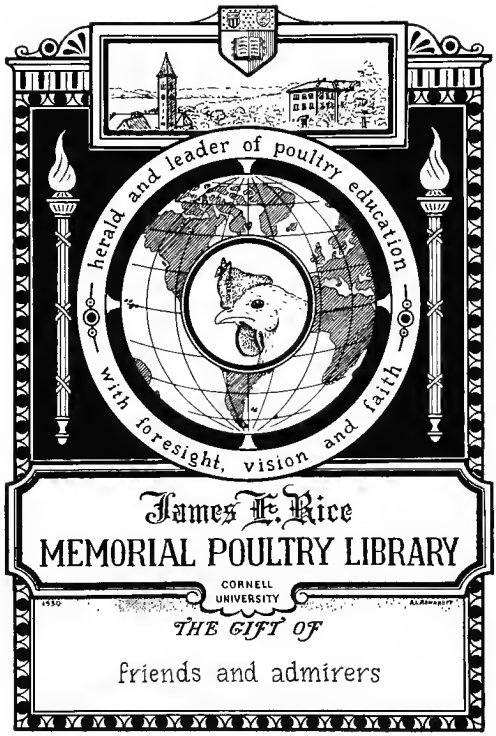
EVERYBODYS STANDARD POULTRY BOOK SERIES

"CHICKEN NURSES"

CHAS. D. CLEVELAND



CHICKEN NURSES

CHARLES D. CLEVELAND

EVERYBODYS

STANDARD

Poultry Book Series

CHICKEN NURSES

BY

CHARLES D. CLEVELAND, Esq.

Breeder and Judge

Published by

Everybodys Poultry Magazine Publishing Co.

Hanover, Pa.

TO ALL KEEPERS AND LOVERS OF POULTRY, THIS BOOK IS RESPECTFULLY DEDICATED. MAY THEIR INTEREST AND LOVE FOR STANDARD-BRED POULTRY EVER GROW STRONGER AND GREATER AND THEIR EFFORTS RESULT IN IMPROVED QUALITY AND UNLIMITED SUCCESS.

FOREWORD

In publishing this book, "Chicken Nurses," written by Mr. Charles D. Cleveland, we are complying with the expressed wishes of thousands of readers of Everybodys Poultry Magazine who have, in part at least, read Mr. Cleveland's articles and who request them complete in book form for future use and reference. One old time fancier and famous breeder of this day writes:—

"Mr. Cleveland's articles, 'Chicken Nurses,' have given me more pleasure in reading than has any other article or book on poultry production that I have ever read. He has refreshed my memory and has brought back to me scenes and experiences that I had in my boyhood days when I first began breeding standard bred poultry. The ups and downs are the same the world over, but the man who will stick to it will prove a poultry success, as Mr. Cleveland well states. These articles, published in book form, would prove of untold value to old and new breeders alike."

Mr. Cleveland's many years of experience as a leading poultry breeder and judge and his several years as secretary and manager of the great Madison Square Garden, N, Y., Show place him as a foremost authority of this day whose advice can be followed with safety for progressive and successful poultry production.

As we see it, the greater value of this book to the breeders does not lie wholly in Mr. Cleveland's advice or in his telling how to incubate, brood, feed, mate, exhibit, etc., but in the greater worth of liberal, broad-minded lessons noted in every chapter and on every page. There are no inflated

ideas, but only whole-hearted sentiments, plainly expressed and splendidly written that will surely benefit all who will read, study and follow them. We surely appreciate Mr. Cleveland and commend him for his excellent examples in aid to others, his efforts for improved breeding, and his worth in general to the standard-bred poultry industry.

By courtesy of several well-known breeders we are also publishing herein pictures from life of several noted winning birds that have been carefully selected to show to advantage the standard of type in the several different breeds and varieties for a further study of shape, as Mr. Cleveland well lays special stress upon this subject throughout his work.

It is with special pride that we commend this work to all fanciers and breeders, feeling assured that it will fulfill its mission thoroughly by creating a greater interest in standard-bred poultry keeping and breeding.

Yours very truly,

H. P. SCHWAB.

PREFACE

In response to the request, of the publishers, for a short preface I scarcely know what to say, except to admit the authorship of the rambling sketches entitled "Chicken Nurses".

They are crude in form and many have been written under pressure of other work, but there has been considerable pleasure in their construction because they reflect the actual experience of the author and they recall many of his mistakes and some of his successes.

If they have been helpful in any manner or have stimulated the fanciers' spirit to any extent the author will feel amply repaid for such labor as he has given to their preparation. To become a real and true fancier is a high ambition which the writer has constantly before him and at which goal he hopes to arrive—if he lives long enough.

CHARLES D. CLEVELAND.

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CHAPTER 1

MECHANICAL CHICKS

The art of artificial incubation is as old as the sun—older for all I know.

The best evidence shows us that the ancient Egyptians were as clever thousands of years ago as we seem to be today in the science of incubation.

The Chinese and Japanese, ages ago, became very skillful in bringing a chick out of an egg without the use of a live mother and even a bird (the ostrich) has shown us that eggs may be hatched under conditions where the mother does not brood them.

They tell us that the Egyptians used to make their profit out of the extra birds they hatched; that is they usually brought out more chicks than they agreed to deliver from the particular lot of eggs sent them. That was "going some" for those days! We also gather from the records that the chicks brought forth by these ancient gentlemen lived and grew up to be lusty mature fowl.

Since these times the real science and art of mechanical incubation and brooding has made great strides; wonderful improvement in method has been achieved and today millions of eggs are hatched and millions of chicks are raised by purely artificial means. Indeed, experiments have gone so far as to produce and grow a chick which was altogether artificial; that is the egg itself was fertilized by artificial means!

