance of the brain itself, and that which is located in the membrane only. It is often sympathetic from other diseases, and may be caused by sudden constipation of the intestines.

Whatever causes a great determination of blood to the head may cause inflammation of the brain or its membranes. Fractures of the skull, suppressed evacuations, and the repulsion of cutaneous diseases, may cause it.

Symptoms.—Inflammation of the brain is generally attended with redness of the eyes, intolerance of light or noise, more or less inflammatory fever. If the substance of the brain is diseased, it will produce more or less delirium. There is also apt to be pain in the stomach, which arises from sympathy. The head is hot and the bowels generally constipated. The disease may prove fatal in a few hours, or it may continue several days. Sometimes the hog becomes very delirious and raves in a complete frenzy.

In these cases effort should be made to restore their blood to the extremities, and thus direct it from the brain

Treatment.—With a keen, sharp blade cut through the skin to the skull bone, between the eyes, and rub in

the gash a quantity of salt and pepper. Also make an incision in the end of the nose as a counter-irritant. Give a brisk cathartic of the hydrangea kind of the following Equal parts of mandrake and cream tartar, three or four hours apart, until purged.

CHAPTER XL.

APOPLEXY.

Apoplexy is a disease characterized by a sudden loss of feeling, consciousness, and the power of voluntary motion. Its immediate cause is pressure upon the brain from congestion or effusion. It is most usually produced by a rush of blood to the head. It generally attacks large size shoats and older hogs. It appears to occur without any warning, except the evacuations of the bowels, which is hard, black, and pebbly, with a white substance mixed or rolled up in the stool; the urine very yellow and small in quantity.

When the attack comes on, the hog suddenly falls, losing, for the time, sight, hearing, feeling, and power of motion, while the action of the heart still continues. The veins of the neck and face become turgid with blood; the arteries throb, pulse is full, strong, and slow; the breathing is also slow; the power of swallowing is much impaired or entirely lost. This condition lasts but a few minutes, when, if not fatal, the hog soon recovers and is ready for its food. If properly treated, they seldom die, but recover and do well afterward.

Treatment.—In the treatment of this disease I have found the same to be good that I use in the treatment of inflammation of the brain. First use the knife to produce

a counter-irritation upon the surface, which action supplies the place of a blister. Then give the following prescription:

Bicarbonate of Soda, 1 pound;
Mandrake, ¼ pound;
Blood Root, ¼ pound;
Jalap, ¼ pound;
Nitre, ¼ pound.

In case worms be a disturbing cause, add to the above

Pink Root, ¼ pound;
Worm Seed, ¼ pound.

CHAPTER XLI.

NERVOUS DISEASES.

That the hog is heir to many nervous diseases there is no doubt. Having no known rule by which we can detect them, except the one just treated of and lockjaw, any others have no apparent symptoms by which we can detect them because the hog cannot tell its feelings. Other diseases are apparent to sight, hearing, and feeling.

If the hog possesses nerves, then it must be susceptible to all the nervous diseases appropriate to its temperament; but to distinguish the predominant ones is extremely difficult, except in the lymphatic temperament, which is characterized by general fullness of the nervous system and a strong tendency to take on fat from the small amount of food they consume.

The sanguine temperament has expanded, broad chest, vivacity of disposition, and shows a preponderance of the vesicular system. Being of plethoric habits, the circulation of the blood is very strong.

The billious is the one in which the muscular system predominates. The body is remarkable for compactness of fiber, indicative of strength and activity.

The hog, being possessed of all the temperaments like unto mankind, and the hog being more easy to control, the appetite of the lymphatic hog can be restrained,

while with man it cannot. It is a characteristic of both animals—man and hog—to be hoggish. Very few of either is fit to set an example for the other, or to complain one of the other! Then, I say, why need one ask how is it that the one is as susceptible to all the nervous diseases as the other? While we have not been able to detect any symptoms by which we can discover any of the nervous diseases, yet we may readily conclude that the hog like a man is an equal heir to those complaints arising through sympathy with other derangements of the system.

The most, or a very large part, of such diseases are caused by costiveness. Then to prevent it should be our first care. To do this I offer a general prescription, which will prove efficacious in many other diseases, to be given whenever costiveness is discovered among your swine. If you give it when necessary, you will have but little use for any other medicine.

General prescription:

Bicarbonate of Soda, 1 pound;
Mandrake, ¼ pound;
Jalap or Scammony, ¼ pound;
Nitre, ¼ pound;
Pink Root, ¼ pound;
Male Fern, ¼ pound:
Aconite, ⅛ pound;
Blood Root, ¼ pound.

This should be given sufficiently often to keep the bowels loose.

THIRD DIVISION.

GENERAL DISEASES AND DISEASES WITH CORRUPTION OF BLOOD.

CHAPTER XLII.

FEVERS IN GENERAL.

Under this head are embraced all fevers by which the hog is afflicted.

Fevers are very numerous and arise from various coughs, afflicting swine of different constitutions and breeds more or less violently, which shows the necessity and importance of looking well to the breed of swine, as some breeds are much more hardy than others, less liable to become diseased, and are better adapted to all climates or localities. That is, some breeds have greater vitality, consequently greater resisting powers, and are less liable to contract disease and be overpowered by them. There is less disease and less mortality among them.

If the same active treatment should be used with a delicate hog which is employed upon a strong, vigorous one, it would in all probability sink under the treatment.

An experience of 30 odd years has convinced me that the stomach and lungs are the first organisms to receive direct and prompt treatment. One is the receptacle of food: the other, the receptacle of air(food and respiration.)

These two organisms make up the health of the entire animal. There need be no fear from the liver. It will perform its office correctly, the opinion of others to the contrary notwithstanding, the liver being nothing more than an important factor or assistant of the two former—the stomach and lungs.

I repeat it, that the stomach must first be attended to and relieved in the treatment of fevers, and the first impression made upon the stomach by medicines, act instantly by sympathy throughout the whole system. This is the organ which is to receive the medicine by which the disease is to be subdued.

The great secret of medicine is to discover the cause of the disease. The next is to apply the proper remedies, and the remedies properly. The third and last is to watch closely their effect. The practice of medicine is very simple and founded upon good sense. A fool with all his theory and learning will never make a successful practitioner.

As fever shows itself in various forms, it is important that inquiries be made as to the true course which assisted in producing the disease. First look at the surroundings as to bedding, water, the kind of feed, etc.

Two very opposite states of the body are supposed to give rise to fevers—The one is called medically the *phlogistic diathesis*, which means disposition wherein the heart is greatly excited to quick and powerful exertion; manifested by great strength in the action of the vessels, while the blood exhibits a red hue and a closer texture than usual. In the other, the brain and nervous system are more directly affected. Their powers are weakened, the force of the heart and vessels are weakened, the blood is of a closer texture and the fluids or juices tend to disolution or a changed appearance.

When the fever or inflammation originates from external or outward causes, such as wounds, blows, etc., which is called the local affection, it is in proportion to the

degree of inflammation in the part affected. Such fevers are called symptomatic. And this is true in certain disorders of the lungs and other diseases of the body, which arise, not from external causes or injuries, but from some fault or disease in the part, which gradually brings on inflammation and fever. If the local inflammation be removed—or, in other words, health restored to the parts affected—the fever is also removed. If this cannot be subdued, but keeps gradually increasing and destroying the organization of the part, the hog then dies sometimes by violence of the fever, and sometimes because an organ essential to life is destroyed.

Cold very frequentls produces inflammatory disorders, and when of long standing and neglected, settle on the lungs.

During the winter and early in the spring, plurisies, quinsies, rheumatism, and inflammatory fevers prevail or are more common among swine. Toward the end of summer, and particularly in autum, fevers of a different nature prevail, while dysenteries and putrid sore throats of various types generally make their appearance.

During the summer months, in sultry weather, when the system is relaxed and when heat and moisture combine to hasten the decomposition and corruption of animal and vegetable matter, and fill the air with foul air together with effluvia of stagnent water, all tending to produce fever, billious, intermittent, and rheumatic fevers are most prevalent among swine.

But a still more active source of fevers is produced from the effuvia arising from the living body of the hog itself, when hogs in great numbers are crowded together, when the air is deprived of its vital ingredients by repeated and constant respiration, and made poisonous by foul exhalations. Hence this infectious matter will be formed in hog pens. This effluvium will be formed wherever there is filth and will produce disease in some form. Infections of this kind will remain long ensconced in their old bed-

ding even if it be the ground upon which they feed or lie. The same is capable of infecting other hogs from year to year with like disease. Hence the perpetuity of diseased swine, and it may be looked for so long as the pens or feeding lots go disimpregnated, and that frequently. The experience of every farmer is that the disease can be greatly modified, if not permanently checked at times, by change of situation or location. We will now proceed to point out or classify the different fevers with a description of them, the symptoms by which they may be distinguished, and their remedies.

CHAPTER XLIII.

INTERMITTENT FEVERS.

The only symptoms of this fever are the shaking sensations, great thirst, and inclination to be in the sunshine while the fit is upon them, and so soon as it passes off, to seek the coldest spot they can find.

Remedy.—Make a strong decoction of Prussiac willow by boiling the twigs, giving it freely in their slop from time to time through the day for 10 or 15 days or longer. Keep the bowels open with the following general prescription:

Bicarbonate of Soda, 1 pound;
Mandrake, ¼ pound;
Jalap or Scammony, ¼ pound;
Nitre, ¼ pound;
Pink Root, ¼ pound;
Male Fern, ¼ pound;
Aconite, ⅛ pound;
Blood Root, ¼ pound.

This should be given sufficiently often to keep the bowels loose.

CHAPTER XLIV.

REMITTENT OR BILLIOUS FEVER.

In this fever the symptoms vary according to the situation and constitution of the hog and predisposing causes, or seasons of the year. It arises probably from an over accumulation of bile, or from exposure, derangement of the liver by some inaction of the bowels, or from other causes similar to those which produce intermittent fevers.

