POULTRY DOCTOR

OR

HEALTH in the POULTRY YARD,

AND

HOW TO CURE SICK FOWLS

BY

FANNY FIELD.

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In offering this work to the poultry world we do not pretend that we possess absolute and supreme knowledge concerning the causes and cure of poultry diseases; we do not set ourselves up as authorities; we only give in a condensed and convenient form the results of our own experiments, study, and observation in regard to the cause, prevention, and cure of poultry diseases.

FANNY FIELD.

HEALTH IN THE POULTRY YARD.

BY FANNY FIELD.

CONCERNING THE CAUSES OF DISEASE AMONG POULTRY.

Poultry diseases never come by chance. Fowls never "just happen" to have roup, cholera, or any other ill; there is always a cause somewhere, and as it is almost useless to dose sick fowls with medicine while the conditions which produced the disease remain unchanged, the poultry keeper should, in all cases of sickness among his fowls, first ascertain and remove the cause.

One of the chief causes of sickness and death among poultry is *filth*; it may be in the air, or in the food or drink; but in whatever form filth is taken into the system it is almost certain to cause disease. The germs of some poultry diseases are probably generated by filth, and all cases of sickness among fowls are certainly aggravated by filthy surroundings.

Dampness in poultry houses is another cause of many serious diseases. It does not hurt fowls to run about in the rain, provided they have a dry place to go to when they desire shelter; but it does hurt them to roost or be closely confined in a house that is "most always" damp; and continual dampness in chicken coops kills off more little chicks than any other half-dozen causes combined. The poultry raiser who keeps fowls and chicks in damp houses and coops will have to fight roup, canker, colds, cramps, rheumatism, consumption, and many other ills "too numerous to mention."

Roosting in draughts is another direct cause of disease. Fowls that roost out of doors, where the air strikes them all over alike, rarely "take cold;" it is the current of air that comes through the broken window or crack in the wall and strikes the fowls in a one-sided sort of way, that causes the colds which often develop into more serious ills.

Lice are frequently the sole cause of the untimely "taking off" of whole

broods of downy little chicks; and, while they may not actually cause disease among older fowls, it is quite certain that fowls whose strength has been lowered by the constant attacks of hordes of lice are the first victims of any poultry disease that comes along.

Lack of exercise is a frequent cause of disease among fowls that are closely confined to the limits of houses and small yards. It is also one reason why so many brooder-mothered chicks fail up in the legs and die.

Lack of vigor on the part of the parent stock is another cause of sickness and death in the poultry yard. "Like begets like," and chicks from unhealthy stock are generally weakly and fall easy victims to diseases that the systems of stronger chickens would resist and overcome.

Strange fowls often introduce disease into a healthy flock. Many an outbreak of roup or cholera which the poultry-keeper was utterly at a loss to account for, might have been traced back to the "new rooster," or the half-dozen hens that were bought and at once turned loose among the other fowls.

Improper food, over-feeding and *under-feeding* are also directly responsible for many of the ills that afflict chicken flesh.

HOW TO PREVENT DISEASE.

Since sickness among poultry is, in the majority of cases, but the natural result of carelessness, neglect and general mismanagement, the poultry-keeper can, by taking thought and doing a little extra work at the right time, prevent disease from gaining a foothold among his flocks; and let me tell you that prevention is better than cure, and it is about fifty per cent. cheaper and easier than doctoring fowls after they are sick.

But I do not advise you to "dose" your fowls continually with something to "keep them well." If your fowls are so "weakly like" that they cannot keep in good health without swallowing a quarter's worth of pills or powders every week, better let them die and have done with it. Long experience in the care of poultry has convinced me that proper food and care, together with strict attention to the sanitary conditions of the house and surroundings, will almost banish disease from the poultry yard. I have kept fowls in good health from the time when they left the shell until they were killed for market without administering one drop of medicine; and I can assure you that if the preventive measures which I here recommend are faithfully followed you will seldom have occasion to refer to the cure part of this book.

1. Guard against dampness in the poultry houses and chicken coops as you would against a pestilence. If the place selected for the poultry-house be not well drained naturally, drain it artificially, and always place the coops for little chicks on the driest spot of ground at your command.

2. See that the poultry-house and chicken coops are thoroughly ventilated, without exposing the occupants to the danger of sleeping in draughts of air.

3. Keep the poultry-house, the yards and everything about the premises occupied by the fowls, clean. Allow no stagnant water, no decayed or decaying animal or vegetable matter, no filth of any kind anywhere about the premises. Every morning sprinkle some absorbent—dry earth or land plaster—over the droppings under the roost, and as often as once a week remove the droppings from the house. Every spring and fall, and once at least in mid-summer (oftener when poultry diseases are prevalent in your immediate neighborhood), whitewash the inside of the house *thoroughly*. When contagious disease is present among your flock, or among those of near neighbors, use some disinfectant daily about the houses, yards, and all places much frequented by the fowls, until all danger is past. One of the best disinfectants is prepared by adding 2 ounces of carbolic acid to three quarts of water. Sprinkle about by means of a common watering pot with a fine nozzle. Another disinfectant is made by dissolving three pounds of copperas in five gallons of water, and then adding half a pint of crude carbolic acid.

When the fowls are confined to yards a portion of the yard should be spaded or ploughed up every week during warm weather; and even when they run at large the place where they are in the habit of loafing should be purified by an occasional spading and an application of lime or ashes.

When the fowls roost out of doors in warm weather the droppings should be removed, the ground spaded, and fresh earth thrown on often enough to prevent the intolerable stench that arises from neglected outdoor roosting places.

Chicken coops should be cleaned and whitewashed whenever a new family of chicks are moved in, and they must be moved and the droppings scraped away often enough to prevent foul odors. After each cleaning sprinkle the ground with a handful of air-slaked lime, and then throw on a shovelful of sand, gravel, or dry earth before the coop is moved back.

4. Keep fowls and chicks free from lice.

5. Avoid over-crowding.

6. Feed only fresh, wholesome food, and let it be sufficient in quantity to keep the fowls in good condition. Semi-starvation and over-feeding should alike be avoided. Keep pure water where the fowls can have it at all times, and always keep a supply of gravel, charcoal, and crushed oyster shells, or lime in some shape, where they can help themselves.

7. Never breed from unhealthy fowls, or from fowls that seem "weakly like;" and especially would I advise you to avoid breeding from fowls that have seemingly recovered from a severe attack of roup.

8. Have some building apart from the general quarters where sick fowls can be confined and treated away from the rest of the flock. After this place has been used for fowls afflicted with any contagious disease it should be thoroughly cleaned and disinfected.

9. When strange fowls are brought upon the premises, no matter if they come from the yards of the "best breeders," keep them apart from the rest of the flock until you are sure they are free from disease.

10. When fowls are confined to the limits of the house and a small yard contrive "ways and means" to make them scratch for exercise. Keep them busy. Satan finds mischief for idle fowls as well as for idle human beings.

11. When fowls mope about, eat but little, and act about half-sick without any apparent cause, cut down the allowance of food, and once a day, until they are better, give Douglass Mixture, or a few drops of tincture of iron in the drink.