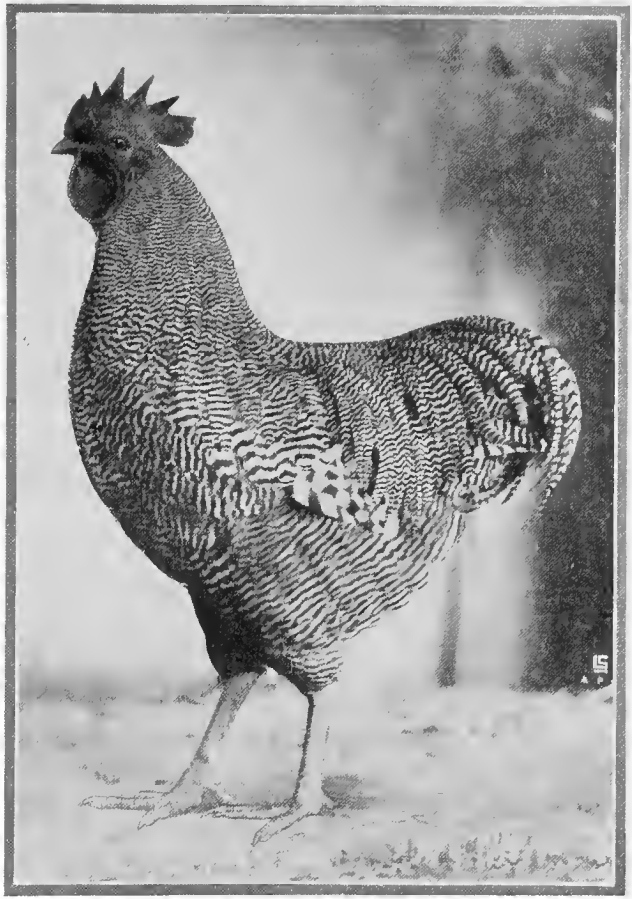
Those of us who did our first hatching with incubators thirty or more years ago, can well remember our early struggles. In those days it seemed to be the practice of manufacturers to let the buyers do the experimenting for them and report results in the form of burning letters of complaint.

I can easily recall the strenuous days and sleepless nights I spent in my frantic endeavors to induce a chick to come out of an egg which had been placed in one of those awful sweat boxes they used to call incubators.

In one machine I had, the temperature was regulated solely by the height of the lamp flame and I have always claimed to be an expert on lamps ever since! The moisture was provided by cooling the eggs and thus you had to become an expert in judging the amount of moisture in the room; you simply took out the tray and cooled the eggs for such length of time as you thought would give them the necessary amount of fresh air and moisture from the humidity of the room.

Pretty tall guessing and a little hard on the beginner. All of us who have been through these trying times with the old kind of mechanical "toy" incubators, have amusing stories to tell—some of them sad and some really wonderful. With one of the worst old incubators that I believe was ever made I hatched every hatchable egg the first time I ran it—and never, after that, could I get even a decent hatch, despite my most "motherly" care and attention.

But nowadays, all this is changed. Modern hatching machinery has reached a truly wonderful level of efficiency. Incubators are made today that are practically "fool proof"



Courtesy of Grove Hill Poultry Yard

and all one has to do is to follow the directions. If the eggs are good, the chicks will come out right on the minute.

We have everything today in the way of hatching machines—those which hold 50 eggs and others which accommodate 20,000. We make use of hot air, hot water and electricity to hatch our eggs; we can burn coal, coke, kerosene or even gasoline as fuel; we can control our temperature by the use of metal thermometers, or by the expansion of the water, or the expansion of other semi-fluids and we can turn the eggs entirely by mechanical means—or not at all. We have devices which show us not only the exact temperature inside our machines, but also indicate the amount of moisture that the eggs are receiving and improved methods of testing enable us to see the fertility of a very large number of eggs in a few moments. Improved methods of ventilation insure the proper amount of fresh air, getting not only to the eggs, but also to the cellar in which the machine is set, thus removing the fowl gases that might otherwise harm the hatch.

Safety devices now render incubators really safer to keep and operate than an ordinary kerosene lamp, and the fuel supply, whatever it be, is so nicely adjusted that the greatest economy in operation is the result. We have long incubators, square incubators, round incubators and also those which can be placed one after the other, one on top of the other, or side by side. The machines are now made so that we can start with a modest equipment and add to it as our business expands, still using the same source of heat supply. We have these hatching "boxes" so beautifully made nowadays that they can be operated successfully either at the top of a mountain where the air is very rare or on sea level.

In a word, there is an incubator for any climate or for any purse, and, therefore, there is no excuse for not using one.

Think of the wonderful results that have been accomplished by the use of incubators—and the still more wonderful things that we must do with them. The chicken yard used to be dependent on old mother hen for the chicks that were to go to market or that were destined to become the layers for the succeeding year—and old mother hen was very seldom ready to set when she should do so; she generally delayed her attack of broodiness until pretty well along toward spring. When she did make up her mind that it was necessary for her to bring her offspring into the world, she started in all right and perhaps she hatched a good bunch of chicks—and perhaps not. Like every female she was prone to change her mind and often left the nest right in the middle of the hatching period. It was remarkable how few chicks were hatched in those days compared with the efficiency of the modern plant.

What would we do if we had to hatch 10,000 chicks with hens; what tremendous expense and labor would be involved in such an attempt. It is not an uncommon thing to see 10,000 chicks on a single poultry plant in these days and I had myself this season about 4,000. Of course if we still trusted to old biddy we would be plugging along just as our forefathers did and the poultry industry would not be what it is today. And not only is the breeder both of exhibition stock as well as of utility poultry able, by the use of artificial means, to expand his business and make it really of larger proportions, but two new kinds of industries have sprung up through the aid of incubators. We now have the commercial hatchery and the business of custom hatching, both of which form profitable lines for the man who does not attempt to raise any chicks for himself and who has no poultry plant.

The day-old chick business has grown by leaps and bounds in this country and is certainly one of the greatest factors in the upbuilding of the poultry industry. Several years ago I testified before the United States Senate Committee which was investigating the possibilities of shipping chicks by parcel post. At that time I had gathered such data as was available to show the number of day-old chicks that were annually hatched in this country—and it ran up into the millions. The senators were dumbfounded and could scarcely believe that I was telling the truth. They asked me all manner of foolish questions and became greatly interested in a matter which they at once saw was really a business involving many thousands of dollars. Today there are a number of plants that turn out 100,000 chicks per season and some a lot more. Such results can, of course, only be accomplished by the use of mammoth machines, burning coal or coke (and some kerosene) and built to accommodate twenty, thirty or fifty thousand eggs at one time.

Such mammoth machines are found to work just as efficiently as the small incubator will do and the labor is enormously reduced by the use not only of one base of supply for heat, but also by mechanical devices for the turning and testing of the eggs, so that one man can in this way care for a very large number of eggs. Through the mediums of these hatcheries, millions of pure-bred chicks are shipped to all parts of the country to take the places of the few scrubs that the farmer might otherwise raise, and those who really have not time to hatch their own chicks can, at a small expense obtain all they want with no labor and with perfect safety. Lots of beginners are started in this way.