In billious fevers there are remissions, which mean mitigations of symptoms or retirement of the fever for a time, but it continues on slightly until a fresh attack ensues. The warmer the weather the more active its character, and it assumes, if not arrested, a dangerous form. In my practice in some of the more Southern States, and even in my own, I have noticed this in handling hogs, that there is quite a difference, there being a greater mortality in the southern counties in proportion to the number treated by me and those without any treatment. Like other fevers, it commences with a shivering sensation, sickness at the stomach, vomiting, great weakness of the whole body and difficulty of breathing; then comes the cold stage, followed by considerable increase of heat, while the pulse, which was small and quick in the cold stage, becomes full, and increases in its quickness. Sickness at the stomach increases, with frequent efforts to

vomit, which results in nothing but bile. All these symptoms continue: the skin is hot and dry, with great thirst; then the skin gradually becomes moist. Shortly after this the symptoms pass off and some times cease entirely.

The inexperienced person or physician may have hopes of the hog's recovery, but in a short time the hog has another attack more violent than the former. If this fever be not opposed in the early stage by proper medicines, it will end in delirium, when great restlessness takes place, the discharges by stool will be very offensive; after which will be a jerking of the nerves and contraction of the muscles, and in a short time death will ensue. Thence passes away a Billious-Fever-Cholera-Hog.

The same causes which produce this disease are the same in a great measure as those which produce intermitten fever, although acting in a more powerful manner.

Treatment.—The use of purgatives in the treatment of billious or remittent fever is of the utmost importance, for the evacuation of the intestinal canals is always the first step to be taken at the commencement of this disease, and repeated occasionally during its continuance, with care as to the effect produced, increasing or diminishing accordingly. Excessive purgation should be avoided. It is quite enough, as a general rule, that at the commencement of this disease from 3 to 5 evacuations be had every 24 hours. In the latter part, 1 to 3 is sufficient. Should there be any intestinal irritation, great caution is then necessary, and milder laxatives should then be employed.

I have used the following with good success to the whole herd, to prevent the disease from further spreading among the herd, and even to those that refused any food, but in a different manner. In treating those that refuse food, I mix it in water for their use, while I give medicine on dry feed, such as oats or shelled corn, to those that are able to eat.

You will find this prescription invaluable:

Mandrake, ½ pound;
Bicarbonate of Soda, 1 pound;
Calomel, ¼ pound;
Blood Root, ¼ pound;
Pink Root, ¼ pound;
Nitre, ¼ pound.

Dose.—Proportion to different ages:

To sows nursing, 3 teaspoonfuls;
To other grown hogs, 2 teaspoonfuls;
To shoats, 1 teaspoonful;
To pigs, ½ teaspoonful.

Only enough of the foregoing prescription should be given or continued to be given until all the bilious matter is evacuated and the discharges come of a natural color. After unloading the stomach and intestines by two or three brisk purges, on the first intermission of fever, then use the following as a tonic stimulant, diuretic, anodyne, expectorant, emenagogue, astringent, and sudorific:

Bicarbonate of Soda, 1 pound;
Quassia, ¼ pound;
Queen of the Meadow, ¼ pound;
Blood Root, ¼ pound;
Pleurisy Root, ¼ pound.

It should be fed in doses of three teaspoonfuls to sows nursing, two to other grown hogs, and from one to one-half to shoats and pigs, at morning, noon, and at night, in water, slop, or in any thing that the hog will eat or drink.

CHAPTER XLV.

NERVOUS OR TYPHUS FEVER.

Typhus fever is contagious to a certain extent, or under certain circumstances. This term is also applied to typhoid fever when it assumes a character to justify its use.

It receives its first name from attacking the brain and the effect it produces on the nervous system. The second from the slow and gradual manner in which it comes. Sometimes it comes on the third, fourth, or fifth, where a great number are crowded together and where proper cleanliness and ventilation are not given—that is, for the want of pure, fresh air. The sixth from certain spots or pimples slightly elevated above the surrounding skin, about the size of a pin head or a small pea, of a bright red or rose color. They make their appearance generally on the belly and chest, and frequently over the whole body. They make their appearance from the fourth to the seventh or eighth day of the fever. The seventh derives its name from the putrid state or tendency supposed to take place in the fluid. The last from the dangerous nature and malignity of the fever. They are, however the same disease, varying according to the violence of the symptoms, and the different constitutions of the hog.

Symptoms.—In this, more than any other, the symp

toms vary. It sometimes crops out in such a slow, secret manner that the disease will have made considerable progress before the owner of the hogs is aware of the necessity of using remedies, but on other occasions it comes on with a great degree of rapidity, though the symptoms are pretty much alike common to all fevers: First heat, then cold, or sometimes chilly shivering, followed by heat, want of appetite, sickness at the stomach, and occasional vomiting, entire refusal of food, weakness, trembling, pulse irregular, sometimes faster than usual and at other times about natural.

These symptoms generally increase; the pulse becomes smaller, and at the same time quicker, while the arteries of the neck beat with additional force. The hog becomes more restless in the evening; toward night the breathing is more difficult. This gradual increase of symptoms with a peculiar, pale, sunken countenance attending a fever ought to give the alarm to the owner of the swine when other nervous diseases, with which the earlier symptoms have been confounded, are present. In the progress of this disease, the system is easily affected; uneasiness and restlessness prevail in a high degree. While at the same time the tongue is clean and moist, and at other times the tongue will be dry and foul, the skin becomes moist. This fever, moreover, is not only thus irregular in affecting various parts of the body, but is also irregular in its recurrence after the remission; and then, instead of taking place in the evening, will take place in the morning. Again, the fever is very violent for the first few days; it diminishes for a time, and then increases again.

After or about the fifth day weakness increases considerably. The whole nervous system becomes affected with tremors and twitching; the urine is commonly pale; the tongue becomes dry, of a dark color, and sometimes the tongue and gums and lips are covered with a dark viscid substance. To these succeed stupor, with a fetid

smell, hiccough, and twitching of the tendons, together with an involuntary discharge of the excrements. In every malignant case, this fever ends fatally on or before the fifth day, but more frequently toward the seventh day. When the hog survives the seventh day it usually recovers. When the fever terminates favorably, before or at the seventh day, the crisis is generally obvious, but should it terminate later the favorable turn is less evident and sometimes several days pass off during which time the disease goes off so gradually that I am in doubt myself whether it does or not. At length, however, it becomes evident by a warm moisture on the skin, by the dark colored whey substance which adheres to the gums and lips growing less tenacious, and being more easily removed; by the evacuation of the bowels regaining a natural color, or by the urine being made in greater quantities and depositing a sediment; by a return of appetite, and by the pulse being slower than it was at the commencement of the disease. Tumors appearing behind the ears, a red rash and an inflamed scab around the mouth and lips, are, I consider, favorable. The symptoms which point out the approach of death are dilated pupils or glassy, staring eyes; involuntary, cadaverous swelling; evacutions; hiccoughs; cold flammy skin, with a small, weak, creeping, tremulous pulse.

The causes which occasion this disease are impure air, impure water, and unwholesome food Although these causes produce the disease in frequent instances, where it is not epidemic, hogs under even the most favorable circumstances, where they have the best of treatment, are even attacked through filth, a moist atmosphere, scant living, and the feed probably in a decayed state; or whatever may weaken the nervous system may produce this fever.

This fever also arises from bilious fever of long standing changing into nervous. I consider the disease essentially one of debility.

Treatment.—Emetics can be used under two circumstances only in this fever: First, at the very commencement of the fever; and, secondly, when a relapse or aggravation of the symptoms has been threatened by some being fed too lavishly or some improper food. It is very customary among farmers, under such circumstances, when the hog has begun to feed, to overdo the thing by giving too much or improper food, such as sour slops, &c. Under such circumstances, where there is a relapse, I would then advise an emetic (that is, something to cause it to vomit,) to be given, thereby unloading the stomach of whatever produced the relapse. If an emetic be given within 24 hours after the hog has been first taken, or directly after a relapse, it will save 9 out of every 10 diseased hogs. On the first appearance or symptom of the disease give one half gill of tincture of lobelia in one pint of water. If it should refuse for an hour to drink it from the trough, then pour it down as a drench. Be careful at the same time not to pour it down while the hog is squealing, or you may strangle it, which might produce death instantly. Repeat this every 15 or 20 minutes until the stomach is disgorged of its contents. The dose as given above must be diminished as to age and size of the hog. After a few hours, then give a brisk cathartic or purgative. The bowels must be kept gently open so that the hog should at no time be more than 8 or 10 hours without a stool, for costiveness is apt to increase an undue amount of heat, which may produce an affection of the head. A great deal of feculent matter is produced in fever, although little food is taken. In administering purgatives, you must be very careful, after the first evacuation, not to employ them in such doses as will operate severely; for if you do you may produce great debility and thereby lose your hog. The object is to secure as much as from 2 to 3 discharges daily. For this purpose give three teaspoonfuls of jalap, scammony, and pleurisy root of equal parts, mixed with two ounces of bicarbonated soda,

Dose.—To grown hog, 3 teaspoonfuls; to be decreased in proportion to age and size of the hog.

The great point in this disease is to support the strength of the hog by tonic medicines, which should be early employed in this disease, and at the same time some nourishing diet, such as milk or house slop with a small portion of ship stuff or oat meal mixed with it—just enough to form a gruel.

While supporting the vital energies of the hog, you must take care to prevent feculent matter from being confined in the bowels by occasionally administering gentle laxatives, such as teas of Balmony, yeast, and Balsam Peru, of equal parts, mixed with water. Pour in the trough and let them drink it as water, or mix it with slop. Balmony is both a stimulant and tonic, while Balsam Peru is a stimulating expectorant or strengthening tonic, acting upon the mucous membranes of the system. If these gentle laxatives do not accomplish this result, then resort to a dose of scammony.

If you have plenty of yeast, give it, mixed with the slop or water it drinks. Hop tea is good. This last will be found valuable throughout the disease, instead of water, as a drink. By persisting in this course, which is easily done, requiring but little time, you will scarcely ever lose a hog by this disease.

In the meantime, feed the following to the whole herd as a preventive in the proportions already mentioned:

Bicarbonate Soda, 1 pound;
Common Salt, ¼ pound;
Blood Root, ¼ pound:
Quassia, ¼ pound;
Mandrake, ¼ pound;
Plurisy, ¼ pound;
Black Snake Root, ¼ pound.

To be fed twice each day until the discharges of urine and bowels look natural—that is, show their feed

CHAPTER XLVI.

TYPHOID FEVER.