Whitewash. Right here seems to be the right place to remark that the value of lime as a preventive is not generally appreciated by poultry-keepers. And I do not wonder, for not one poultry-keeper in twenty uses it in a way to make it effective. They whitewash the poultry-house, but the work is not half done, and for all the good a half-way application of whitewash does the work might about as well be left undone.

Here is a good way to prepare and use whitewash: Fix a half-barrel of wash about the thickness of paint; then stir into it three or four pounds of sulphur, and to every pailful used add a tablespoonful of carbolic acid. Apply this mixture to every part of the house except the roosting-perches, and be sure and put it on and *in* with a good brush and plenty of muscle, so that it will get into all cracks and rough places. When this mixture is thoroughly used in houses and coops, lice and gape worms will have but a poor chance for their lives.

CONCERNING THE CURE OF POULTRY DISEASES.

Notwithstanding the fact that I am writing a book on poultry diseases, for which I expect you to pay a quarter (for the book, not the diseases), I do not hesitate to tell you that doctoring fowls or chicks after they are really "down sick" is, generally speaking, rather discouraging work; at least I have found it so. Often it costs more in time and medicine to cure a sick fowl than it is worth after it is cured, and it is my candid opinion that in nine cases out of ten when sickness appears among fowls it would be better for the fowls and cheaper for the owner if the hatchet were used in the first place; but in the tenth case a little "timely knowledge" concerning the symptoms of disease and the proper remedies to be administered will enable the poultry-keeper to save the life of a valuable fowl.

When disease appears don't wait until tomorrow to see if it will "wear off," but at once search out and remove the cause, and administer the proper remedies to the sick fowls before they get beyond all hope of a cure. A little care and medicine to-day may cure a fowl that would surely die if neglected until to-morrow. "Procrastination is the thief of time" and the death of sick fowls.

Don't expect to cure every case; if you do you will probably be disappointed.

Don't pin your faith very fast to any of the so-called "sure cures" so extensively advertised to cure every poultry ail under the sun. Some of these preparations are good for some things, but most of them are nearly worthless. There is no such thing as a "cure-all" or specific for all poultry diseases. The remedies prescribed in this book are the ones that have proved most successful, and will cure whenever a cure is possible.

CHICKEN CHOLERA.

Cause.—The disease known as chicken cholera is the most contagious and rapidly fatal of all poultry diseases, and every year its victims are counted by thousands. It is more dreaded by the poultry raisers of the West and South than all others put together. It attacks turkeys as well as chickens. It is caused by a microscopic organism or germ which is taken into the fowl's system with the food and drink, and possibly by inhalation; anyway that is what the "distinguished scientists" who have studied up the subject of contagious diseases tell us. This germ, or cholera poison, affects the blood first, then the liver, and thus the whole digestive apparatus is affected. Where these germs

come from in the first place is something that the scientists have not yet told us. Possibly they don't know, I am sure I don't; but I believe they are generated by filth in some form, and that when the disease is not brought into a flock by strange fowls the original cause may be found on the premises or on those of a near neighbor.

As an argument against the supposition that the disease is caused by filth, some poultry writers have cited cases where fowls that ran at large and roosted in the tree-tops were attacked with cholera. But that proves nothing, for the fowls might have had access to impure water and filthy food; and besides, when fowls roost in trees they have a regular roosting place, and unless the ground beneath the tree is scraped and spaded up occasionally the air for some distance around will soon be tainted with the disagreeable odor arising from the accumulated droppings. In damp or wet weather the stench around these neglected roosting places is almost unendurable. Upon this subject A. J. Hill, in his "Treatise on Chicken Cholera," says: "I have sufficient evidence to warrant me in saying that the cause is local. Wherever the disease prevails, right there its cause exists; and there is the place where its cause was generated, unless infectious matter had been introduced by diseased fowls or otherwise."

Prevention.—But whether the germs of chicken cholera just grew out of filth or not, the disease can be almost entirely prevented by perfect cleanliness and the free use of disinfectants. All the "authorities" agree upon that point. I have never known a case of chicken cholera among fowls that were kept on well drained land and properly cared for in other respects, unless the disease was first introduced by strange fowls, or from the premises of near neighbors whose fowls were afflicted with cholera. I know one woman who kept poultry seven years in a locality where cholera prevailed every year, but although her neighbors' fowls died by dozens hers always escaped, and she attributed their immunity from disease solely to the sanitary precautions she always insisted upon. Follow the instructions in regard to cleanliness, use of disinfectants, etc., which I have given under the heading "How to Prevent Disease," and when the cholera prevails among the flocks of your immediate neighbors give your fowls pulverized charcoal (tablespoonful to a pint of food) three or four times a week, and once in every two or three days add five drops of carbolic acid to a quart of water, and use it to mix their food with. Also give the Douglass Mixture daily in the drink until after the disease has disappeared from the neighborhood. The charcoal purifies the digestive organs and aids digestion; the Douglass Mixture acts as a tonic; and the carbolic acid kills the cholera poison.

Symptoms. The usual symptoms of cholera in fowls are thus described by A. J. Hill:

“The fowl has a dejected, sleepy and drooping appearance, and does not plume itself; is very thirsty, gapes often, and sometimes staggers and falls from weakness. Comb and wattles lose their natural color, generally turning pale, but sometimes dark. There is diarrhoea, with greenish discharge, or like sulphur and water; afterwards thin and frothy. Prostration ensues, the crop fills with mucous and wind, the breathing is heavy and fast, the eyes close, and in a few hours the fowl dies.”

The symptoms vary somewhat in different fowls, but the peculiar color of the discharge and their frequency always tell the story. Sometimes fowls will live several days after the diarrhoea commences; then again, fowls that are apparently in good health one day will be dead the next.

Is Cholera contagious? Opinions are divided upon this subject. Eminent poultry breeders who have had experience with the disease claim that it is contagious, and others equally eminent claim that it is not. The safest way in dealing with cholera, is to assume that it is contagious, and act accordingly. If one makes mistakes, it is always best to make them on the right side.

Treatment.—We have wrestled with chicken cholera upon several occasions. We have bought more than one “Treatise” upon the subject. We have tried a goodly number of the so-called “sure cures” for chicken cholera, but we have not yet found any cure that can be depended upon to cure in all or even in a majority of cases, and we don’t believe that anybody else has found one, either. Most of the “cholera pills,” powders, etc., that are recommended as sure to cure chicken cholera are utterly worthless. There is no doubt but people who recommend these remedies do so in good faith, but there is a mistake somewhere, for the same remedies that they claim to have used successfully failed when tried by others.

The cheapest, quickest and best way to deal with chicken cholera when it makes its appearance among a flock is to kill the sick fowls at once, and burn their “remains,” or else bury them very deep with a quantity of quick lime; then, no matter how much you have already done in the way of cleaning up, have a general and thorough cleaning and disinfecting of houses, yards and all places where the fowls are in the habit of congregating. After cleaning the house, shut it up as close as possible, put a pound of sulphur in an old iron kettle, pour on a half-pint of alcohol, set it in the house where you can reach it

from the door, hold your nose with one hand, set fire to the alcohol, shut the door and leave. The burning sulphur and alcohol will send off sulphurous acid gas, which will kill every living thing, invisible germs included. Wherever the sick fowls have left their droppings wet the ground thoroughly with the copperas and acid disinfecting fluid, and scatter lime freely. Use the disinfectant daily and freely as long as the cholera remains on the premises.