Custom hatching is another of the ways in which the incu-

bator has helped to keep chickens on the farms and small places in this country. For those who have their own birds and wish to have their eggs hatched, but who either have no place for an incubator or are too busy with other work at hatching time, the custom hatcher is a great boom. The poultryman or farmer takes his eggs to the man who makes it a business to hatch for customers, leaves these eggs with the proprietor and is notified by him when the chicks are ready for delivery. In most cases an excellent hatch is the result and both parties are pleased; and it generally costs only about three cents per egg to have the work done. I find this quite profitable myself.

My mammoth holds 6,000 eggs and I make it a habit to run 3,000 of my own eggs and to reserve space for 3,000 eggs as accommodation for customers. The three cents per egg I get for hatching my neighbors' eggs pays the cost of the coal and quite a little of the expense of the operation—and I get my eggs hatched for nothing. The sale of clear eggs to the baker usually makes up for any additional expense and really my incubator is run without cost to me.

If good fair hatches are the result, my customers come back year after year, and I notice that they raise many more chicks by this method than they would if they attempted to do the work themselves. When people talk to you about incubators they generally ask, "What is the best incubator?" This is just as impossible to answer as the question—what is the best breed of fowls? All incubators are good and there is no one best incubator; the kind you buy will depend on your particular fancy, on the use to which it is to be put, on the location of your plant, and on many other considerations—not the least of which is the selling ability of the man who is trying to sell you his particular make of

machine. The point is that, where it is at all possible, you should have and operate your own machine. It almost always happens at the end of the season that you find you have not raised as many birds as you ought to have done, and this is largely because you have not used an incubator. You have put the same amount of labor in raising 200 chicks with hens as you would have done in raising 500 or more with an incubator and brooder. The increased use of and demand for incubators this seasoin should be very large. When we consider the awful havoc that has been wrought in the ranks of the poultry of this country during the past two years; when we have the absolute necessity for an increased poultry production not only for home consumption but also to supply the markets of foreign lands, we can appreciate the necessity for the more universal use of the incubator and the brooder.

In no other way can we hope to restore the poultry to the farms and the breeders' yards, save by the greatly increased use of the modern incubator. The present outlook for the poultry business is extremely bright—everything points to an active demand for poultry and its products and it is the solemn duty of every man and every woman who can possibly do so to raise at least a respectable flock of fowls this season, if you can produce a surplus over former years so much the better for the demand for it will be certain. If you are paying $1.00 per dozen for eggs, as many people are doing today you will realize how shrunken the poultry industry has become and will know the necessity for better poultry and more of it. To those who already have their large incubators and brooders this advice also applies and in this connection there need be no fear for a shortage of fuel with which to operate them. If you will communicate

with the makers of your machine they will tell you how to mix coal and coke or how to use coke alone in your machines, if you believe that you may be short of the proper coal that you have been accustomed to use in former years—where there is a will there is always a way and you may trust to the ingenuity of American manufacturers to get out of any difficulty in which you may find yourself. Your experimental station will also give you very material help along these, as well as other lines.

It does not require a skilled mechanic to run an incubator—all that is necessary is regular care and attention according to the directions furnished with the machines. There are no more sleepless nights nor smoking lamps nor roasted eggs. It is comparatively simple to hatch chicks and, therefore, you will not be doing your full duty unless your "bit" embraces the hatching and raising of a flock of chickens this season. Should you be a beginner you will be greatly interested and astonished at the results and I am certain you will find it not only pleasant but really profitable. It is up to you to raise the standard of efficiency by whatever means you can and in whatsoever business you engage. If you are in the poultry business or are about to start to have a flock of hens, you must use an incubator.

CHAPTER II

HENS WITHOUT HEARTS

In the spring the young man's fancy lightly turns to thoughts of hatching and rearing chicks. We know that the early chick usually catches the worm and the prize ribbon. We yearn to get our hatches off and our chicks running out just as early as Mother Nature will let us. We have a decided antipathy toward late chicks and we know that after such chicks come out they will not be mothered or looked after like the early ones.

Old "biddy", however, does not see the thing as we do; she wants to lay a lot of eggs before she gets "broody" and even then she oftentimes seems very uncertain about her intentions.

That we do not have to wait on her good pleasure has been taught us by science. As pointed out in the previous chapter, we can now use the modern incubator with perfect safety, whether we have a small flock or a large one; whether the weather is good or bad and whether we have had any previous experience or not. But what are we going to do with those incubator chicks after they are hatched?

Must we find a hen who has proved to be the exception to the rule and decided to "mother" some chicks at (to her) the wrong time of year?

Or are we to put these little downy fellows into a box and keep them near the kitchen stove where the ever watchful cat may help herself when our back is turned? Is there not some way of caring for the early chick so that

he may endeavor to grow big enough to catch that oft spoken of early worm?

Science has again come to our rescue and provided the modern brooder.

We have often watched the loving hen with her brood of new hatched chicks. How she loves them, what a great big heart she has! How she scratches for them and calls the flock as soon as she discovers anything that she thinks might tempt their tender appetites!

How splendidly she fights for them! How tenderly she tucks them under her wings to give them the necessary warmth! She is, apparently, a model mother and usually excites the admiration of those who do not know how young chickens should be brought up. Although we may grant that she has virtues which are very admirable, yet we must not be blind to her faults. A little watching will disclose them to us. First, she is not clean, but usually teems with lice which soon fasten their clutches upon her offspring and begin to sap the vitality out of them to an amazing degree. Then, old mother hen seems to be inspired with a marvelous desire to make her particular brood the champion long distance walkers of the feathered tribe. Note how she starts out with them in those cold, early spring mornings when the grass is fully saturated with dew. See how she drags them over hill and dale, regardless of their shivering bodies or their plaintive "peeps" for warmth. What she is after is food, whether they need it or not and she does not stop to let them rest between mouthfuls. If the mother and her family are caught in a heavy rain they are generally all wet until the next day. If it turns suddenly cold the hen does not feel it, but the chicks do and some of them drop by the wayside.

If the grass is long the hen can see over it and chase bugs, etc., at her pleasure, but the little ones often become helplessly lost and never come back to the fitful warmth that their mother could bestow.