The predisposing causes of typhoid fever are all such as greatly depress the system either temporarily or permanently, and we might say with truth that no hog, unless originally of feeble vitality, or laboring under some cause that produces depression at the time of exposure, can have primary typhoid fever. It is true, if the cause acting upon the system is very intense, the disease might be rapidly developed. Animal miasma is the exciting cause of the disease, and by this we understand animal matter in a state of decay or decomposition. In animal substance in the act of decomposition, or a substance generated from the component parts of a living body by disease, communicates its own condition to all parts of the system capable of entering into the same state, if no cause exists in these parts by which the change is counteracted or destroyed. Thus, exposed to gaseous exhalations from animal matter undergoing decomposition, or arising from persons suffering from low typhoid disease, the material gaining entrance into the blood through the lungs, will, if there is not resisting power enough in the system, set up a process of decomposition, which continuing, will give rise to the phenomena we observe in this form of fever.

This form of fever may be either endemic, sporadic, epidemic, or contagious. If endemic, we will find more or less intense local cause. If sporadic, the miasm may have been speedily generated and dispersed. If epidemic, we have to look to the condition of the atmosphere as regards moisture and temperature for the rapid propogation and spread of the miasma. I think this none will deny. Thus a hog suffering from low typhoid fever, is continual giving off in the excretions from the lungs matter in a state of decomposition, and if proper attention is not given to a proper supply of fresh air and cleanliness, these exhalations assume a degree of intensity that will unfavorably impress all of the hogs that come within its reach, and will give rise to the same form of fever in those hogs that may be predisposed to it. I am now fully satisfied from all my observation and experience that this disease, typhus fever, and black tongue erysipelas, were the prevailing diseases of that day known as Cholera—it having made its appearance directly after the cessation of Asiatic Cholera of that date—because of its destructive mortality among the hogs.

Symptoms.—The early stages are frequently of considerable duration in this disease, the symptoms being those of depression. The hog becomes languid and debilitated, with nausea and efforts to vomit. The appetite becomes impaired, and a general sense of soreness and stiffness is felt. These symptoms increase for several days, with chilly sensations, the hog seeking the warmest spot that it can find, alternated with flushes of heat. It may remain from two to three or four days.

With the development of reaction, the pulse becomes frequent, full, and open or soft and weak, in some cases soft and easily compressed; or, if of a nervous character, quick and sharp. The tongue is generally loaded with a dirty mucus, and is broad, soft, flabby, and moist, sometimes coated in the center, but with reddened tip and edges. There is also great thirst. In some cases the

tongue is heavily loaded, especially at the base. There appears to be oppression about the belly, indicating morbid accumulations in the stomach. The urine is slightly diminished in quantity, appears turbid and frothy, but does not deposit a sediment. The bowels are frequently natural as to frequency of stools, but extremely susceptible to the action of medicine. The discharges are thin, pale, and frothy. The temperature of the surface varies greatly; sometimes it is intensely hot and pungent, but more frequently slightly increased, with tendency to cold extremities. The countenance is dull, pallid, and shrunk; the eyes heavy and devoid of luster. The hog sometimes exhibits great uneasiness and restlessness, changing its position frequently, but at others is torpid and impressible. The respiration is frequently only little affected, especially for the first two or three days, but sometimes fre quent and depressive.

By the 4th to the 6th day, we notice that the head has become affected; that the mind has become confused. The respiration has become affected and is short and quick, or labored and depressed. In many cases ulceration of the bowels manifests itself; the bowels are irregular; two to five or six evacuations or more during the day, watery, yellow, clay-colored, frothy, and fetid. The urine is but little diminished in quantity, but is pale and frothy, resembling whey. Pressure upon the bowels appears to produce great pain.

By the 7th or 8th day, the bowels have become quite loose, the operations frequent and difficult to arrest, with increase tenderness on pressure. The coatings of the tongue has gradually been changing its color, and is now brown, somewhat fissured, or sometimes the coating has disappeared and the tongue is dry, red, glossy, dark, and mucus commences to appear upon the teeth and lips Typhomania has now become fully developed. The hog appears half asleep, then follows considerable restleness Sometimes it appears in a profound stupor, but is aroused

and springs suddenly from its bed, only to sink down again in its former condition. Usually about the fifth day a rose colored eruption makes its appearance on the neck, flanks, and on the belly. This eruption manifests itself in small rose-colored spots, from the size of a pin head, to that of a small pea. The color disappears upon pressure of the finger, but returns when the pressure is removed. Malaria sometimes makes its appearance at this time in the shape of minute vesicles filled with limpid serum. The hog by this time has become entirely prostrated. The diarrhœa becomes worse, the discharges being dark, fetid, and very offensive, and the abdomen very much distended; the coating on the tongue black, and the teeth and lips covered with a dark, offensive excretion or matter from the stomach. The prostation is extreme, the stupor profound, and in this condition the hog dies, often without a struggle.

Treatment.—The object of treatment at first is the arrest of the fever, and this can done in a majority of cases by the 4th or 5th day and before the severe symptoms take place.

If there is evidence of morbid accumulation in the stomach, it must be removed, or all treatment will be unsuccessful. I know from personal observation where the stomach is thus oppressed. Typhoid symptoms rapidly supervene and the hog is almost sure to die. Further, such accumulations in the stomach prove the cause of the rapid development of the inflammation of the intestines in many cases. In such cases an emetic should precede every other treatment. Lobelia and capsicum are my favorite agents. If there is great prostration a stimulant should be added to it, and a bath of fairly strong lye and salt (the salt to be dissolved in the lye) poured over the surface with a water sprinkler, so as to equalize the bath over the body, which should be continued once each day afterwards—the bath to be moderately warm. As soon as the emetic has ceased to act, sedatives should be ad-

ministered in sufficient doses to continue the influence produced by the emetic. If, in the early part of the disease, the bronchial mucous membranes or lungs become affected, the same treatment should be given with a counter-irritant. In such cases give 60 drops of tincture of aconite to a grown hog, in a gill of water. Repeat it every hour. If the skin is hot, use the alkali bath.

If there is tendency to coldness of the extremities, add a little capsicum to the bath. The extremities must be kept warm or the treatment will fail. You will notice that these remedies decrease the frequency of the pulse, but it becomes more full and stronger—especially better far from the heart. At last the pulse, coming down to 80 or 90 beats per minute, we observe evidence of commencing secretion. Now diuretics and diaphoretics may be advantageously employed, the sedatives being continued in doses just sufficient to maintain their effect. I have used marsh mallow and spearmint as a tea, which the hog drinks very readily. For a diuretic you can use a teaspoonful of nitre, dissolving it in the tea just spoken of, which will be more agreeable to the taste of the hog.

When secretion has commenced, but not before, use Peruvian bark in the tea as a tonic. Furnish them with any food that would be easily digested.

If diarrhœa should be present, give tincture of xanthoxylon in 4 teaspoonfuls and four grains geranium—which is about the best thing that I have used.

To the herd of willing feeders, give the prescription under the head of typhus fever. Feed twice a day until you have a healthy action of the stomach and bowels.

CHAPTER XLVII.

HOG POX.

I give it this name for the want of a better one. But it is so near resembling in its manifestation and symptoms that of small pox fever, as described by different authors, that I venture to say that it is one and the same disease called hog or small pox. It is always caused (as laid down by our authors) or communicated by contagion—that is, caught from other hogs that have it. It is divided by medical writers into two kinds: the distinct and confluent, but is the same disease in different degrees of severity. The distinct form is the mildest, where the pustules or scabs are fewer, distinct from each other, and do not run together. On the other hand it is said to be confluent when the pustules run together and form a continuous scab.

When the virus has once been taken into the system, the disease cannot be prevented, so far as my experience and observation goes among willing feeders, or greatly modified—at least either by immediate vaccination or by a course of diet and preparation of the system. It is necessary to understand the premonitory symptoms. As soon as it is known that a hog has the disease, or been exposed in any way to it, the hog or hogs should be iso-

.ated from the herd, put on the lightest diet possible, and purged frequently.

As for vaccination in the ordinary way, I regard this impracticable. My mode of vaccination is never to move a dead hog out of the pens. I usually cut it up into pieces, salt it well, and, if I can get it, put over the meat strong wood ashes or bicarbonate of soda, with the prescription that will follow this article.

Symptoms.—Premonitory or first symptoms are chill and fever. After the second or third day, eruptions break out on the surface, about the neck and shoulders, and apparently great pain over the kidneys, with apparent pain in the head, dislike of motion, nausea and vomiting, thirst and stupor. The fever continues. On the second to the fourth day the neck and breast is covered with small spots like flea bites, which increase for four or five days, during which time the eruptions appear more or less over the whole body. It is usually worse from the shoulders forward. Usually from the seventh to the tenth day the process of suppuration has ceased, or formation of matter is complete. From about the 11th to the 13th day inflammation subsides and the pustules begin to decline, dry up, and scale off.

Treatment.—It is a disease that requires mild treatment with simple remedies. In the first stage, before the eruptions make their appearance, you may not be able to tell whether it is small pox or some other febrile disease, but the treatment should be about the same in either case. If there be vomiting, give them soda in the water they drink. After the stomach is quieted, give a purgative of mandrake and scammony of equal parts, with a small portion of capsicum. Bathe the skin frequently through a water sprinkled with a little weak lye water, as warm as can be borne. Repeat the bath two or three times each day. To aid in removing the phlegm and mucus from the throat, give borax water, made a little salty. If there is prostration and debility, give them a big spoon-

ful of Peruvian bark—less to smaller hogs. Keep the bowels gently open during the whole course of the disease.

This prescription should be fed to the willing feeders to prepare them for the attack. Feed from two to three times each day, according to the virulence of the disease:

Horehound, 2 pounds;
Bicarbonate Soda, 1 pound;
Blood Root, ½ pound;
Mandrake, ½ pound;
Queen of the Meadow, ½ pound;
Pink Root, ½ pound;
Quassia, ½ pound;
Scammony, ½ pound.

This prescription should be fed on shelled corn or oats, in troughs with sufficient room for all without being crowded. Feed until bowels are freely moved, then feed once every day for a week, then twice a week for two weeks.

CHAPTER XLVIII.

INFLAMMATORY FEVER.