To counteract the effects of the cholera germs that may be lurking in the systems of your apparently well fowls, give them the carbolic acid, pulverized charcoal, and Douglas Mixture as recommended under the head of "Prevention." Nine times out of ten this course of treatment will stamp out the disease at once, and you will lose but few fowls; but if your first onslaught does not have the desired effect, keep right on with the same method and it will finally conquer.

If instead of killing the sick fowls you desire to try your hand at doctoring them, separate them from the well ones and try some of the following remedies:

1. Calomel and blue mass in two grain doses, or four grains of blue mass mixed with two grains each of gum camphor and cayenne pepper may be given twice a day.

2. Two drachms of calomel mixed with one quart of corn meal; feed twice a day.

3. Powdered chalk, powdered charcoal, gum camphor, assafoetida and pure carbolic acid equal parts; mix all together and feed in the proportion of one teaspoonful to every 10 fowls. Give in the food twice a day.

4. Powdered garlic one ounce, extract of rhubarb half an ounce, tincture of capsicum two drachms, tincture of camphor two drachms, tincture of opium one drachm, tincture of oil of peppermint three drachms; mix well. Dose: Six drops in a teaspoonful of water, three times a day.

5. Fowler's solution one ounce, aqua ammonia one-half ounce, water one gallon; mix. Give this to the fowls to drink.

6. Hyposulphate of soda, half a level teaspoonful in as much water as will dissolve it. Give once a day for three days.

7. Equal parts of assafoetida, hypophosphate of saffron and soda ground together. Mix in soft food in proportion of teaspoonful to every ten fowls.

With all these remedies give Douglass Mixture in the drink, and feed only

soft, easily digested food. Don't use any powerful astringent medicines to check diarrhoea. Such medicines do more harm than good.

ROUP.

With the single exception of cholera, roup is the most troublesome and offensive, and, if neglected, the most fatal of poultry diseases. It first affects the membranes which line the nostrils, but when neglected it soon extends to the head and throat and finally affects the fowl "all over," just as a neglected cold in a human subject often "runs into" more serious diseases. Roup is contagious, and when it once gets a foothold in a neighborhood the flocks of the most careful poultry-keeper are liable to be attacked. It is most prevalent among adult fowls, but chickens are sometimes attacked. Fowls not treated generally die in from three to ten days after the first symptoms appear, though sometimes a roupy fowl will linger along two or three weeks.

Cause.—Roup never comes without a cause, and the chief cause is a neglected cold. Fowls take cold from roosting in draught, confinement in damp houses, undue exposure to cold and wet after being confined to artificially warmed houses, and exposure to cold after the system has been over-stimulated by the injudicious use of cayenne pepper or of "egg-foods" that are chiefly made of cayenne. Upon this subject Mr. F. C. Sturtevant, of Hartford, Conn., says: "I think the over-feeding of cayenne is a prolific cause of roup. Most poultry writers advise feeding a *little* cayenne, and the inexperienced poultry-keepers think if a little is good; more will be better, so they shovel it in. It heats the fowls up, gives them a regular sweat, and then they take cold upon the least exposure to the cold outer air. The same performance is repeated day after day until the fowls have the roup."

Prevention.—The preventive measures are obvious. Guard against all the causes mentioned, and if the disease appears among your neighbors' fowls use the disinfectants and give the carbolic acid, charcoal and Douglass Mixture recommended to prevent cholera. To be sure the disease may gain a foothold among your fowls in spite of your preventive measures, but if it should it will be of a milder type and more easily controlled than when it breaks out among fowls that are kept in damp, filthy houses, in total disregard of all sanitary laws. Concerning this subject the *American Poultry Yard* says: "The fact that fowls sometimes get along amid filthy surroundings with no attacks from roup show that this disease and filth are not always inseparably connected. Roup is

poultry is like diphtheria in the human subject. Before the disease appears in a neighborhood the filthy places and the clean ones are alike exempt, but after it appears the places having the most filthy surrounding offers it the most congenial home. Roup thrives and shows the most malignant form in damp, dirty fowl-quarters."

Symptoms.—The first symptoms of roup are just those of a common cold—hoarseness, sneezing and a slight discharge from the nostrils. In the second stage of the disease the hoarseness and rattling in the throat is more pronounced, the fowl shows fever and weakness, eyes inflamed and watery, and the discharge from the nostrils increases, grows yellow and thickens and becomes very offensive as the disease progresses. In the third and last stage the fowl is weaker, the nostrils are clogged with thick matter, the head swells, one or both eyes are closed, ulcers form in the throat and sometimes around the eyes, the comb turns black and the fowl dies.

Treatment.—When the roup appears among a flock, separate the sick from the well, and proceed to clean and disinfect the premises as recommended for cholera, as the disease is communicated from one fowl to another by the discharge from the nostrils and eyes, carefully clean the feed troughs and drinking vessels that have been used by the affected fowls. Give the sick fowls a dessert-spoonful of castor oil at night, and for the next week feed chiefly on cooked food with daily doses of the charcoal, Douglass Mixture and acid. Also give all the apparently well fowls one or two doses of the acid, and the charcoal and Douglass Mixture daily for a week. This course of treatment will usually clear the roup off your premises in a week.

For roup in the second stage, give the dose of castor oil, and afterwards use the "German Roup Pills" according to directions. These pills will cure roup whenever a cure is possible. Besides the pills, give the charcoal and Douglass Mixture. Examine the throat, and if ulcers have commenced to form dust them twice a day with pulverized chlorate of potash. Open the bill and put a big pinch of the dry powder right where it will do the most good. Most of the fowls so treated will recover.

After the disease reaches the third stage the best remedy is the hatchet. Such fowls are not worth fussing with.

Keep fowls that you are treating for roup in a dry place, and do not return them to the flock until you are sure they are entirely well.

Be "kind o' careful" when handling roup-y fowls, for if any of the dis-

charge from the nostrils and eyes gets into a cut or scratch on the hands, or comes in contact with the eye it will be apt to cause serious inflammation.

Is Roup Hereditary?—Well, I don't know; perhaps not exactly, but I do know that chicks from fowls that have had the roup do not seem as strong as chicks from healthy stock, and they fall easy victims to the first chicken ail that comes along. I once had a yard of Partridge Cochins that had the roup badly. Several of the hens died, but I doctored the majority of them through it. The cock was very bad, and as he cost a ten-dollar bill, I naturally fussed over him a good deal; don't know but I prayed over him; at any rate he finally pulled through and by the first of March seemed as well as ever, so I concluded to breed from him. The chicks hatched all right and seemed strong until the first spell of damp weather, then we lost nearly forty out of one hundred and fifty. From that time they dropped off by ones and by twos until October, when we found that we had less than fifty left. We took extra care of those and they weathered the cold fall rains without exhibiting any symptoms of roup; but we did not dare to sell them for breeders, so we fattened the whole lot for market. In November the roup broke out again among the old stock of P. Cochins, and every fowl that had the disease the year before took it and would have died of it if we hadn't killed them before they had time to die. Since that time I have never bred from a fowl that ever had the roup; it don't pay.