Courtesy of Hillview Farm

Should the brood be confined in a coop the "old lady" will be so anxious to scrath that she will continue to do so, regardless of the fact that very often she will lift one of

her offspring and rudely dash it against the back of the coop, breaking the leg or "jarring" it beyond recall. When a hen is allowed to take care of her young, she is generally in a high-strung and nervous condition, constantly calling the chicks to her or sounding a note of alarm that frightens them "into a cocked hat" and she thus renders them wild and anxious to a degree. And when we come to sum up the whole situation we find that the hen mother is really not a good mother at all and her use as such is to be avoided by every ruling of common sense.

Just here is where the "hen without a heart"—the artificial mother—the modern brooder comes to the rescue and makes the rearing of chicks almost a certainty, and really only a matter of regularity and system.

This modern mother has no heart; she has no favorites, nor has she any whims.

At all times she is under our control and she conducts herself in a regular and dispassionate way, never angry, never frightened, never neglectful. Her heat is provided at all times; she is absolutely free from vermin and she never takes a stroll, but is invariably found at the same old stand; the chicks will always know when they can get that gentle flow of heat that their little bodies crave.

There can be no question but that the modern brooder is the only thing to use if you intend to raise really good chickens. And the brooder has, like the incubator, gone through many experimental stages. I cannot recall now what make of brooder I first used, but I know it was a bad one! Those old time brooders were badly built and generally caught fire during the night, so that one did not have the opportunity to cook the chicks in just the style most de-

sired! I remember one case in particular where I was brooding a nice bunch of early chicks in the bath room. Everything had gone swimmingly and the "tots" were growing and developing to an amazing degree.

At this time the weather moderated and I transferred the outfit to a nice clean colony house in a sunny and sheltered corner of the garden. The next morning brooder, chicks and colony houses were a mass of black ashes. The brooder was an "indoor" brooder which meant that it was so poorly built that the slightest draft about the lamp would send it shooting upward until something caught and that was the end. I remember very distinctly writing the makers a nice, "chatty" letter, telling them in words of one syllable just what I thought of their particular line of goods! At the present time these little incidents do not happen.

We have today the dependable fireproof and windproof brooder that will take care of the "children" in any old building and at any outside temperature.

Many of the first users of the artificial heating device for the raising of chicks used steam. Pipes were run on the side walls of a building and kept very hot and hovers were set on the floor. The room temperature was pretty high and if the chicks ran under these "cold hovers", which were simply circular contrivances with flannel nailed on the circumference, they would generate themselves sufficient extra heat to keep them warm enough. It is surprising how much heat say 50 chicks will generate from their own bodies when they are huddled together under some protecting covering. The pipe system then developed in an overhead one, that is, the lines of pipes were carried over the heads of the chicks gradually rising from one end

where they were very near the floor until at the other quite large chicks could seek shelter under them. The pipes generally carried hot water and they were covered with burlap or felt screens to hold the heat or throw it down upon the backs of the chicks. These overhead pipe systems were very successful and many hundred thousand chicks were raised by their aid. Perhaps the most modern pipe system is that in which the hot water pipes are run in an insulated box under the brooders; the heat is allowed to rise through openings in the box and under each hover and this heat striking the top of the hovers is deflected on the backs of the chicks. The floor of the brooder compartment is kept cool by providing an air space under it and between its bottom and the top of the pipe box. This is the system which I have used in my brooder house for many years and I have found it extremely reliable. The temperature of the air that comes to the chicks is regulated by a float that rises and falls in an expansion tank that is connected with the water system; this regulates the temperature of the water by means of opening or closing the draft damper of the furnace is automatic and practically cannot get out of order. Once set to control the proper heat it is set for the season and there is no lamp to trim. The coal burning furnaces attached to these hot water systems are the finest examples of perfect combustion imaginable and are reliability itself.

By use of such devices one stove will take care of almost as many hovers, or sections, as is desired; it only depends on the size of the furnace. My brooder house contains only 24 hovers each accommodating 50 chicks. This we found too small a capacity and we were led to adopt another modern device for our "overflow" department. I

refer to the colony brooder, an invention which has been a boon to many another poultryman. The colony brooder is a little coal stove, whose damper is opened or closed by a thermostat which can be adjusted so as to regulate the heat to a nicety. All about this colony stove is a big metal dome which holds in the heat and throws it down upon and over the chicks as they cluster about the stove. These contrivances can accommodate 500 chicks in one brood and they can be placed in one colony house of suitable size. When the chicks have reached a proper age the stove may be easily removed and the youngsters continue to inhabit their old home until ready either for market or the pot. Many of these big colony brooders are now provided with blue flame kerosene burners so that the use of coal is not necessary and the claim of their makers is that a more uniform heat is thus provided. Some users of the colony brooder became frightened last year because they imagined that they would be without coal but nearly all got along nicely and those who applied to the manufacturers learned that they could use coke or mixed coal or briquettes. The utility of these colony brooders must be apparent to all and certainly they made it unnecessary for one to build an additional brooder house, thus saving quite a large sum. For those who do not require a large capacity the oil-burning small brooder has proven a great blessing. These are now made in many patterns and in nearly all sizes and afford a means of bringing up small flocks of really early chicks without waiting until the hen gets ready to do it herself. Excellent brooders are also made for attaching to colony houses and which are heated by gasoline, the supply of which is kept outside.

Cornell University devised such a system and it has been used extensively and with entire safety. In other words, if you want to raise chicks at any time of year you can do so and you can find a device exactly suited to your requirements. If you are in doubt, visit the best poultry show, see the brooders in operation, go to a modern poultry plant and talk with the man in charge. But whatever you do, don't wait on old mother hen, use the "hen without a heart".

CHAPTER III

FIRST LESSONS IN BROODING AND FEEDING

In the previous chapters we have given a brief account of the gentle art of incubation and the accomplishments of the modern brooder, or the "Hen without a heart" were made as manifest as it was possible for me to do. It is now my purpose, kind reader, to ask you to lend yourself to me for the balance of this year so that we may together bring up these chicks in the way they should go and spend a year with one another in our effort to be closely associated with these youngsters, "from shell to show room". We shall get to know each other pretty well before the year is over and, if we succeed in our efforts, who knows but we may be decorated with some form of distinguished service medal which, in the poultry world, is evidenced by the coveted blue ribbon at one of the country's best shows.