This disease comes on after a severe shivering or shaking, really a hard ague, followed by a steady increase of heat, the pulse becoming stronger. There appears to be great pain over the whole organism, with much anxiety, followed by redness of the surface, while the heat still increases, followed by thirst that cannot be satisfied. The tongue is covered with a white fur, the pulse beats from 90 to 120 or 130 a minute; hurried or great oppression of breathing; soreness of stomach; skin dry and hot; the eyes inflamed and incapable of bearing the light, making it disposed to stick its head into any dark corner; the urine scanty, highly colored, and depositing a red sediment; bowels very costive. There is usually some abatement of the fever at evening and night.

This disease runs its course in from 4 to 10 days, usually ending with death, attended with diarrhœa, bleeding of the nose, or by copious discharges of urine in which is deposited the red sediment.

If it does not pass off in this way, it changes to a typhoid form, and then it should be treated as under that head.

Causes.—The causes that produce this fever are

sudden changes from heat to cold, which check perspiration when warm. The drinking of cold water so usually given by the farmer at noon when in from his work when the hog is already overheated by the burning rays of a summer's sun, not being protected by a shade, outward inflammations, stoppage of certain evacuations, costiveness, sudden stoppage of perspiration on the skin, sudden check of any of the secretions, may produce this disease.

Treatment.—I have found cooling applications poured on the head, not in any great quantity, but let it slowly drop as a shower bath from a vessel punctured with holes for the purpose, will allay the febrile excitement, and will usually be a great relief to the animal; and it will be received as if appreciated by his hogship. This should be continued until the fever subsides. When the hog experiences any chilly sensation, it will leave, but will return if the fever makes its appearance.

The great object to be attained in fever is to moderate the force of the circulation and at the same time open the pores of the skin to increase the secretion of urine, and to loosen the bowels.

To do this I have usually used either ipecac or lobelia, given in the water. They drink it, as they are very thirsty. They will not refuse to drink. I think lobelia preferable to ipecac, as they drink it more readily. This should be given often enough to keep up a slight nausea. Give from one to three grains, dissolved in water—that is, proportion the dose to the age and size of the hog. It should not be given too frequently. Care must be taken not to continue the treatment too long. If used with prudence, it often puts an end to the fever of itself. It quiets the nerves and uneasy sensations and induces a pleasant, agreeable sleep. All heating or exciting treatment in the beginning of this disease should be carefully avoided.

A good cathartic dose should then be given, say from 1 to 3 teaspoonfuls of leptander and mandrake, equal

parts, or equal portions of mandrake and scammony, mixed with water or slop. You should administer the doses at all times according to age and size—about 3 teaspoonfuls always to nursing sows.

I have found a small portion of cream tartar, added to the above, an excellent adjutant. It renders it less objectionable to them in their drink or feed. Senna and salts are very cooling physics. It not only relieves the head and tends to allay general fever, but prevents determination of the blood to the lungs and liver, if used with judgment.

A clyster of medical castile soap, injected occasionally with an elastic syringe, thrown high up as possible, cooling drinks, their bedding place well ventilated, with as much quiet around them as possible. The hog will soon recognize its friend and helper, and will be pleased to see you at any time, especially on the return of appetite. Great care is to be observed as to what their feed should be and the quantity given, and how often they are fed. Nature is nature. If a man exercises but little discretion on a return to health in regulating his appetite, you could expect nothing less of a hog. Then regulate their diet; give but little at any one time, but often. This will hold good with any disease.

Diaphoretic medicines should be used—that is, medicines that will promote sweat or perspiration—such as sage tea, boneset balm, ground ivy, pennyroyal, flaxseed, sweet spirits of nitre, etc. These I find to be of great benefit in any continuous fever by determining the circulation to the surface.

Remember in every species of inflammatory fever to use the most simple means to induce perspiration. It is far better than by powerful agents. When these measures are employed and act favorably, they reduce the heat, soften the skin, relieve the head, prevent delirium, and induce sleep and quietness.

I am aware that it is necessary to have recourse to ar-

tificial heat in order to equalize the circulation, also blistering if there appears to be much pain. Under such circumstances I have used coal oil by sprinkling it over the surface of the body; then sifted over this a pretty coat of ground mustard. After the mustard has been there sufficiently long to blister the skin pretty fairly, use the sprinkler with warm water to remove the mustard.

With this course of treatment I have seldom failed of a success in raising the hog to a good, healthy condition. Care should be observed in its diet, together with pure, fresh air and water and fresh bedding.

CHAPTER XLIX.

PROGNOSTICS OF FEVER AMONG SWINE.

Prognostics of fevers is the opinion formed of any particular disease, either favorable or unfavorable. Now, if the reader will be attentive he may be instructed in the art of foretelling what may happen to the hog with respect to the termination or change of the disease, either by death or recovery. This knowledge is very important to one who has never made swine diseases a study as a profession or had experience in practice.

The prognostic of an impending disease may be drawn from the appearance of the countenance, the manner in which the hog is fed, their changes of situation, etc.

If you should see a hog become swallow-weak, with loss of appetite and spirit, no disposition to be moving around, yet restless and uneasy without apparent cause; should these appearances be gradually disclosed with a tinge of yellow, it is possible that obstruction in the liver has taken place.

If more rapidly, with slight shiverings occasionally, a fever threatened.

A regular fever of evenings at a certain time, gradually increasing, with cough, threatens a hectic fever.

A more violent shiver with considerable heat, a continued fever.

A deep redness on the surface about the head, neck, and eyes plainly point out to an accumulation in the head; and these symptoms frequently arise from diseases impeding a free circulation through the lungs, so that the state of these organs must be considered in forming an opinion of the diseases. They often exist together and aggravate each other.

You frequently see hogs with apparent fixed pain and misery in the head. This shows some fixed obstruction prevents the free course of the blood through the organ, followed by convulsions or fits, and sometimes by sudden termination of life, as in appoplexy.

A fullness of the stomach or bloat of the belly are signs of an accumulation, and it depends upon the comparison with other symptoms whether it be obstructions of the viscera (which means the internal organs of the body) or accumulated contents, or merely flatulency or wind.

The prognostics must be regulated by comparing the symptoms of each disease. The mode of raising a hog; its surroundings; its bedding; its feed, water, pasture, and general feed lead us to form some prognostication of impending disorder.

A light feed after having been fed very sumptuously often creates disease. Change of feed not infrequently is a cause, especially if the hog should gormandize.

Close confinement of hogs in the fattening pen is often a cause of disease by compelling them to a sedentary life on high feed without the system being prepared to receive it.

In forming, our opinion as to diseases, our best, most correct information is to be derived from the state of the circulation and respiration, usually known by physicians as the vital animus or natural actions, and prognostics are usually drawn from them, which I shall endeavor to explain:

The vital action is chiefly known by the pulse. The

pulse consists in the reciprocal contraction and dilation of the heart and arteries. By the former, the blood is propelled through every part of the body; therefore great attention is necessary in feeling the pulse, as it often misleads, unless you accustom yourself to examination, and this is not difficult to do if you will pay close attention to the rules I lay down.

First, it is important to consider the age of the hog.

The pulse of the pig for the first three or five months is 100 to 130. From this time until fairly grown, it is from 85 to 100. From diseases and other causes they are subject to great changes or variety.

After a full feed, the pulse becomes quickened. After exercise or any agitation, when they stand, it is quicker than when at rest lying down.

A fat hog always has a weak pulse, because it beats to a great disadvantage beneath a layer of fat. Under these circumstances we must make allowances.

In a thin hog, this error can seldom arise. The pulse can be distinctly felt.

A natural pulse beats from 65 to 85 a minute.

On feeling the pulse, the arteries should be first gently felt, and if any doubt arises whether the pulse is weak, compress the artery strongly with three fingers, then slowly raise the two upermost fingers. If the pulse be strong, and seemingly weak only from compression, the blood rapidly returning will strike fully the finger below; but if it be really weak, it will slowly recover its former force.

When you feel a strong, firm pulse, it is a sign of good health; but if it strikes the finger like a tense cord, it is a sign of approaching disease; if this hardness is increased in frequency, it shows that inflammatory fever is present.

A throbbing pulse, which strikes the finger with apparent but not real firmness will sometimes be mistaken for what is called the hard pulse.

But this has not the same firm resistance that we

have described. It strikes sharply, but not strongly, and the relaxation is as rapid as the pulse is transitory. When there is internal irritation, the throbbing pulse will continue, often to the last showing its peculiar character more strongly. In the commencement of fever, it so often resembles the strong pulse as to deceive. A small pulse will also be taken for a weak unless you have experience or attend strictly to this matter. The lightness of its stroke depends on the small size; sometimes on the depth of the artery. If a pulse be at 55, 50, or lower, there is fear of compression of the brain. A constant pulse of 90 to the minute, rising occasionally to 100, 110, 120, shows much irritation in the system and is not without danger.

If any stage of disease the pulse exceeds 120 for a short time, there is a foundation for apprehension.

An intermitting pulse is a mark of considerable debility, and prognosticates a dangerous disease. It is also a symptom of organic affection. This alarming view of the subject requires some attention, however soon alleviated.

As it would be almost impossible for us to take these symptoms as a standpoint for our judgment in prognosticating the diseases of swine, because we cannot handle them as we do the sick person, we must make up our opinion from some other standpoint. First from its surface appearance, as already described in many instances.

The tongue carries with it many important signs. Whiteness of its surface is a sign of fever; when white and dry, it shows the fever to be more considerable. As the fever progresses, it becomes brown and even black; and these colors are usually seen when the tongue is dry and hard. While the edges continue clean and of their natural speckled appearance, there is very little danger. Indeed, fevers have terminated favorably in my practice in hundreds of instances where the tongue was for many days dark, dry, brown, and even black. When the tongue in the course of fevers sometimes becomes suddenly clean,

and of a shining red, it shows that the fever will continue some time.

A load or weight at the stomach arises from indigestible food or an accumulation of viscid mucus. When the irritability of the stomach is worn out, exhausted by overfeed, such as sour slops, damaged feed. &c., vomiting and costiveness are sure to follow. Vomiting is the connecting symptom between the digestive and secretory organs.

If vomiting is violent and constant, without previous accumulation of bile, it is an unfavorable symptom, generally caused by irritation of the brain; and when from bile, it is distressing. Constant diarrhœa is dangerous, showing debility.

Other prognostics or signs, where the surface of the skin is cold and clammy with perspiration, arising from total relaxation, are generally evident signs of death.