LICE.

Notwithstanding all that has been said and written about the importance of keeping fowls and chickens free from lice, I firmly believe that nine-tenths of the poultry and poultry-houses in the country are fairly overrun with lice of all sorts and sizes. Each individual poultry raiser seems to think that it is impossible for his fowls to be lousy—that all the advice and warnings about lice are meant for some other man. The farmer reads a long article on the subject and says: "Well, that's good advice for the fellows who have to keep their hens shut up in a little yard. Hens that are kept cooped up will get lousy. I am glad that we farmers don't have to keep our hens shut up and fight lice all the time." The man who keeps his fowls "cooped up" reads the same article, and says: "Well, that's good advice for the farmers, who keep their hens anyhow, just as it happens. Hens that take their chances as most farmers' fowls do, will get lousy, but we who keep our fowls up in decent houses and yards have no need to fear lice." And so it goes, each one can see a cord of wood in his neighbor's poultry keeping eyes, but he cannot see the smallest chip in his

own. Let me tell you that fowls and fowl-houses that are not properly cared for will get lousy, no matter where they are or who owns them, and when you read a piece of advice that seems good, better find out whether you need it yourself or not before you pass it on to some one else. If the advice were in solid currency, you wouldn't be so anxious to pass it on to your neighbor. The other day a poultry raiser wanted me to "take a look" at his half-grown chickens and see if I could "make out" what ailed them. I "took a look," and behold! they were literally covered with lice. A more astonished man you never saw. "Why," said he, "I never once suspected lice. I was afraid that something was wrong with my way of feeding." Another poultry keeper took me through his poultry-house, bragged (that's the right word) about his superior methods of caring for poultry, etc., but when I came out I found chicken lice on my hands. And more than half the letters I receive about chicken ails indicate clearly that lice are at the bottom of the troubles. If a good many of the poultry raisers who are hunting remedies for "droopy" chicks and ailing fowls would wage a war of extermination against lice they would save time, money, fowls and chicks, and a good deal of useless dosing with drugs.

To Prevent Lice on Fowls.—Attend to the house-cleaning and whitewashing in season, wet the perches with coal oil once a month the year round, and provide some place where your fowls can wallow in dust and ashes to their hearts' content.

To get rid of the pests after they have taken possession of a poultry house and staked out claims on the fowls' bodies: Catch the fowls and rub coal oil on the heads, under the wings and into the feathers on the under part of the body. Then carry every movable thing out of the house and thoroughly white-wash the whole of the inside. If the floor is covered with dry earth, as the floor of every well-regulated poultry-house should be, scrape off the top and carry it somewhere out of the reach of the fowls, and sprinkle on some air-slaked lime and fresh earth. Next, shnt up the house and fumigate with burning sulphur and alcohol; the fumes will reach and kill any lice that the whitewash failed to reach. If you have not the alcohol, or dislike to use it, use the sulphur alone. While this work of death is going on inside, take boiling hot soap-suds and an old broom and clean perches and nest boxes. When they are dry wet the perches with coal oil, and pour some into the cracks of the boxes. Burn the old nesting, and in the new sprinkle snuff, tobacco, carbolic powder or insect powder. Heroic measures of this kind will effectually "clean

out" lice of any "breed"—even the obstinate red mites. Open the house and air well before admitting the fowls.

Lice on Chicks.—When your little chicks mope around and act as if they didn't care much about living anyway, you had better examine for lice. If you find them, dust carbolic powder, insect powder well into the feathers of hen and chicks just before they go to bed.

When chicks throw their heads up and back, tumble over backwards, squat down and "rock" themselves back and forth, shake their heads, stretch their necks, and stand with beaks touching the ground, and act as if bewitched generally, examine their heads and you will find large lice or ticks on top of the head, eating their way into the brain. Remove the parasites (a big pin or darning needle is handy to catch these big lice with) and rub the head with a mixture of sweet oil and carbolic acid—two or three drops of the acid to a tablespoonful of the oil. If you have not the acid at hand, use the oil alone, or even pure fresh lard if nothing else be at hand. But it is a good plan for every poultry raiser to keep a bottle of the mixture of acid and oil on hand.

To prevent lice on chicks, dust your hens, when they commence sitting, thoroughly with sulphur, carbolic powder, or insect powder, and repeat the performance a few days before the chicks are due; and, as a final precaution, when you take the chicks from the nest just touch their heads with the oil and acid mixture.

Never use coal oil or grease of any kind on sitting hens, for it is liable to prevent the eggs from hatching.

Keep coal oil and sulphur, lard and sulphur, and clear sulphur away from young chicks; the sulphur is apt to get in the eyes and injure them, even if it does not cause blindness, and all mixtures of grease and sulphur generally kill lice and chicks together. Clear coal oil may be used on chicks if used sparingly, and no evil results follow, but when there are other remedies that are equally good, and quite safe, it is better to let the coal oil alone. Just so with clear sulphur; it may be used and no harm come of it, but it is better to keep on the safe side. Coal oil may be used on half-grown chickens.

GAPES

in chicks are caused by the presence of small worms in the windpipe. Sometimes the worms are so numerous that they completely fill the windpipe, and the chick dies of suffocation. Where these worms come from in the first place is still one of the "unsolved mysteries;" but I have noticed that the gapes occur

most frequently among chicks that are kept in damp, filthy coops, fed on sour, sloppy food, and allowed access to impure water.

Prevention.—Good food, pure water, strict cleanliness about the coops and runs, Douglass Mixture in the drink and “Imperial Egg Food” in the feed three times a week, will prevent gapes unless the premises where the chicks are kept are already infested with gape worms.

Symptoms and Treatment.—The name of the disease sufficiently describes the symptoms. The best remedy is the fumes of burning carbolic acid. Fix a coop or box so that you can shut the chicks in the upper half, and fumigate by putting a few drops of the acid on a red hot shovel, placed in the lower part under the birds. Keep the chicks in the fumes until they are nearly suffocated, but watch closely lest you quite “choke them to death.” We have tried this method and cured chicks that seemed almost dead. We have also fumigated with sulphur, with good success.

Another good remedy is air-slaked lime. Put the chicks in a box and tie a piece of cheese cloth over the top; spread the lime over this, and then shake a little, so that the fine lime will sift down among the chicks, but don’t overdo the matter and smother them.

If the patients are taken in hand as soon as the gasping and coughing are noticed, a small pill of camphor gum, or a little turpentine (four or five drops mixed with a pint of food), will generally effect a cure. Chicks that die of gapes should be burned or buried deep, with plenty of quick-lime, the coops moved to fresh ground, the old places spaded over and lime scattered freely. When the gapes appear among chicks give the well ones a preventive in the shape of the small camphor pill, or a dose (two or three drops apiece) of coal oil.