This is not to be a six round decision contest, but a genuine fight to the finish. We are not pitted against a single evening, but must encounter many. We are not to receive the constant applause of an admiring audience, but must plod along together unknown and unseen until we have reached our goal. Are you willing to undertake this work? Can you put on your overalls and resign yourself to the occupation of becoming a certified chicken nurse? Yes! Glad to know you have made your decision; let us begin work.

It is quite immaterial how we got our chicks. Perhaps we hatched them ourselves either in a huge mammoth heated by water, warmed with a coal stove or in a smaller

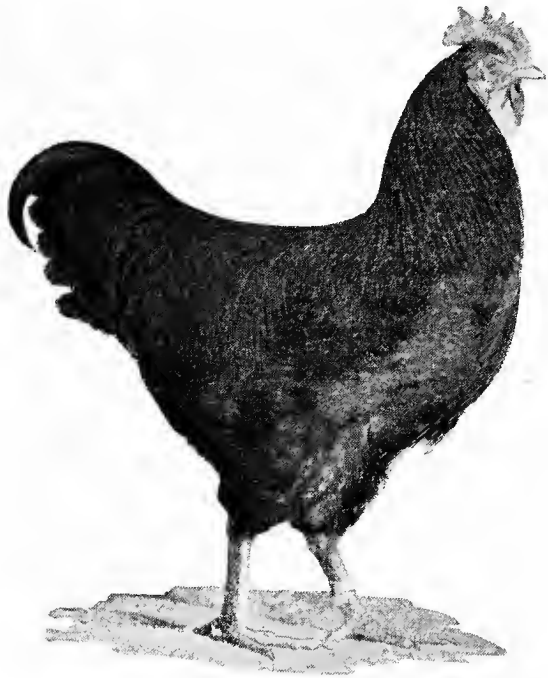
hot air machine supplied with a kerosene lamp. They may have been purchased already hatched—as day old chicks —furnished by some one of the immense commercial hatcheries now located in various parts of the country. At any rate, we have them, and they must be inspected and looked after. They have arrived by express, and we are just home from the station in high spirits. Indeed we were so delighted to get the youngsters that we forgot to open the boxes at the station and see if the "peepers" had made the journey safely; we never stopped to count them, but gave a receipt in full. As we now take the cover off the first box we find our error—eleven chicks are dead in the first hundred and some of the others look a little "wobbly". All together, twenty-six day olds have passed to the "happy scratching grounds," and we now realize that we should have inspected them before we gave a receipt in full.

At once our assistant is for sending a wire to the sender telling him in plain English that this is an "outrage" and that he "will not stand for it," etc., but we tell him to pause in his hot career for a moment and think the matter out with us.

Can we always expect 100% safe delivery with any quantity of live stock? Is there not always a certain number of "weaker ones" in every shipment of chicks? Would all of them have lived for two weeks even if the whole lot arrived in apparent good order? Pretty soon, he begins to see our argument. Twenty-six dead chicks out of five hundred is not so bad after all. Perhaps it was better to have the weak ones die at once rather than have them linger for a while on our hands and finally pass up their chips. So the assistant is content with writing a letter telling the sender about the loss and asking him if he wants to make

it good. This seems more reasonable to us both and puts us in better spirits, as we place the youngsters under the hover. Now, before we went to the station we were very particular about this hover. It has first been most carefully cleaned and disinfected; it had been brushed and washed and sterilized and was as neat as a pin. Then the stove had been gone over with painstaking care; the thermostat had been looked at; the grates tested; the smoke pipe renewed, and the colony house where the brood was to be raised had been put in apple pie order. Clean sand was on the floor; clean water vessels were at hand; clean grit trays were placed at regular intervals. Then, the proper size coal was put in and the brooder gradually heated up to 95 degrees and finally kept there for three days, so that the house was dry and warm and snug. Round about the stove and about eighteen inches out from the edge of the hover top is placed a circular ring of fine mesh wire netting about a foot high. This is to prevent the chicks from straying too far from the source of heat and to keep them from crowding into corners. By and by we can remove this protecting circle, but not until we see that the chicks know where to go when they want to be warmed. And right here, we tell the assistant a very harrowing story of our neglect to provide such a safeguard as this wire confiner. We recount to him how, a number of years ago, we did not know or realize that the chicks would not easily find the heat. We did not remember that the brooder had no voice to call the chicks, and so we failed to plan to confine them near enough to the heat supply to make it impossible for them to get chilled. The next morning the corners of the house were crowded with little bunches of dead chicks which had huddled together for warmth simply because

they did not know where to go to find it. Half of them were either dead or so badly chilled that they never recovered.



Courtesy of Bloomfield Farm

The assistant listens intently and we can see that he is so impressed that he will never forget this harrowing experience. This is what we want. We must make him see the right way by showing him from our own experience what is the wrong way.

And so together we place our little charges under the hover and note how nice and strong and active they seem.

There is just that little chirping of happy chicks to be heard; none of that plaintive peeping of cold chicks can be noticed, and we, therefore, know that all is serene thus far.

Again, the assistant is asked to take notice. Does he know the language of chicks? This he must learn, and a good time to begin is right now. Let him listen carefully to the bright, happy noise that he can now hear. The notes are short and sharp, and the chicks are moving about with alacrity and seem alert. This means that they are contented and well. When chicks are cold or sick, they mope around and give vent to a dolorous long drawn out "peep, peep" which at once should put the caretaker on his guard and should instantly warn him that something is wrong and that his attention is needed immediately. The assistant again listens and again makes a mental note.

And now we tell him that we will leave the chicks for a while. We will darken the house down a bit and let the little fellows have a sleep and a rest after their long journey. We don't want to forget that they have travelled over 200 miles and are neither in the mood nor spirit to take much exercise for a little while. Some of them are naturally good travellers and have had comfortable places in the boxes. These will want a drink and a little grit. There is plenty of light in the house for these particularly active ones, but the others want to recuperate and rest, so let us give them a chance. In a couple of hours we can come back with their first real meal and watch them eat it to our heart's content. So we close the door and go about our other work for a while.

Perhaps this is the day for cleaning the dropping boards in the laying houses, and we had better get that work done.