The urine, when highly red, without depositing any sediment, shows a violent and long protracted fever. In general, where there is a scum on the top in the early period of fevers, I have usually found them to be slow and tedious.

In bilious fevers the urine is sometimes of a greenish or dark color, which shows a highly putrid state.

In chronic diseases, such as rheumatism, &c., among swine, and which is becoming more frequent, red urine, depositing a copious red, branny sediment, after standing for a time, is a mark of considerable weakness.

A mucus like the white of an egg is indication of a diseased bladder and is a frequent symptom of gravel and calculus, which means stone.

The nature of the stools is of much importance and they should be frequently examined with attention. Liquid, frothy, watery, or exudation motion, with little color or smell, is a sign pretty generally of tedious fever. When the stools in the beginning smell very offensive and bilious, it, too, may be considered unfavorable; but if the discharges be free and copious, it is rather favorable.

Calomel will, through the whole course of a fever, often produces such motions, because it acts powerfully on the biliary secretions.

Where the hog evacuates small, black, pitch-like motions or stools, it shows weakness in the alimentary canal and biliary system; but when the stools are of a hard excrement and come without much difficulty, looking slick and greasy, like that of a healthy stall-fed steer—that is, showing the food looking natural—shows a speedy recovery to health and strength.

I consider the situation of the hog a dangerous one if the natural appearance of the face and eyes are lost, if there be a pinched up appearance of the face, a glare or vacancy of the eyes, becoming cold on the extremities, twitching or jerking of the nerves. They are at least signs of great debility and weakness, and the earlier they take place in fever the greater will be the danger.

The favorable syptoms and signs of the termination of the disease are these:

The general countenance and appearance of the hog appears unchanged and expression natural. When it expresses to you by a kind, familiar grunt that food would be acceptable, its sleep has been refreshing, the tongue is clean at the edges, the belly looks soft and flabby as if it needed a little nourishing stuffing of sweet slop.

In all cases of fever, if properly managed in the early period of the disease, there are but few instances in which a favorable change does not take place with swine on from the fourth to the tenth day.

From these remarks, and the signs of diseases which I have given, you will, by strict observation while in the pens among diseased hogs, be able to form a favorable or unfavorable opinion as to the termination of the disease. Notice attentively the degrees of debility and other attending circumstances, such as constitution, habits, age, and the severity of the attack.

CHAPTER L.

BOILS.

Boils—called furunculus in surgery—are circumscribed inflammatory swellings under the skin, varying in size from a pigeon egg to a small hen egg. It has a central core. A boil always suppurates or forms matter, and scarcely ever breaks on the hog, the skin being too thick, though susceptible to the sight. They seldom need any treatment except an incision of the knife and a removal of the core with the point of the instrument and rubbing into it with your finger sulphate of zinc. If in fly time, rub over the incision with a paddle a little tar to prevent any deposit from the fly. If there should be several, and the hog costive, give a dose of mandrake and leptander, equal parts.

CHAPTER LI.

CARBUNCLES.

Carbuncles—in medicine called anthrax and furunculus malignans—is a species of malignant boil, being a livid red swelling, which gathers, vesicates, and discharges matter, and tends rapidly to gangrene. Like the boils it cannot discharge its contents unless punctured with a sharp instrument, and then, if of long duration, the matter forms a cheesy-like substance, which finally becomes callous or bony substance, which will have to be removed with the knife, and treated as the boil. (See boil.) They appear on various portions of the body, but most usually about the shoulders, neck, and hams of the hog. They are usually attended with more or less febrile symptoms: thirst, foul tongue, loss of appetite, langor, and restlessness. They occur mostly upon large hogs, and originate from a depraved state of the system. After the above surgical treatment, give to them an active hydrogogue physic—that is, a physic that will produce a watery discharge from the bowels. It would be well to use caustic potash or lunar caustic to burn it, but if you have neither, use sulphate of zinc. Fill the orifice with salt after removing the matter. If it has a tendency to gangrene, or the sore becomes large and angry, inflamed and offensive, wash with pyroligenous acid and tincture of myrrh. The caustic should be applied until the tumor presents a healthy appearance. If fungus or proud flesh appears, apply burnt alum in the orifice or sore.

CHAPTER LII.

WORMS.

There are three distinct classes of worms that infest the hog, two of which are so familiar to the farmer that they need not be illustrated. A description of the two is sufficient.

One is a round, plump worm, large in the center, tapering to either end. This is not a dangerous worm, except among pigs, where they may congregate in the throat like that of a child, choking the pig and stopping their breathing.

The second probes into the smaller intestines, is known as a real tape worm, jointed as the tape worm that infests the human being.

The third is extremely fine, as fine as that of the hair of the mane or tail of the horse, and is entirely overlooked by the common observer. The two latter are the more dangerous and destructive of health and life.

The following remedy will prove efficacious:

Bicarbonate Soda, 1 pound;
Mandrake, ¼ pound;
Male Fern, ¼ pound;
Pink Root, ¼ pound;
Nitre, ¼ pound.

Dose.—Give to a weaned pig ½ teaspoonful, twice each day. Increase in proportion to age until thoroughly cured.

CHAPTER LIII.

LICE OR COMMON MANGE.

This is so well known it needs no description, yet it is a great damage to the growth or thrift of the pig. The best and least expensive remedy that I have tried to rid the swine of is, to place the swine in a close place and saturate them well with coal oil all over. Then with a common seive cover pretty thick with powdered sulphur. Let them remain until the oil has been taken up by the surface. This serves to open the pores of the skin, and at the same time destroys the vermin that infest the surface and cause so much itching and uneasiness to them as to retard the growth and fattening of your swine, and often produce other diseases.

CHAPTER LIV.

ABORTION OF SOWS.

Abortion or miscarriage means a sow losing her pigs before the fourth month of her pregnancy—that is, before her time. Miscarriage involves pain and weakness in addition to the loss of her offspring, and is often a severe trial to the maternal constitution.

It may occur at any period of pregnancy, but particular stages are more liable to the accident than others, at from the sixth to the seventh week and from the tenth to the eleventh. When abortion has taken place once, it is very likely to occur again. Some sows have a very strong tendency that way.

The causes of abortion may exist in the constitution of the sow, being the result of weakness or a diseased condition of the womb, the fœtus or pigs may die by injuries, or by deficient development, when they are cast off like blighted fruit. Suckling after conception, the farmer trying to rear two litters each year, is not infrequently a cause of abortion. Active diseases occurring during pregnancy, such as fevers, severe inflammation, eruptive fevers, &c., are almost certain to occasion evacuation of the uterine contents. Continued diarrhœa and the action of strong purgative medicines, are dangerous or very injurious. All undue agitation of body or mind, certain jerks

or jumps, running to get rid of the dog that you are hissing on, thus disturbing both body and mind, may any of them bring on miscarriage.

Intermittent pains, with discharges of blood from the part, signify that the process has begun. If miscarriage should happen within the first two or three weeks after conception, it might be accomplished with so little inconvenience as to go unobserved, the sow eating her offal.

When miscarriage is going on, the pains increase in force and frequency and continue with a discharge of blood, in fluid or clots, until the ova or first formations of the pigs are expelled, after which both become moderate until they cease altogether, the red flow giving way to a colorless one. It is very important that strict attention be paid. See that every clot is discharged. If they be large, tear the clots in pieces, that you may ascertain whether the contents of the womb are expelled or not, for there is no safety while miscarriage is progressing until it has taken place and everything is cast off.

I would advise where there is a tendency to abortion, let it take place and assist it in doing so. If you should carry them over to full time in 99 cases out of 100 the pigs will be valueless or they may come dead. The same thing being liable in another pregnancy, the best advice that I can give is to fatten the sow and put her on the market.

There are many causes of abortion with the sow that could be avoided with a little humane care for your sows. You can avoid setting your dogs on them or allowing them to be bruised and injured by running with other stock. From the time of pregnancy they should be culled or separated from all other stock and kept to themselves and not too many of them together, especially in very cold weather, or they are apt to pile one upon the other, weight alone being sufficient to produce abortion.

Sows should be kept only in good living condition of flesh, and fed such food as is easily digested. By observing these precautions sows need have no trouble in doing well and delivering to you good, strong, healthy pigs.

CHAPTER LV.

MAKING CHOICE OF BROOD SOWS.

This is a very important point to be considered, as health, strength, and longevity of offspring are necessary to make up your success as a hog producer. As to any one breed having the preference over another, I think that depends very much upon locality. The more northern require a thicker skin and more abundant hair, and *vice versa* with the milder climate; but there is equally as much, if not more, in form, shape, symmetry, former strength, vitality, and general health of the ancestry of the sow and boar.

A sow should have a fairly long body, rather loose and flabby, short legs, belly near the ground, broad, deep chest, short neck, head short, and ears fine, and cut deep on the ham; large bone, selected from a sow that had resisted all disease, every way apparently healthy. The sire should be compactly built, well boned, deep chest, cut well on the ham. The healthiest pigs are dropped from the first of April to the first of May, though they may come sooner if you are well provided for protecting them from stormy, chilly, damp weather by good housing. Avoid having them dropped about old straw piles, barns, and heaps of manure. The pens should be kept

perfectly clean, well ventilated. The sow should be placed in quarters by herself several days before farrowing, that she may become reconciled, fed upon light diet, and supplied with pure water and light feed. There should be but a small amount of bedding, as the pigs are liable to become entangled before they reach the teat, and perish with cold. After she is through with her delivery, never disturb her until she shows signs of hunger or thirst. The least disturbance will often cause her to kill some of the pigs. Her feed should be but little, and that nourishing, until all fever has subsided; for the sow often becomes fevered in the bag, which will check the flow of her milk, and produce weed in the bag, which, if it does not end in death to the sow, will to the pigs, which die of hunger. You had better feed but little at a time, but often. The feed should be increased slowly for a few days.

CHAPTER LVI.

FOR ESPECIAL PERUSAL OF HOG PRODUCERS.