LEG WEAKNESS.

Cause and Symptoms.—True leg weakness, the kind that at first affects the legs only, the health otherwise being good, is almost wholly confined to the large breeds, and is caused by rapid growth, which increases the weight of the body out of proportion to the strength of the legs. The tendency to this ailment is increased by lack of bone-forming material in the food. The trouble usually begins when the chickens are between four and five months old, but sometimes not until later, and in some cases earlier. Cockerels are more liable to be attacked than pullets.

The first symptom of leg weakness is a shaking or trembling of the legs

when the chick stands or walks. Sometimes, when chickens come from unusually vigorous parent stock, they will soon outgrow this shaking without any medical treatment ; but usually the shaking grows worse, until in a short time the chicken squats down a good part of the time, and finally gets unable to walk at all. Generally the appetite remains good, even after the patient can no longer walk.

Treatment, to be effectual, should be commenced as soon as the first symptom of weakness is shown, for after the chickens once get down on their hocks no amount of treatment will ever bring them up again ; at least that has been my experience. I have doctored a good many cases of leg weakness, but never yet saved a chick when treatment was put off until after the victim was past walking.

The first thing to be looked after is the food ; if the chickens have been fed chiefly on corn meal change to bran, shorts, and whole wheat, and feed raw eggs—one egg a day to every two patients. Give milk to drink if you can get it, and give bone meal—a teaspoonful a day to each chicken—in the cooked food. Keep crushed oyster shells or old plaster where they can help themselves. For medicine give Douglass Mixture—about one-half a teaspoonful a day to each chick—in food or drink, and twice a day a half-grain pill of quinine. The patients should show signs of improvement in a week ; then give only one pill a day, and as soon as the shaking ceases leave off the pills and eggs, but continue the bone meal—a teaspoonful to a pint of food three or four times a week—and Douglass Mixture, a teaspoonful to a pint of drink once a day, for three or four weeks longer. Continue to feed at least one-third bran and shorts, and always keep lime in some shape by them. It is a great mistake to suppose that only laying hens need lime. If a week of steady treatment fails to benefit the chicks, and they grow worse, it will not pay to fuss with them. Kill them and have done with it.

When leg weakness comes on in half-grown chicks of the smaller breeds it is a symptom of constitutional weakness. Give pills and Douglass Mixture as directed for chicks of larger breeds, until the chicks brace up, then feed the bone meal and mix lime right along, together with a liberal allowance of meat. By this course many can be carried along to maturity. But they should not be kept over for breeders ; market them as soon as they reach a marketable age and condition.

Chickens that are under treatment for leg weakness should be separated from others, because the stronger ones will fight and crowd them around, and

make recovery more difficult, if not impossible. But do not confine the sick ones to a close coop; they need room to take exercise.

Prevention.—Prevent leg weakness in chicks by breeding from healthy stock and feeding plenty of bone-making material.

Leg Weakness in Old Fowl comes from sexual causes. Sometimes it is caused by too high feeding and too little exercise; the fowls get so fat and heavy that they cannot walk or stand without shaking. This form of weakness can sometimes be cured by cutting down the food, giving the Douglass mixture, bone meal, and burnt bones, and forcing the fowls to exercise by burying their grain in litter. But the better way is to kill such fowls for the table or market. If killed at once before the legs give out entirely and the general health is injured by lack of exercise, they will be just as wholesome eating as though the legs were all right.

Another form of leg weakness comes from injury to the hock joint, and is caused by jumping from high roosts; the joint is sprained, the sprain neglected, and either a weak joint or a stiff joint is usually the result. Preventive measures are obvious. To cure, at once put the injured fowl by itself in a coop well littered with straw, but without any perch, and beyond feeding let it alone. Nature will work the cure if the fowl be cared for when first lamed, but if neglected until the joint is much weakened, or until it has stiffened, no treatment will restore the joint to its natural condition.

Paralysis of the Legs is entirely different from other forms of leg weakness and is brought on by an attack of apoplexy, or by spinal disease, or it may follow a severe attack of gout or rheumatism. Probably it sometimes comes from causes which we do not understand. It occurs in adult fowls, and the best remedy is the hatchet.

SCALY LEGS.

The rough, bumpy, scaly legs on fowls are caused by a minute insect which burrows under the scales. The disease is contagious, and one scaly-legged hen will soon effect the whole flock. If you notice any unnatural roughness on the legs and feet attend to it at once. There are several good remedies, but none better than coal oil. Dip the fowls' legs into the oil and hold them there until the oil has time to penetrate beneath the scales and kill the mischief-makers. These applications, with an interval of one or two days between, will generally effect a cure; the scales will loosen and fall off, but don't attempt to hasten

the process by rubbing or scraping them off; just rub the legs carefully every day with melted lard or sweet oil until they are smooth and well again.

CHILLS

are caused by undue exposure to cold and wet.

To prevent and cure, keep the chicks confined to the limits of the coop and small run on rainy days, and also on pleasant days until after the sun has dried the "heft" of the dew off the grass. If half fledged chicks get caught out in a heavy shower, turn out as soon as possible and hunt them up. Those that are still able to run after the mother hen will come out all right if you drive them to the coop with the hen. Those that do not seem to have energy enough to keep up with the hen should be taken to the house and kept in a warm place until thoroughly dry and lively again. Chicks so chilled that they are unable to stand may be revived by dipping them into quite warm water, and holding them there until they begin to kick and act as if they were warmed through. Partially dry them with an old soft cloth and keep in a warm place until quite dry; then give a warm feed, seasoned with pepper, and return to the mother men.

CRAMP.

When young chicks that have free range go moping round, stagger when they try to walk, and squat down about half the time, they are probably troubled with cramp caused by confinement at night in damp coops. Preventive measures are obvious. Those affected can often be cured by removing to a dry place, and rubbing the legs daily with coal oil, strong mustard water, or any good stimulating liniment.

Cramp also occurs among early chicks that are kept in warm, dry houses. In such cases it is caused by lack of exercise. Rub the legs as already recommended and force them to exercise by raking small grain or cracked corn into the sand that should cover the floor.

COUGH.

When fowls cough continually they are suffering from a cold, bronchitis, croup, or tubercular deposit on the lungs; or else there is some foreign substance lodged in the throat or air passages. Examine the throat and if you find any obstruction remove it if possible; if not, kill the fowl. If you find nothing wrong and the fowl seems all right except the cough, fumigate it with sulphur and wait

the progress of events. But better shut the afflicted ones away from the other fowls until you are sure the cough is not a fore-runner of roup. When the cough does not yield to treatment and continues "about so" for any length of time it is probably caused by tubercular deposits, and the hatchet is the best remedy.

CANKER.

For canker spots in mouth or throat use powdered chlorate of potash, or burnt alum. Give Douglass Mixture daily, and keep the fowls away from the rest of the flock, for canker is contagious, and sometimes precedes an outbreak of roup.

CONSTIPATION.