In a couple of hours we come back and the first thing we do is to look at the thermometers under the hover. We notice that the heat had gone up a couple of degrees because the chicks have themselves generated quite a bit of heat from their own bodies, but the brooder is running like clock work, and we notice that most of the chicks seem to have had a good drink and that they have been at the grit pans already. So we conclude to feed them, and we put in some very shallow pans of rolled oats or pinhead oatmeal. The chicks easily see this feed and begin to pick it up immediately. At first, they merely look at it, and then one by one they take it and finally they are eating away in great style.

We let them go for about twenty minutes and then take the pans away. They will have another chance in about three hours. We explain with the assistant that the motto for feeding young chicks is small feeds about every two hours for the first week or ten days. We tell him that their crops must not be over-crowded, but that they must be kept in such a condition that they will always be ready for the meal when it is brought to them. Over-feeding or too early feeding is the cause of more loss with chicks than any other ten things combined, and we do not intend to lose any more of these little fellows than nature intended that we should. And so we tend our brood for the first week. Gradually, we substitute some high class chick food or prepared "chick starter" for the oats and gradually we lengthen the time between feeds—but very gradually. The motto still is "a little at a time and that often."

In about ten days we can begin with a little dry mash. They do not know what it is and must be hungry enough to want to try it, but they will soon get to know that it is

one of the best things in their bill of fare and go to it greedily. After we feel that they will relish it, and that it is doing them no harm, we can always leave it before them and it is really amazing how much mash 500 young chicks will eat. This does not mean, of course, that we are to cut out the grain. We must give them their hard food at the regular times, just the same, but never more than they will eat up clean in about ten minutes. When we say "regularly", we mean it. There is nothing so important as the regularity by which we time our feeding operations. It is essential that the meals be served on time every day, Sunday included. If we cannot feed very early in the morning at the start, do not begin the first feed early. Start and finish with the chicks by being regular—right on the dot—and you will find the chicks ready waiting for you at the appointed time. Do not try to grow chicks unless you are to devote yourself to them to the exclusion of other matters.

If you are not absolutely regular in your duties, the chicks will not grow to be what you hoped for, and your time is largely wasted. The sooner we can begin with green food with our chicks the better; they crave it and will not do without it. Properly sprouted oats forms the best green food for chicks, but it must be properly sprouted and must be sound, clean oats to start with. There is a great deal of trouble with oats nowadays; much of it is sulphured and it is usually of poor quality. If you cannot raise your own feeding oats, you must buy seed oats or guaranteed clipped oats. It is wonderful what a grand food it makes for the chicks and how much they will eat of it. Do not let the sprouts get too long. This means that there is little vigor left in the oats. Feed it when the

tender roots and sprouts are just peeping out and be sure that it smells sweet and sound.

If you cannot have oats, use sods of nice short, green grass, or cabbage. Should cabbage be given, it should be fed very carefully at first, as it greatly relaxes the bowels and is rather "heavy" for youngsters. We explain this to the assistant and tell him also that one of the cardinal points to be kept in mind is cleanliness. Keep the brooder and the water bowls clean; wash them every day at least once —and better twice. The water that chicks drink is very important and it must be clean, clean, clean.

Should we be able to give the chicks sour milk, it will be a great advantage. It must be sour and the pans in which it is placed must be perfectly clean. The best plan is to have two pans for each lot of chicks and let one stand in the sun, after washing, for a while. Sunlight is a great disinfectant. If we cannot have the milk from the farm, we can use one of the milk powders; such as dried buttermilk either alone or mixed with the dry mash; but milk in some form we should use if possible. And here again we speak to the assistant. We tell him that the best is none too good for young chicks and growing stock. We point out to him that the question of expense is not to be considered at all when we want to raise good chickens, and we show him what foolish economy it is to try to raise good chicks on poor food. If the chicks grow up to be high class individuals, they will pay for their feed ten times over, but if they are not properly fed with the best things to be had, they will never amount to anything more than the ordinary —and the ordinary never calls for much.

And so we leave him for a while to think over the few lessons he has learned in the first ten days of the care of a brood of chicks.

CHAPTER IV

FEEDING AND GROWING

We are still engaged in the pleasurable pursuit of poultry nurses, but both of us, the assistant and myself, are a month older, so are the chicks and there are more of them.

Last month we had just given our charges their first meal and had left them to digest it. They were under the protecting canopy of a big brooder stove and had not yet tasted any solid food. They started life on breakfast food, but we do not want to finish them on such a diet. We well remember the glowing advertisements of a young man whose picture was displayed who had been reared exclusively on one of the latest patent breakfast foods, and he certainly did look like a good physical specimen, but we venture a guess that he occasionally slyly appropriated something a little more substantial, and perhaps a nice piece of tender beefsteak or a toothsome stew garnished with a variety of vegetables. Even if he had not transgressed the rules laid down in the advertisements, we believe he would have been better off if he had done so. What we are getting at is that all animal life must have and should have variety, and this applies to poultry as well as as to all other live stock.

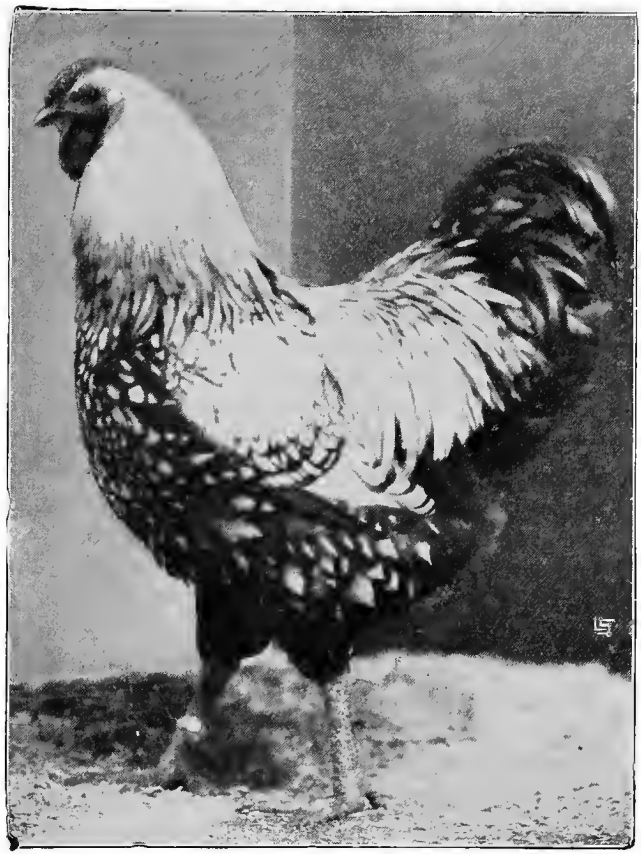
Whether we know anything about protein or carbohydrates or fats, or indeed, of the chemical analysis of feeds, even the dumbest of us realize that "variety is the spice of life" and that without it, appetite fails and digestion stagnates; and so we have to provide a menu for our chicks that will not only be nutritious and developing, but