Of all the pigs born throughout the entire country, from one-half to two-thirds die from two weeks to two months old. It is a sort of mockery of creative wisdom to suppose that this is unavoidable. The great mortality among pigs in a great measure can be averted by proper treatment, both of the mother and the sire, of which I have already spoken. The approximate causes of death in pigging are very numerous. Such is the extreme delicacy of the little tenement of life that even the smallest injury, something that might be unforseen, will often prove fatal. It is certain, however, that there is a greater likelihood of preserving the lives of your pigs when proper care is taken for that purpose than where there is no care. It behooves every hog producer to educate himself on those points which chiefly affect the health of his pigs, for without pigs you cannot have hogs.

Hog men—I mean those who pretend to produce them—do not act upon regular principles in the early care and nurture of their pigs. The lower class are extremely ignorant, and delight in being so. They are the class spoken of by the poet when he says, "A little learning is a dangerous thing." They are not only ignorant,

but often superstitious, and are far from being cleanly in their own habits about their houses, kitchens, etc., though they have an outward show for fine houses, barns, etc. Look extremely well about their barns, cow, and hog houses. They are filthy in the extreme; yet he has no time to clean them; at his odd moments he can find some business in town. They, too, are often superstitious. As they are far from being cleanly themselves, they have no thought or care for their swine. What is termed the higher class, who are more condemnable than the other, as they at least affect to be intelligent, often pay less regard to the cleanliness of their out door affairs, in keeping everything neat and tidy than the other class. Either one of the characters lacks much of being model farmers. While the one makes no pretentions, the other is but a *pretender*. The pretender paying far less attention to the necessary wants of his dumb animals than the other, yet is always ready to make a show of himself, his beautiful daughters, and sprightly sons. They are painted, powdered, puffed, and ride in splendid buggies, while their stock at home is suffering for water to cool their parched tongues.

So we see those pretenders of a higher class, even church-going and praying people, are as culpable, careless, and regardless of their swine as those who make little or no pretensions. In fact, they live and die in pretension and style, and when their administrator finally winds up their estate he finds it insolvent. Thus they pass away as little respected as the hogs they so inhumanly treated, and without money enough to make a jingle on a tombstone.

Swine are often given over to the tender mercy of a hired hand who has no interest in them, or to some don't-care son, instead of being looked after by the owner himself.

My observations are that the farmer who is not above his business, who possesses a sufficient degree of common

sense, and is not afraid to spend a dollar for the general benefit of his swine, and pays that care and attention to them that is humane and necessary, can make a success in the business. If it doesn't pay, as many of you pretend, it would be far better to make no pretensions.

If there be one law of God more obligatory than another, it is that which is laid upon the stockmen of our country to rear with scrupulous care that which has been so graciously bestowed upon us, and upon which we are dependent for our very existence, as a matter of food. What should be said of a man that recklessly—I say recklessly, for I mean it—resigns this trust to others and leaves his swine to fall victims to an improper mode of treatment and their general systems corrupted and diseased, all of which can be avoided by proper care.

Then the starting point to success is, as I have before suggested, pure air, especially in their sleeping arrangements. To keep them in closely-confined pens is certainly injurious to their health, so that when they are exposed to anything like ordinary temperature they are liable to colds.

From the nature of the infant pig and the adaptation of the milk to its growth and development, it is obvious that it ought to have that full and regular supply of fluid which the nourishment of the pig's constitution requires. Hence the necessity and importance, in the event of the absolute incapacity of the mother, from debility or sickness, to give sufficient nourishment to her pigs. It then becomes necessary to furnish other food that would be most wholesome until the health of the sow can be restored and a full flow of milk established for their support, which subject is treated elsewhere under its proper heading.

There are certain adaptations of the mother to the constitution of her own offspring which render her its best nurse, and unless there be sufficiently strong reasons for dissolving their connection, this natural adaptation

should be preferred unchanged. When the pig is newly-born, digestion is weak in its first performance, and it attains strength only with the increasing physical development of the system. On this account the milk of the mother at its birth is weak, watery, and easily digested. As the pig becomer older, say three or four weeks, it has grown considerably; its waste has become greater and its power of digestion to supply is much increased. On this account the milk of the mother becomes much stronger with the age of the pig, so as to yield a greater amount of nourishment in less bulk than formerly. Now, if this be not kept in view, powerful and serious consequences might ensue if new-born pigs were suckled by a sow not their mother that had been giving milk for weeks.

TESTIMONIALS.

The following testimonials, covering a period of many years, show the uniform success attending the author's treatment of diseased swine in various places:

COTTON HILL, Ill., July 8, 1870.

During January, 1868, Dr. G. W. Kinney treated 87 hogs for me that were dying very rapidly with what is known as cholera. His remedies worked like a charm. He soon restored them to health with the bare loss of 8. It amounted to a success.

FILLIMAN STOUT.

SPRINGFIELD, Ill., Jan. 3, 1864.

Mr. G. W. Kinney treated two beautiful shoats that were stricken with cholera. They refused any food or drink. He drenched them. Unexpectedly to me they recovered and made fine hogs.

JAMES RAYBURN.

PANA, Ill., June 8, 1875.

I have given G. W. Kinney's Remedies a careful test in several instances, with good success. I feel no delicacy in recommending him to others. JOHN BOGUE.

Woodside, Sangamon County, Ill., Aug. 6, 1870.

In February, 1869, G. W. Kinney treated 120 hogs for me that had cholera. I had lost about 30 before his treatment. Lost two while being treated. The others recovered and did well.

Geo. W. Trambaugh.

Champaign, Ill, June 7, 1867.

In June last year I was feeding 23 hogs from the offal of my table. Was at that time proprietor of the Doane House of this city. Said hogs became badly diseased. Mr. G. W. Kinney treated them one week, at the end of which time they had recovered, and continued to thrive nicely.

B. Burrows.

Champaign, Ill., July 7, 1867.

Plank & Ward, agents of G. W. Kinney, treated a herd of hogs for me that had cholera. They were bad cases. They numbered 86. They restored them to health without the loss of a single hog.

Wm. Shepherd.

Champaign, Ill., July 16, 1867.

James Rayburn, of Springfield, Ill., furnished me some of Mr. G. W. Kinney's Hog Cholera Specific in January, 1863, which I used on a bunch of hogs, and found it to be as good as recommended.

S. H. Busey.

Pana, Christian county, Ill.

I have used Mr. Kinney's Remedies for Swine disease for the past 12 years, and can pronounce them a success.

S. M. Myers.

MAHOMET, Champaign Co., Ill., Sept. 10, 1869.

In June, '67, Mr. G. W. Kinney treated 180 hogs for me that had cholera. I had lost 30. They were dying 2 and 3 a day. He carried them through with the loss of only 3. I never had hogs to feed out better.

HENRY S. ORR.

HOMER, Ill., Oct. 2, 1869.

In April, 1867, Mr. G. W. Kinney treated 143 hogs for me. They were dying daily. He restored them tc health with the loss of five. They fattened finely afterterward.

JOHN INSLEY.

PANA, Ill., Jan. 3, 1885.

While living in Clay county, Ill., near Louisville, Mr. Kinney treated about 100 hogs for me in the year 1871. Said hogs were in as bad condition as hogs could be to live, although well fed. They were walking skeletons. I had lost several before his undertaking. He lost four afterward. The remainder fatted up finely.

N. B. CHALFANT.

PARKERSBURG, Ill., Dec. 8, 1868.

Dr. G. W. Kinney about one year ago treated 130 hogs for us that were badly diseased. They appeared delirious, as if there was an affection of the brain. Some were stiff. There was ulceration of the foot; also coughing and wheezing with difficult respiration. In a word, they appeared afflicted in every conceivable shape that could be thought of. He had good success in restoring them to health. He lost only six. We can with pleasure recommend him to others.

PARKER & ALTHOUSE.

LOUISVILLE, Ill., June 15, 1864.

In April, 1864, Dr. G. W. Kinney treated 80 odd hogs for me that had cholera. I had lost several; cannot say just how many. The flock was made up of sows and pigs. He did an excellent job, having lost only two pigs.

JAMES BOGARD.

TAYLORVILLE, Ill., June 8, 1886.

Mr. G. W. Kinney treated for me last season 23 beautiful thorough-bred Poland shoats, that I had taken much pride in, for the disease called cholera alias lung fever. I had lost 3 before treatment. I do not think there was a sound hog among my flock. They were very bad. He succeeded in saving all but 2. I sold the others at handsome prices for stock hogs. I can in all sincerity recommend Mr. Kinney to others.

HIRAM P. SHUMWAY.

NOKOMIS, Ill., Feb. 7, 1888.

I have used Mr. G. W. Kinney's Remedies for hogs for several years, and often in extreme cases with good success. Previous to its use I could have no luck at all. If I got up a good bunch of shoats they were sure to go back on me. I lay all of my good luck to the use of his remedies.

J. R. SKINNER.

MOAWEQUA, Ill., May 28, 1877.

During last season, in May, Mr. G. W. Kinney treated 150 hogs for me that had cholera, and that bad, losing two and three each day. He checked its ravages immediately. After 48 hours, my hogs began to improve rapidly and continued so to do until I marketed them. He lost five.

PETER BILYEU.

ASSUMPTION, Ill., April, 1872.

During last January, Mr. G. W. Kinney treated about 130 hogs for me. Though well fed they were mere walking shadows. His treatment was a success. He lost but three. I can recommend him to all swine producers.

ISAIAH POUDER.

HARVEL, Ill., May 7, 1887.

In the Spring of 1876 Mr. G. W. Kinney treated the first lot of hogs for me. My loss was very heavy before his treatment. I had over 200 before they became diseased. I had lost about one third before Mr. Kinney began treating them, and they were dying daily. They appeared to be rotten before death. With this lot of hogs he lost one. He has treated probably as many as 1000 since. I have been very successful ever since under his treatment.

W. W. WHITLAW.

TAYLORVILLE, Ill., Feb. 10, 1886.

Mr. Kinney treated for us all told some 600 hogs. These hogs were treated at different times and in different bunches. To make an estimate of our losses while under treatment, we would place it at about 6 per cent. His losses were nearly all suckling pigs. We think him a success.

GOODEN & BRO.

TAYLORVILLE, Ill., Jan 13, 1887.

In December, 1886, G. W. Kinney treated 200 hogs for me which he treated with good success, having lost but one. The year previous to this the disease had about killed all on the farm, it being badly impregnated with disease. My hogs done well afterward. It amounts to a success.

W. T. HEWITT.

ASSUMPTION, Ill., July, 1876.