Early chicks that are raised wholly indoors are sometimes troubled with constipation. It is caused by lack of green food, lack of gravel or coarse sand to aid in digesting food properly, too much concentrated food and lack of exercise. It generally comes on when the chicks are about two weeks old. Give a half teaspoonful castor oil, supply green food and plenty of gravel. Also give pulverized charcoal in the food twice a week, and induce them to scratch as recommended in the treatment for cramp. Later chicks, kept out of doors, are seldom troubled with this disease.

Old fowls that are confined to small yards and not properly supplied with green food sometimes suffer from constipation. Give a teaspoonful of castor oil and afterwards supply green food of some kind daily.

DIARRHOEA

Among young chicks is generally caused by sour, sloppy, uncooked food, impure water, filthy coops, sometimes by exposure to cold and wet, and sometimes by too much green food. The mention of the causes indicates the preventive measures.

Treatment.—Feed cooked rice, wheat bread scalded in milk, give scalded milk to drink, and twice a day, until the chicks show signs of improvement, mix a tablespoonful each of powdered chalk and fine bone meal, and a "pinch" of cayenne with each pint of food. Also give Douglass Mixture freely in the drink. This treatment will generally cure if the patients are taken in hand as soon as the disease appears. But if the diarrhoea is pretty bad before you begin to "doctor"—discharges of a clayey color, and the chick "bakes up behind"—give a half-teaspoonful of tincture of rhubarb, and afterwards give twice a day a small pill made of equal parts of cayenne, powdered chalk and rhubarb, wet

up with spirits of camphor enough to form into shape. Also give the Douglass Mixture and bone meal as before recommended.

Diarrhoea often attacks old fowls that are confined to yards. It is caused by too much green food, or by other errors in feeding. Correct the errors in diet, give a teaspoonful dose of extract of rhubarb, and afterwards two of the pills recommended for chicks twice a day. Give bone meal and Douglass Mixture, and feed on well cooked food until they are well. If this course of treatment does not benefit the patient within a week, better use the hatchet, for, in spite of doctoring, diarrhoea in old fowls often becomes chronic.

DYSENTERY

is a bad form of diarrhoea, and the evacuations are streaked with blood. It usually follows a neglected diarrhoea. Give the castor oil and pills as directed for diarrhoea in old fowls; and twice a day give five drops of laudanum. Cure doubtful.

CROP BOUND.

When a fowl's crop is hard and swollen and about twice as big as it ought to be, there is something that prevents the food from passing into the stomach. Pour some warm water down the throat and then carefully knead the crop until the contents are softened somewhat; then hold the fowl's head down and the bill open and work at the crop a few minutes longer. After this performance give a tablespoonful of castor oil and shut the fowl up without food for ten or twelve hours. At the expiration of that time, if the crop be not empty or partly empty, cut it open and remove the contents. Make the cut an inch and a half in the upper part of the crop. Use a small, sharp blade, and take care not to cut across any of the larger blood vessels. After the contents have been removed oil your finger and pass it carefully as far as possible down the passages to the stomach, to make sure that the food can in future have the "right of way." Take two or three stitches in the cut in the crop and two or three more in the cut in the outer skin. If you sew both cuts up together the fowl will "lean forward" rather too much for symmetry. Shut the patient away from other fowls and feed lightly on soft cooked food for a week or so. Give no drink for the first two days after the operation.

SORE EYES

in chicks are generally caused by the use of sulphur, or sulphur and grease, for lice. The sulphur gets into their eyes, makes them sore, and often causes blind-

ness. It will be easier to avoid the cause than to cure the eyes after they once get sore; in fact the only remedy that I shall suggest for a sore-eyed chicken is the hatchet.

BREAK DOWN.

Sometimes old hens, especially of the larger breeds, become so loaded with fat that they are “dreadful baggy like” behind, and can hardly walk. This difficulty can sometimes be overcome by semi-starvation for awhile, but it is apt to return again as soon as the fowl is placed on regular rations. It is hardly worth while to bother with such hens, for since the only trouble is over-fatness they can be killed and eaten.

INFLAMMATION OF OVIDUCT

usually occurs in fowls that have been forced, by highly stimulating foods, to their utmost in the way of egg production. The hen is feverish, has a distressed look, and is continually straining as if to lay. Hens affected this way never amount to much afterwards, and the wisest course of treatment is one that will put them out of misery the quickest.

EGGS BROKEN IN OVIDUCT.

The only symptoms are the desperate efforts of the hen to rid herself of the wreck. Carefully inject sweet oil or castor oil into the oviduct; in some cases this will cause the expulsion of the broken egg in an hour or so, but the majority of such accidents prove fatal.

SOFT-SHELLED EGGS

are caused by lack of material for egg-shells, and by over-feeding with stimulating food. The mention of the cause indicates plainly the preventives and remedies.

EGG-BOUND.

Symptoms.—Hen remains on the nest a long time trying to expel the egg; comes off and walks about with a distressed look, but soon returns to the nest. If you can see the coming egg take a feather and oil the rent; but if the egg be not visible give the hen a tablespoonful of castor oil and shut her away from the other fowls. If relief be not obtained in six or eight hours, inject sweet oil or castor oil into the oviduct, taking care not to break the egg.

BUMBLE FOOT

is simply a lump on the bottom of the foot and is usually caused by jumping from a high perch on to the bare hard floor. Sometimes this lump contains matter; if so, it will feel soft and hot, and the fowl will walk as if it hurt. Cut it open and press out the matter. Keep the fowl by itself on a straw-littered floor, and wash the foot daily with carbolic soap suds, or with castile soap suds, to which have been added a few drops of carbolic acid. To prevent these "lumps" place the perches low, or else provide a ladder for the fowls.

RHEUMATISM.

The symptoms of rheumatism are lameness, stiffness of the legs, and a disinclination to move. Sometimes the toes are drawn as with cramp. The disease is caused by confinement to damp houses and cold, swampy runs. Soak the feet and legs for a few minutes in mustard water (teaspoonful of ground mustard to a quart of water), as hot as the fowl can bear; then wipe dry and rub with coal oil, or with any stimulating liniment. Give ginger and pepper in the food and Douglass Mixture in the drink. Follow this course of treatment daily until the fowl begins to improve; then use the liniment two or three times a week until the patient is cured. Keep affected fowls on a well-littered floor in a dry place where they will not be annoyed by other fowls. Rheumatism is hereditary, and fowls that have it should not be used as breeders.

LAMENESS

that is caused by a sprain or an accident of any kind needs no medical treatment. Put the fowl by itself and let nature do the rest.

CHICKEN-POX

manifests itself in the shape of small, scabby sores on the head and face. It is contagious, but if attended to in time is not often fatal. Wash the affected parts daily with carbolic soap suds, give pulverized charcoal and sulphur in the food and Douglass Mixture freely in the drink. If the fowl is not benefited by this treatment, and the sores run together, apply the hatchet. The original cause of chicken-pox? I don't know.

CONSUMPTION.

A neglected cold sometimes runs into consumption instead of roup; and sometimes fowls that to all outward appearance have been cured of roup will

soon afterwards “go off in a gallopin’ consumption.” The chief symptoms are cough and emaciation. There is no cure, and the sooner a consumptive fowl is killed the better for the fowl and her owner. Dark, damp, filthy poultry houses favor the development of the disease.