will also contain enough variety to whet the appetite and promote quickest and surest growth. When the chicks get older, nature will see to it that they receive quite a large variety of her unrivaled supplies, but, before we turn our chicks into the range, where nature will supply the growing youngsters with a variety of worms, grubs and insects with succulent green food and with a great number of seeds of plants and weeds, much relished and eagerly sought for, and she will supply pure, distilled water and the moist tender roots of grasses and berries of various sorts, so that a hen turned loose with her chicks can succeed in bringing them to maturity without any food being given by the human hand. Her brood, however, while it will have a fine constitution and an excellent covering of feathers, yet it will not attain the large size and perfect development which it could have done had nature's rather meagre store been supplemented by the feeding at the hands of modern scientific man, of those things which should have assisted nature in producing the best possible results.

I explain this all to the assistant who occasionally nods with approval and who seems interested. I tell him that we must endeavor to imitate nature as much as we can; that, while it is not necessary that we go out into the byways and hedges to gather the seeds of weeds and plants or dig in the ground for angle worms so that we can bring them to our pets, yet we must plan to use something in our feeding operations that will fill these gaps. Animal food, or protein is absolutely necessary and the place of the angle worm or the grub is taken by the use of beef scraps and sour skim milk. We find that oats alone as a food is not enough, and we know that the three foods necessary and essential are wheat, corn and oats. Perhaps we had

better note here that we are not so sure about wheat. It may be that we can get along without wheat, but we certainly cannot get along without corn and oats. War taught us a few things, not only in the making of soldiers, firearms, ammunition and the winning of battles, but also, perhaps, opened our eyes a little on the question of feeding problems. I explained to the assistant that last winter, on account of war conditions, I fed my laying and breeding hens exclusively on a corn grain ration; that I fed a small amount of wheat in the way of bran and middlings with the mash, but that no grain was given other than corn and that the results, both in number of eggs and the fertility of the same, were on a par with other years. But this year war conditions do not prevail, and it is wise and beneficial to use in the grain and also in the mash about 20% of wheat and, to my mind, this should be mingled with about 40% of corn, 30% of oats and 10% of animal food. I further point out that there are a number of mill products made from each of these and that we can use a very large number of combinations in our ration, providing we bear in mind only the main proportions of each grain that should form the whole, and I further point out to him that there is another grain which, for a while at least, on account of its beneficial effect on the bowels, should be used—and that is barley. Ground barley should be used in all chick mash for at least a month or six weeks, and a safe proportion would be from 5% to 10%.

At first our chicks on graduating from oatmeal or rolled oats should be fed a crumbly mash (not wet) made by mixing sour milk with one of the very best chick mashes that is on the market, such as Pratt's. Grain is not necessary and, in my judgment, not advisable for a while, for



Courtesy of A. & E. Tarbox

remember that there is grit and oyster shell always at hand and constantly before the chicks. If we have no milk or are not looking forward to a supply of this product for the summer, we should certainly use one of the milk substitutes

such as milk powder or dried buttermilk. The benefit derived from its use cannot be over estimated and no matter what it costs, a plentiful supply should always be on hand. And this reminds us to say very firmly to the assistant that the question of cost in connection with food for young chicks should never be considered. The best is none too good and, just as in everything else, cheap foods are the dearest. Thousands, perhaps millions of chicks have been lost through feeding cheap foods adulterated with floor sweepings or made of unsound grain. Think of the real loss that the death of each chick means to you. You have mated the parents with great care and considerable expense; you have housed them and fed them comfortably and liberally at more expense; you have gathered and marked their eggs and stored them away carefully for hatching; you have spent three weeks in tenderly watching over the incubator in order to bring forth the chicks to life, and it is certainly poor economy at least to waste or throw away any of these chicks, each one of which has cost you so much time, labor, thought and money. There is always a certain percentage of weak or inferior individuals in any flock of chicks; the sooner these die or are gotten rid of the better, but the remainder should all live if that is possible, and it is possible to preserve the life and health of all of the healthy chicks if they are cared for with modern methods of housing, feeding and care.

After they are turned out into the colony houses, they are more or less subject to loss from causes practically beyond the control of the caretaker. Vermin will prey upon them; storms will overtake them and accidents will befall them, but this loss is not heavy. The greatest mortality in chicks occurs between the time of hatching and the date

when we succeed in putting into the colony houses 80% or 90% of the chicks we started with, we shall do exceedingly well. Not long ago, I had a visit from a young city man, an artist by trade, but a farmer by inclination. He came to inspect my Guernsey herd and to talk cattle and did not know that I was a poultryman. At dinner he turned the conversation to incubators and brooders and explained to me at some length the wonderful machines he had just purchased which were sure to hatch every fertile egg and to raise every chick. I could not bear to let the opportunity go by of pointing out some of the pitfalls, dangers and snares ahead of him, and it was almost pitiful to observe his consternation when he began to realize that a 75% hatch was an awfully good one and that he was practically sure of losing, from one cause or another, 20% of his youngsters. This was but a typical case. There are hundreds of people who think just as this young man thought; namely, that the poultry business is a snap and that huge profits, worked out on paper, are not really dreams.

But to get back to our chicks. We have learned how to care for the fire in our brooder stove so that it will be uniform, night and day; we have learned its eccentricities and weak points; we now know when to put coal on and when not to, and we are firmly convinced that it is a mighty good little machine—if it is attended to regularly. We have removed the circle of wire netting that was placed on the floor around the hover top because the chicks have now learned where the heat is to be found and can be given their liberty to run at will all about the colony house. As they grew bigger we mounted our water vessels on low stands, so as to keep the water clean and free from any

litter that the chicks would scratch up in looking for their small feeds of chick grain. The pans of sour milk are similarly disposed of and the mash hoppers are placed tight against the walls so as to prevent any chicks from squeezing in behind them and getting caught. Once each day we have been feeding a liberal supply of properly sprouted oats or have thrown down upon the floor a couple of good big sods, and we have opened the windows in the day time so as to let the air and sunlight permeate all through the house.