Mr. G. W. Kinney treated 150 hogs for me that were very badly diseased. I had lost several. He was very successful. He lost four. I was very well satisfied with his treatment.

THOS. WALLACE.

MORRISONVILLE, Ill., May 10, 1889.

In May and June, 1886, Mr. G. W. Kinney treated about 100 diseased hogs for me. There was not a sound hog in the whole herd. It seemed as if they were all stricken at once. Many of them refused their feed. I thought if the Doctor could pull through half of them it would be well done, but to my astonishment he did not lose a single hog. I can with sincerity recommend him to the swine growers of the county.

S. B. HARRISON.

MORRISONVILLE, Ill., August 16, 1886.

I had a lot of hogs that were in very bad condition. I had lost eight before Mr. Kinney began treating them. They were dying daily. I had about made up my mind that they would all die. My last resort was Dr. Kinney. He restored them to health with the loss of five. I count him a success.

ABEL FUNDERBURG.

EDINBURG, Ill., March 2, 1872.

In January, 1869, Dr. G. W. Kinney treated 56 hogs for me, all that I had left out of about 100. They were still dying daily. He treated them about 10 days, at the end of which time there was a marked difference for the better. They began to feed up and thrived finely afterward. He lost only three. This satisfied me that there was a cure for swine cholera.

PATRICK COOPER.

TAYLORVILLE, Ill., June 12, 1885.

I have been acquainted with Mr. G. W. Kinney for the past 15 years; have sold him drugs for his practice, and that he is a better posted person upon the diseases of hogs than any man that I have ever met.

A. SEAMAN, Druggist.

PAXTON, Ill., Nov. 1, 1867.

During the month of July, 1866, Mr. G. W. Kinney treated 265 hogs for me that had cholera, all that I had left out of 400. These hogs were dying every day, from 5 to 10. Mr. Kenney treated them two weeks, during which time he lost 9. The others recruited up and did well afterward.

DR. J. E. DAVIS.

CLAY CITY, Ill., 1865.

In 1864 I had a fine herd of thin rind hogs, one among the best stocks of hogs, which I had imported from Ohio, that were seriously and fatally being ravaged with cholera. I called to my relief the renowned Hog Doctor, G. W. Kinney, who soon gave them permanent relief. I never had hogs to do better afterwards. This experiment made me a strong believer in his remedies.

THOS. BOTHWELL.

CLAY CITY, Ill., 1865.

Dr. G. W. Kinney treated over 100 hogs for me. They were in the worst shape that I had ever witnessed before—puking, purging, reeling, and tumbling about in every conceivable shape. As there was talk of mad dog, I felt pretty certain that they were bitten. The Doctor contended not. He treated them one week, at the end of which time they were feeding up all right. He lost seven.

JEREMIAH MCKINNEY.

FLORA, Ill., April 14, 1870.

I was feeding some 30 shoats from the offal of my table when they become violently attacked with cholera. There did not appear to be a sound one among them. Dr. G. W. Kinney treated them. At the end of one week they began to feed up and done fine afterward.

JAMES MAJOR.

FLORA, Ill., May 7, 1870.

I have always taken a great deal of pride in hog raising and having good ones. The hog cholera became so common, killing off my hogs, that I was almost discouraged; but hearing of the fame of Dr. G. W. Kinney, I concluded to give him a trial. So I did, on something over 100 head, at the time they were dying 2 and 3 each day. He succeeded in carrying them through with the loss of 2. I tell you, friends, you need not be afraid of him. He is all right.

ALLEN LANDERS.

PALMER, Ill., Sept. 8, 1887.

Mr. Kiney treated a bunch of 60 odd hogs. They were what I would call bad cases. He lost one; the others done well afterward.

A. M. HEWITT.

TAYLORVILLE, Ill., July 2, 1884.

In 1875 G. W. Kinney treated 80 head of hogs for me diseased with cholera. He lost none. His treatment I consider good.

S. E. BAUGHMAN.

OWANECO, Ill., Dec. 20, 1872.

I have used G. W. Kinney's Hog Remedies with good success.

JOHN HUNTER.

EDINBURG, June 18, 1885.

The first 100 hogs treated by Mr. Kinney on our farm was for my husband in 1885; the second lot was for me in 1887, consisting of 60 head. He was entirely successful, not losing a single case.

MRS. JOHANNA MALUGIN.

MILLERSVILLE, Ill., Aug. 2, 1876.

Mr. Kinney treated a lot of badly diseased hogs for me about one year ago. He had fine success he lost one only.

S. M. MOORE.

TAYLORVILLE, Ill., July 6, 1887.

Mr. G. W. Kinney treated 80 head of hogs for me in 1868 that had what is known as cholera. He was successful in conquering the disease without the loss of a hog. I cheerfully reccommend him to others.

A. J. WILLEY.

SHARPSBURG, Ill., June 1, 1865.

Mr. Kinney treated 85 hogs that were following my fat cattle. The disease had made inroads on them, having lost several. In fact, I thought that I would lose all. Mr. Kinney pulled them through with the loss of two.

HENRY SHARP.

TAYLORVILLE, Ill., Jan 14, 1888.

As near as I can remember I had nearly 100 hogs when Mr. Kinney commenced treating them. I had lost some and the others were in a bad condition—red-eyed, dumpish, etc. Mr. Kinney straightened them out. I have been free from the disease ever since they were treated in December, 1885.

M. SHELDEN.

ENFIELD, Ill., May 10, 1884.

Dr. G. W. Kinney treated a beautiful bunch of hogs for us that had become badly diseased. He succeeded in saving them without any loss.

Yours Truly, LAND & EUBANK

XENIA, Ill., March 3, 1871.

In February, 1870, out of a lot of feeding hogs that I had bought I had lost some 40 odd with cholera. The mortality was so rapid that I had concluded on losing all. I however employed Dr. Kinney (though a skeptic) to treat the remainder, and entirely unexpectedly to me he carried them through with the loss of only five. The others began to improve so rapidly that I and my neighbors could only look upon them with astonishment.

HARVEY FRANK.

XENIA, Ill., March 3, 1871.

I was feeding some 200 hogs in an adjoining lot with my neighbor, Harvey Frank, which were in a few days afterward attacked. Dr. Kinney treated my hogs with equal success. He is certainly the man for the age in a hog pen.

JACKSON BARKER.

ENFIELD, Ill., Sept. 6, 1884.

In the Spring of 1883, we had a fine lot of hogs feeding from the offal of our mill. They became diseased and had already commenced dying rapidly. We secured the services of George W. Kinney. After 24 hours they ceased dying, began improving very rapidly, and we never had hogs to do any better afterward. After marketing them we bought up another lot, which were similarly afflicted. He treated them with equal success.

ORR & BRO.

GRAYVILLE, Ill., May 16, 1862.

Dr. G. W. Kinney treated some 80 odd hogs for me for cholera. They were dying every day. I had lost between 15 and 20. He lost 5 out of what was left. I feel more than satisfied with his success. I cheerfully recommend him as a success.

HENRY CHERRY.

HILLSBORO, Ill., Jan., 1868.

Mr. G. W. Kinney treated 36 hogs for me that had cholera. They were bad. He lost none.

ROBERT SIMS.

HILLSBORO, Ill., Feb. 28, 1886.

Mr. G. W. Kinney treated about 50 diseased hogs for me during the summer of 1878. I lost one.

HIRAM LONG.

HILLSBORO, Ill., Feb. 23, 1886

G. W. Kinney treated 56 hogs for me that were badly diseased. He lost one.

ALEXANDER SIMS.

HILLSBORO, Ill., Feb. 24, 1886.

Mr. G. W. Kinney treated 45 badly diseased hogs, out of which number I lost one.

CHARLES LIPE.

NOKOMIS, Ill., September 3, 1883.

Dr. G. W. Kinney treated 60 head of hogs for me that were violently attacked with cholera. After one week's treatment, they improved rapidly and continued so until marketed.

HENRY WANSING.

HILLSBORO, Ill., Sept 3, 1884.

I reside in the city; feed a few hogs for family use. Mr. Kinney treated eight for me that were badly stricken. I lost two before treatment; none afterward.

R. W. MASON.

NOKOMIS, Ill., July 15, 1885.

Mr. G. W. Kinney has treated all told as many as 800 hogs for me at different times. I have used his Remedies for the past 10 years with the greatest satisfaction, having had the best of success in that time. Previous to his having treated hogs for me, I had no success whatever. I am happy to say to the public that there is a reliable Specific for both the prevention and cure of the diseases among swine.

Yours Truly E. R. SKINNER.

FILMORE, Ill., Feb. 27, 1878.

Mr. Kinney treated about 200 hogs for me in May, 1887. They were in as bad shape as I ever saw hogs to live at all. They appeared to be diseased in every conceivable shape, yet the Doctor brought them over safely, losing only seven.

JOHN H. WHITE.

HILLSBORO, Ill., May 3, 1887.

Mr. G. W. Kinney has treated three different herds of hogs for me in the past 10 years, numbering in all about 250 hogs, some diseased differently from others. It was very complicated—some of the throat, some of the lungs, and others of the liver and digestive and urinal organs. Each experiment proved to be more than successful, he having lost but two hogs. I must say that I have the utmost confidence in his skill as a swine physician.

MAYFIELD TRUITT.

HILLSBORO, June 25, 1886.

G. W. Kinney treated some 60 odd hogs for my father with good success and has since treated several herds for me with like success, except one which he stated had a disease new to him that he was a little doubtful of. His heavy loss was in this. Taking all in consideration I call them taken together a success.

GEO. SIMS.

HILLSBORO, Ill., June 30, 1878.

Mr. Kinney treated 12 head of beautiful Chester Whites for me that I thought I must lose. He saved them. At the Fair I took the blue ribbon on them and feel satisfied to recommend the Doctor to those that it may concern.

LOUIS WAGNER.

HILLSBORO, Ill., June 23, 1885.

Mr. Kinney treated 68 hogs for us that were badly diseased. We lost 18 or 20 before treatment; lost none afterward.

NELSON & WHITE.

McLEANSBORO, Ill., July 4, 1884.

We are feeders and shippers of hogs. In April, 1883, we were feeding about 200 head of hogs. The hog fever broke out among our herd. After having lost some 15 or 20, the disease having apparently made a dead set on us, we secured the services of Dr. G. W. Kinney. Apparently with a good deal of doubt in his own mind as to the results, he succeeded in checking its ravages with the loss of only five. The others permanently recovered and did well afterward. We would say to those interested that there is no humbug about him.