BRONCHITIS

comes from a neglected cold, and is a sort of half-way disease between a bad cold and consumption. The symptoms are cough, rattling in the throat, and sometimes a slight discharge from the nostrils. Like those of roup? Yes; but with a difference; the roup discharge emits an offensive odor, the discharge caused by a common cold, or by bronchitis, is not offensive. Put the fowl in a dry place, give a dose of castor oil, and afterwards use the German roup pills.

LIVER DISEASE.

The symptoms of liver disease are laziness and loss of appetite, but as these symptoms also indicate other diseases, it is almost impossible to ascertain whether the liver is affected or not until after the fowl is dead. It is caused by over-feeding—generally with highly seasoned food—or by other errors in diet, and lack of sufficient exercise. Preventives are obvious. Cut down the rations, give one grain of calomel every other day for a week, feed onions freely, and give free range if possible.

APOPLEXY

is not a common disease among poultry, but it occasionally appears, and when it does it usually takes the “biggest and best” of the flock. It is caused by high feeding in hot weather, and exposure to intense heat. The usual symptoms are drooping wings and a staggering walk. Sometimes the fowl whirls and runs about as if crazy; and sometimes fowls die right off without any symptoms. Fowls that have free range, plenty of shade, and cool water in hot weather, and are properly fed, are not troubled with this disease. Apoplexy is a hard matter to cure, for the fowl is generally dead before you notice anything wrong. But if you see one of your fine fat fowls staggering about as if drunk, give a big dose (a dessert spoonful) of castor oil, and let her fast for twenty-four hours; then feed lightly on cooked food, and keep her quiet for a week. When the fowl is pretty near gone before you notice it hold its head under a stream of cold water, or plunge it head first into cold water. If the bird “comes to” and seems relieved,

give the physic and shut up in a quiet place ; but if no better, open one of the large veins under the wing and let the fowl bleed freely. Stop the bleeding with burnt alum.

WHITE COMB

is a sort of scurf or dandruff that covers the comb, and sometimes the whole head. In bad cases the feathers come off. It is caused by improper food and filthy quarters. Clean up, correct errors in feeding, give sulphur internally, and apply Stoddard's poultry ointment to the head.

BLACK ROT

is another disease that is caused by improper food and filthy fowl houses. The symptoms are black comb and swelling of the feet and legs. If you feel like doctoring fowls afflicted this way, give a dose of castor oil, and afterwards use the Douglas Mixture freely ; but the better way would be to kill the sick and take better care of those that are left.

ITCH

is another filth disease, and appears in the shape of a rash on the head and body of the fowl. Treat as directed for white comb.

FROST BITES.

When comb and wattles have been "touched by frost," or actually frozen, keep the fowl away from a fire and thaw the frozen parts by the application of cold water or snow ; then anoint daily with sweet oil. A fowl with frozen feet should be killed at once. If killed before the feet thaw out and the fowl grows feverish, it will be all right for table use. To prevent frost bites—well, if you live where the mercury goes down in the bulb whenever it happens to think of it during the winter, you had better have a comfortable poultry-house, and keep fowls that wear small combs and wattles.

OBSCURE DISEASES OF CHICKS.

It frequently happens that whole broods of chicks that are well fed and cared for in every respect, droop, mope around, grow weaker and weaker, and finally die without any apparent disease. The trouble comes from lack of vitality in the parent stock. If you would have healthy chicks that will grow right along,

never breed from fowls that are not strong and healthy in every respect. If you breed from fowls whose constitutions have been weakened by disease, or by injudicious, haphazard in-breeding, the chicks will be a sickly lot that will never pay for the trouble of hatching.

INJURIES.

The best remedy for serious injuries—broken legs or wings—is the hatchet.

WORMS.

Fowls whose digestive organs are “out of order” are often troubled with worms. When you notice worms in the evacuations, give each fowl a piece of camphor gum the size of a common pill; twelve hours later give a dose of castor oil and for the next two weeks give sulphur and pulverized charcoal in the food two or three times a week.

MOULTING

is not a disease; it is a natural process, and the fowls will get along all right if they are well fed and otherwise well cared for. If any seem weak and ailing “tone them up” with a little Imperial Egg Food two or three times a week.

BREAKING SITTING HENS.

The desire to sit isn't a disease either, but it often causes the poultry-keeper lots of trouble. When your hens take a notion to rear a family contrary to your wishes, don't try any of the old-fashioned, barbarous methods of “breaking them up,” but the first time you find them on the nest after the other hens have gone to roost remove them to a roomy coop, give them a lively young rooster for company, and leave them to meditate on the error of their ways. Have a perch in the coop, but nothing that can be used for a nest. In three or four days, or a week at most, they will be thoroughly cured of their desire to sit.

FEATHER-EATING

is a vice engendered by idleness, and it is not often cured by diet or medicine. The only “sure cure” is a bit passed through the mouth and held in place by a wire passed through or around the comb. The bit is just large enough to prevent the criminal from shutting the bill close enough to grasp the feathers, but does not interfere with eating. These bits are patented, and can be bought two for a quarter. As soon as you find a feather eater in your flock, kill her or put a bit in her mouth at once, else she will teach the habit to the whole flock. To prevent fowls from acquiring this habit, keep them busy.

EGG-EATING

is another vice, and I don't believe it is always caused by a craving for lime and fresh meat. There are several ways by which hens learn to eat their eggs. In cold weather eggs are left in the nest until they freeze and crack open; the hens peck at the cracked eggs, and thus learn that eggs are good to eat. Egg-shells are carelessly thrown to fowls and they devour them for the sake of the lime, and soon learn to peck at the whole eggs. But in most cases I think the cause is simply lack of exercise; the fowls are shut in close quarters with nothing in particular to do, they get to scratching about in the nests, the eggs get broken, she pokes her bill in, and the mischief is done; henceforth that hen is an egg-eater until she dies—unless you can break her off the notion. And that is not the worst of it; she will soon teach the trick to the whole flock.

The quickest way to get rid of egg-eaters is to watch until you catch the guilty ones, and then cut their heads off. Another method is to shut them up in a coop, feed plenty of lime and raw meat, and leave three or four porcelain nest eggs around; they will try to break these eggs, but finding that they cannot do it they will finally give up; but it will take a month of confinement and porcelain eggs to affect a cure. Still another way is to fill egg-shells with a mixture of cayenne and mustard and leave them in the nests. The "philosophy" of this is that one mouthful of the prepared eggs will so disgust the hen that she will never break another "real" egg.

To keep hens from learning that eggs are good to eat, never throw egg-shells to them, provide nest eggs that won't freeze, gather the eggs often, make the nests so that they will be dark inside, or so that the eggs will roll out of sight as soon as laid, and above all keep your fowls busy when they are confined to the limits of the house and a small yard.

"CHIGGERS."

Our friends who live where chiggers abound, know how the little wretches penetrate beneath the skin and rear their families there. To cure: add four or five drops of carbolic acid to a tablespoonful of sweet oil and rub on the afflicted places. The acid will kill the chiggers, and the oil will prevent the acid from hurting the fowl.