BURTON & COKER.

RINARD, Ill., July 9, 1881.

I am a general shipper of hogs. Buy them in any condition, fat or poor. Those that are not fit to ship are placed upon the farm and put upon feed among my stock and feed hogs. The disease known as cholera, though more properly lung fever, commenced its ravages. My number was about 700. Though the mortality was great before he began treating them, he succeeded in 24 hours in checking it. My hogs fed up and done well afterward.

T. R. SENTER.

SALEM, Ill., Nov. 18, 1886.

About one year ago the disease, cholera, commenced making sad havoc among a beautiful herd of swine in which I took much pride. I at once procured medicine from Dr. G. W. Kinney, which I fed to them with the best of results. They improved rapidly and did well afterward. I have every confidence in his ability as a swine physician.

SILAS L. BRYANT.

JEFFERSONVILLE, Ill., June 7, 1881.

Dr. G. W. Kinney has in the past few years treated several herds of hogs for me and my neighbors. He has given universal satisfaction. They all speak well of him as a swine physician and wish him success in his undertaking. We regard him as the man for the emergency of bringing this destructive disease and its remedies intelligibly before the people.

NATHAN SIDWELL.

WAYNE CITY, Ill., August 17, 1880.

Dr. G. W. Kinney treated for me 46 hogs. Had lost several before treatment. They were dying daily. He lost one. It proved a success.

ENNIS MAYBERRY.

OLNEY, Ill., June 8, 1864.

I picked 46 badly diseased hogs out of a lot of over 100 for Dr. Kinney to experiment upon. They were really test cases, such as I had no hopes of recovery with or without treatment. My hired men attending or feeding reported losses daily. To my astonishment, at the end of 10 days, I found that they had entirely recovered, and were feeding all right. He lost one. I would earnestly recommend him to the swine growers of the county.

ALEX. L. BYERS.

SHARPSBURG, Ill, 1868.

G. W. Kinney treated about 100 hogs for me that were badly stricken with cholera. I had lost 35 or 40 before he commenced treating them. They were dying daily. He cured them, losing only one. It was a grand success.

JOHN SHARP.

ZIFF, Wayne Co., Ill., August 3, 1880.

Dr. G. W. Kinney has treated for the past 8 or 10 years back a great many hogs for me and my neighbors We all agree in one thing—that he is the man of the age among diseased hogs. May he live long and continue his good work.

LEWIS BRUMMETT.

KEENVILLE, Ill., Sept. 25, 1880.

Dr. G. W. Kinney treated over 100 hogs for me that were badly diseased. They were dying daily. I had lost before his undertaking some 25 or 30. He lost four. This satisfied me that he understands his business.

GEO. W. SMOTHERS.

FAIRFIELD, Ill., Sept. 10, 1883.

Dr. G. W. Kinney since 1860 to the present date, 1883, has treated for me as much as 500 hogs. The percentage of his losses was slight—say about from 2 to 4 per cent—might be a little above or a little below. However, I count it a success.

ALEX. J. HUSSELTON.

FAIRFIELD, Ill., March 10, 1868.

Mr. G. W. Kinney treated for me eight beautiful hogs that were badly diseased. My only hope of success in raising them was with Dr. Kinney. He succeeded in restoring them to health. They fatted out finely afterward.

R. P. HANNAH.

MOUNT ERIE, Ill., Nov. 1, 1870.

Dr. G. W. Kinney treated in March last 70 odd hogs for me that were badly diseased with cholera. I had lost several previous to his undertaking. I was one of many who had no confidence in any cure, but he completely knocked the skepticism out of me. He succeeded in curing them without any loss. They fatted out finely. Try him; he will convince you as he has me.

RICHARD PORTERFIELD.

CLAY CITY, Ill., 1868.

From November, 1860, to March, 1867, Mr. G. W. Kinney treated, all told, about 300 hogs for me afflicted with what is known as cholera. In some instances they were very bad, dying daily. He appeared in each trial master of the disease. I would place the losses at about 3 per cent. Mr. Kinney gave me entire satisfaction, and I can recommend him to those it may concern.

HANNAH HUSSELTON.

ENFIELD, Ill., March 8, 1884.

We, the undersigned, committee appointed at the Macalgin Schoolhouse, in Hamilton county, Ill., would report that out of 56 hogs belonging to Ben Taylor treated by Dr. G. W. Kinney, 47 for James Taylor, 68 treated for Macalgin, 36 for John Lester, and 72 for Capt. James Lester, he lost only 6. Your committee report a success and a vote of thanks to Mr. Kinney and desire for his future welfare.

BEN. TAYLOR,
JAMES MACALGIN,
JAMES LESTER,
JOHN LESTER,
JAMES TAYLOR.

WOODSIDE, Ill., April 13, 1873.

In April, 1872, G. W. Kinney treated 175 hogs for me that were dying with cholera. I had been losing pretty heavy. I had quite a number that refused food. The Doctor proved himself equal to the emergency. He pulled them through with the loss of five, which I consider a good send off for me as well as himself.

JAMES BRIDGES.

SHERMAN, Ill., February, 1864.

Mr. G. W. Kinney, who has petitioned the Legislature and Executive Board of the State for an appropriation to enable him to give to the public his treatise on hog cholera, was sent by the Board of Committee to treat a herd for me consisting of over 100. These hogs were dying daily. I had lost about 30. He treated them successfully, having lost three. The others continued to do well afterward. I can with pleasure recommend him to others.

GEORGE POWERS.

ATWATER, Ill., Nov. 15, 1886.

In May, 1885, Mr. G. W. Kinney treated 10 hogs that I had left out of 40. One died under treatment. They have done well to this date.

C. W. SMITH.

LOAMI, Sangamon Co., Ill.

In the Spring of 1879, Mr. G. W. Kinney treated 40 head of hogs for me that had cholera. I had lost 30 when he commenced. I had no idea of him saving half of them, but to my astonishment he did not lose a hog.

HENRY KINNEY.

ATWATER, Ill., June 3, 1889.

Mr. G. W. Kinney has treated several herds of hogs for me since 1885, in which year he treated 70; in 1889 he treated 47, and in each instance he proved a success.

W. D. BASSHAM.

ATWATER, Ill., November, 1889.

In April, 1884, Dr. Geo. W. Kinney treated 16 hogs for me, all that I had left out of 87. These refused their feed and looked as if they had come out of the scalding tub—their hair had all slipped off of them. Since that time I have used his Remedies with excellent success.

EDWARD FARDELL.

BUFFALO, June 27, 1884.

Mr. G. W. Kinney treated over 100 hogs for me that had cholera. I had lost about 15 before treatment. They were a bad lot of hogs. They were dying daily. He checked its ravages with the loss of three. They did well afterward.

WM. MUNTZ.

RAYMOND, Ill., April 7, 1885.

In June, 1884, Mr. Kinney treated 20 badly diseased hogs for me. I lost four before treatment. I lost none afterward.

H. H. WHITAKER.

RAYMOND, Ill., June, 1888.

Mr. Kinney has treated several herds of hogs for me since 1883—say 200. In some instances they were as bad as hogs could be to live. In each instance he proved to be successful. I have every confidence in his skill.

WILLIAM RICHARDS.

BUFFALO, Ill., June 12, 1874.

Mr. G. W. Kinney treated over 200 hogs for me that had cholera. They were dying daily. I had lost over 40 before he began treatment. At the end of one week my hogs began to feed up all right and done well afterward. He lost three. He is the man of the age on sick hogs.

GEORGE HALL.

RAYMOND, Ill., May 7, 1887.

Mr. Kinney treated 87 pigs for me and 17 sows. My sows were furnishing the pigs no milk. The pigs were running off at the bowels, dwindling away to mere shadows. The sows began to nurse well, the pigs recruited up and made me a fine bunch of hogs at shipping time.

JOHN WEIDECAMP.

BARNETT, Ill., March 16, 1886.

Dr. Kinney treated 40 odd hogs for me, all that I had left out of 70. Many of these refused their food. They were dying daily. He treated them one week. They all recovered but one, and done well.

ISAAC WOODRUFF.

SPRINGFIELD, Ill.

Dr. G. W. Kinney treated 80 head of hogs for me that were badly diseased. I had lost six before treatment and two after.

JOHN GORMAN.

SHERMAN, Ill.

Dr. G. W. Kinney treated for me, in the year 1872 about 140 hogs that were badly diseased with lung fever. It had already killed some 30 head. The others were going in a like manner. Hearing of Dr. Kinney's fame, I procured his aid. In 68 hours he had the disease checked. The hogs began to feed up all right and made me a fine herd. He lost five. May the Doctor long live in his usefulness.

GEO. W. CONSTANCE.

FARMERSBURG, Ill., Jan. 18, 1878.

In 1876 I called upon Dr. G. W. Kinney to treat about 200 hogs for me that were dying very rapidly. He soon checked its ravages. They began to improve rapidly, lost all traces of the disease, and done remarkably well afterward.

Q. HARRISON.

SPRINGFIELD, June, 1872.

Dr. G. W. Kinney treated 137 hogs for me that had cholera. I had lost 15 before he began treatment. A number refused any food. Out of this number he lost about six per cent. The others recovered and done well afterward.

HENRY SHOEMAKER.

RAYMOND, Ill., April 6, 1885.

Mr. Kinney treated seven hogs for me that were badly diseased. He restored them to good health, and so far as I can learn he has given good satisfaction in this neighborhood.

S. S. TILDEN.

RAYMOND, Ill., April 25, 1885.

I had 12 hogs at the time Mr. Kinney treated them. I had lost two before. Those treated were bad. They recovered and did well.

C. ETTER.

HILLSBORO, Ill., October 3, 1884.

In the Spring of 1883, Mr. G. W. Kinney treated 150 hogs and pigs for me that had cholera. The larger number were bad. At the end of five or six days they began to improve rapidly and continued so until marketed.

OSCAR MACK.

FARMERSBURG, Ill., Jan. 3, 1878.

I have had Dr. G. W. Kinney to treat several herds of hogs for me. He has acquitted himself with great credit. He is certainly master of the situation on hog diseases.

WM. TAYLOR.

INDEX.