DISEASES OF TURKEYS.

Young turkeys are liable to chills, cramps, and leg weakness, and old and young are liable to attacks of roup and cholera. Use the same preventive measures and give the same treatment recommended for chickens.

DISEASES OF DUCKS.

Before they are fully feathered ducklings are liable to chills if allowed to take to the streams or pond, or paddle about in the cold wet grass. Treat chilled ducklings as you would chilled chicks. Old ducks are almost always healthy.

HANDY TO HAVE.

It is not necessary for the poultry-keeper to keep a whole drug store on hand, but he ought to keep a supply of sulphur, coal oil, carbolic acid, castor oil, pulverized chlorate of potash, charcoal, roup pills, sweet oil and Douglass Mixture.

RECIPE FOR DOUGLASS MIXTURE.

To one gallon of soft water add one-half pound of common copperas ; when the copperas is dissolved add one-half ounce of sulphuric acid. Keep corked in a jug. This mixture should be given laying fowls and growing chicks two or three times a week ; dose, one tablespoonful to a quart of water.

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This operation is performed when the males are about three months old. A cock that weighs, when fully matured, ten to twelve pounds, if caponized when three months old, will weigh from fifteen to twenty pounds at maturity. There is a growing demand in this country for capons, and in a few years this will be a distinct branch of industry.

The reason why capons are being sought after is, their flesh is so much more juicy and tender than any other bird of the feathered tribe. After caponizing, these once fierce and pugilistic fowls, become docile and do not offer to fight, although fifty are kept in the same pen. Then again, they can be allowed to roam over your garden, and they will do no harm so far as scratching is concerned; yet at the same time they will pick up the bugs and worms, and thus make themselves useful without doing the damage that ordinary fowls will.

This changing the cockerels into capons solves another problem, both to the farmer and breeder of fancy stock, and, therefore, is a great benefit to both in a pecuniary point of view. Chicks usually hatch about half males and half females, and while there is no trouble to use or dispose of the females, there is a difficulty in getting a paying price for the surplus males. With this change or outlet for the males, no farmer or breeder need hesitate longer what to do with them. If capons can be made to weigh from fifteen to twenty pounds, and be juicy and tender, and the demand unlimited, why should not the farmer turn his attention to this matter and raise a flock of one or two hundred, and receive for them from five hundred to one thousand dollars annually.

They can be raised as cheap, if not cheaper than pork, are certainly much better eating, and will bring nearly three times as much per pound as pork. Then again, this suggests to the farmers of the west that while they can get only from ten to twenty-five cents per bushel for their corn on the western prairies, or

away from markets, they can feed it to the growing capons, and thus realize at least from fifty to seventy-five cents per bushel at their doors. At the present writing corn in Dakota is worth say fifteen cents per bushel, and in Chicago it is worth forty-two cents per bushel, and at these prices in Chicago it will not pay to ship from Dakota. What is the farmer to do with it? He sees no outlet for his corn only in feeding and making it into pork, and when the pork arrives in Chicago it brings six cents per pound dressed. Now, as it takes one bushel of corn to make ten pounds of pork, the pork would cost one and a half cents per pound in Dakota, and is worth in Chicago six cents per pound, less the freight, while at the same time one bushel of corn will make at the very least six pounds of choice capon meat, worth twenty cents per pound in Chicago. The value of corn fed to the capons is the same, only fifteen cents, while the receipts for this one bushel are \$1.20.

Then again it costs nearly 40 per cent. more to get ten pounds of pork to Chicago than it does six pounds of capon. But call the freight on each product the same, and the result is you get just double the price for your corn by feeding it to poultry. But some will say: Suppose all of us farmers go to raising capons, won't the markets be overstocked and reduce the prices, so there will be no profit in the business? We say emphatically, no. People do not all think alike, and even if they should incline that way it would take at least twenty years to get some of them to make up their minds whether or not they would like the business. However, in every land there are some wide-awake people who catch on to an idea when one is fired at them, and they are the ones for whom this article is intended.

We do not expect that all the farmers will heed these lines, but the young and enterprising ones, who take a fancy to poultry raising, and who can see where money is to be made, as well as to anticipate the wants of the coming generation, are the ones that will take up the *cue* and at once enter into a business that will bring them a profit, and secure for them a pleasant occupation and future independence.

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Has now been before the public over five years and has gained a reputation worthy of it. During 1888 we have sent it all over the country, and we are constantly receiving letters speaking in the highest terms of its curative qualities, and saving their flocks from the ravages of this fatal disease.

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CHOLERA TESTIMONIALS.

R. B. Mitchell,

Dear Sir: Your fowl cholera medicine does just what we got it for—it stopped the cholera. I had forty-seven hens down with the cholera when the medicine arrived. After the first dose I have not lost a chicken from the cholera. I had lost forty-two at the rate of six or eight per day, until I got your medicine. I shall not be without it next year.

Yours truly

WATERTOWN, DAK.

C. A. BARTLETT.

TUSCOLA, ILLS.

R. B. Mitchell,

Dear Sir: Your card at hand asking how I like your cholera medicine. I can readily reply that I like your Cholera Preventive and Cure very much, and do not expect to be without it.

Respectfully yours,

NEWTON M. EVANS.

Office of the District Attorney,
WOODBURY, Gloucester Co., N. J.

R. B. Mitchell,

Dear Sir: Your Poultry Powder proved a good thing to me in keeping my imported Silver Sebright and Pekin Bantams in healthy trim. I believe it is a valuable remedy.

Yours truly,

B. PERRY.

BEACON IOWA.

R. B. Mitchell,

Dear Sir: I received a card from you asking how I liked the Poultry Cholera Preventive and Cure I bought of you. I can say that it is what you recommend it to be.

Respectfully yours,

JAMES PLUM.

MT. PLEASANT, IOWA.

R. B. Mitchell,

Dear Sir: Enclosed find \$1.00 for which please send me one two-pound package Cholera Cure. Please send at once, if possible.

Yours, etc,

O. F. GRIFFITH.

P. S.—I used the package sent me and find it just the thing. Several of my hens were quite sick; after first dose improved at once; shall soon send for ten-pound package.

O. F. G.

TOWANDA, Kas.

R. B. Mitchell,

Dear Sir: Please send me one dollar's worth of your Cholera Cure. My fowls have it again. They had it last fall. I sent and got a dollar's worth of your medicine, which have been of many dollar's value to me. Not another one died after the first dose given. I would not do without it for anything. From my experience I say it is a most effectual cure. I will give my testimony, and so will some of my neighbors who have used it. Chicken Cholera prevails very extensively here, and I am sure you could sell many dollar's worth if it were only known.

Yours Respectfully,

M. E. STEARNS.

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Don't forget the rainy day;
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Save the dime and then the dollar,
Lay up something as you roam—
Choose some blooming spot of beauty,
Some fair lot, and "plant a home."

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100 Eggs Capacity	- - - - -	\$20.00
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DEAR SIR:—Our trial hatch this year was 180 chicks out of 200 fertile Eggs.
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DEAR SIR:—I have just hatched 114 chicks from 120 fertile eggs with your machine.
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