It is such a fine day today that we tell the assistant we are going to try an experiment. We have constructed a rather small run of fine wire mesh covered at both the sides and top and in front of the colony house, and we are going to give our flock its first taste of terra firma. We open the exit door, and the assistant stands by, fully expecting that the chicks will madly rush forth and gambol on the green. As a matter of fact, nothing of the kind occurs. One chick timidly looks out the door and gives the cry of fright. Other curious heads soon appear, but it is a long time before the boldest one dares to venture out. The assistant forgets that the run looks pretty large to these "hand made chicks" and that they have to learn what it means to go in and out a door. I send him into the colony house and he gently drives the flock forth into the sunshine. The chicks stand around in a dazed way at first and make little use of the liberty given them, but soon one and then another sees a tempting shoot of grass or a fallen seed, and then the whole outfit bestirs itself, and the chicks are soon masters of the boundaries of their enclosure. It is, of course, necessary for me to further enlighten the assistant to the effect that these chicks will not know any better how to get back

to their hover than they did how to leave it and that it will be necessary for him, at next feeding time, to see to it that every chick is driven "home" so that he will, in future, know enough to "go in when it rains". On every good day, hereafter, the chicks will be given this limited liberty, and it will do them a world of good, for there is nothing like getting chicks down on the ground as soon as possible. Contact with Mother Earth seems to be essential for the proper development of chicks as is their food or warmth, and we must only be careful that they are protected from stray dogs, cats or hawks.

And so we are going to leave our brood again for a short time when other changes will have occurred. We note that they are thriving amazingly and that they are putting on their first covering of feathers. The work of "starting" them has been accomplished, and we feel that most of them, at least, are destined to survive, and to mature into useful and beautiful specimens of their race. The hardest work has been done and yet much is to be gone through and perhaps the finishing touches are the hardest of all.

CHAPTER V

TRANSFERRING TO COLONY HOUSES

We will permit you, Mr. Reader, to go through this chapter of our experience and to form one of the party of chicken nurses who are endeavoring to bring up their young charges in the way they should go. You may put on a pair of overalls and follow along behind, so that you may either applaud our efforts, or, criticise our mistakes, as the humor strikes you, or as the necessities of the cases seem to require. But, you will not be allowed to take an active part as we already have an assistant and our efforts are primarily for his benefit, so you need not look for a day of violent effort; our hands are the ones that will get blistered and our backs are specially reserved for those peculiar pains which the spring and outdoor work invariably bring.

Remember that it is the month of June, that the days are long and the weather balmy. This is the time when the poultryman's day is the longest for he should be up at sunrise and will generally find something to do until sunset. Such a day, however, includes three full meals for the worker's exclusive benefit.

If your ears are sharp you have not failed to hear the gentle tinkling of "Big Ben", who sounds his alarm at ten minutes before five. If you do not arise promptly we will "assist" you in ways known only to ourselves. The motto is "No Waiting, No Delay", and by five o'clock you should be dressed and on the way to the row of coal heated brooders in our first row of colony houses near the incubator cellar. We are going to feed and water promptly, this is

our habit on every day except Sunday, when we begin an hour later, which is because man is a sleep loving animal—especially in the morning.

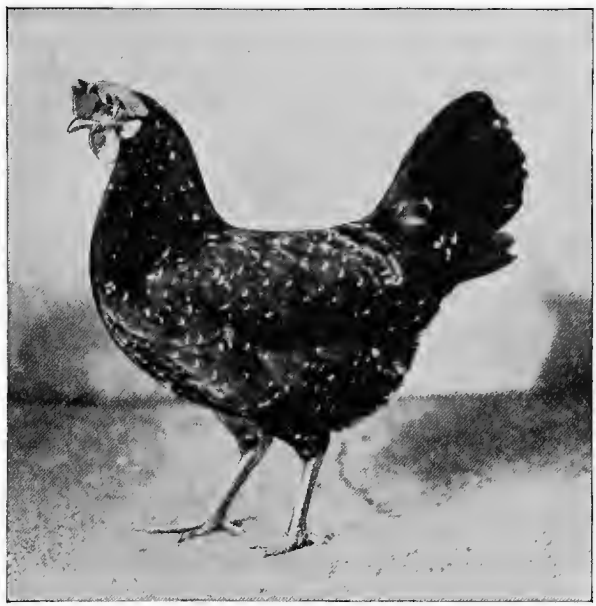
Your humble servant will take the feed pails and is closely followed by the assistant who is to supply the drinks. Each house is provided with a generous dry mash hopper containing a very finely ground mash, enriched either with powdered buttermilk or very fine ground beef scraps. Such a mash (as we have already explained to the assistant) must be in the most palatable, easily digested and nourishing form, for it is the mash that we use from the third week to the third month, a period when chicks should be enabled to "come and get it" whenever they wish, and when they do get it, they should not have any difficulty or bother in securing all the elements that they require in each mouthful of feed. What we want them to do, is to get a sure, quick and lasting start. Now while these feed hoppers are automatic to a certain extent, we do not know of any that continuously let down the mash as they should do; those that let it down too quickly are wasteful, and even the best ones will be found clogged several times a day. Thus, this morning we find that the chicks, who have arisen at the first streaks of dawn, are not able to get at the mash, and are in consequence hungry. To a certain extent this is as it should be, for it enables us to give them a good feed of grain which they would perhaps scorn if the more tempting mash were available. While the chicks are eagerly devouring the grain, our friend the assistant comes along with a water pail in one hand and a pail half full of water and disinfectant in the other. In this last pail is an old whisk broom looking sadly the worse for wear, and many, no doubt, would wonder what it was doing there, until they

saw the assistant at work. He enters the colony house, takes up his water fountain, puts the bottom in the half-filled pail, and with the whisk broom deftly scours out the upper part of the fountain. And the moral of this is "Do not throw away the whisk broom even if you have no silk hat".

Every living thing, including man, must have an abundance of fresh water and the water must be clean. A number of live things will not drink unclean water, but chickens will, and it is decidedly not good for them. One of the undesirable chores in the poultryman's calendar is watering, but, it is one of the most important of his duties. We have, therefore, started the assistant on the right track by insisting that he see to it that the chicks have a plentiful supply of clean water, which must be contained in clean receptacles. How often have we seen flocks of chicks bountifully supplied with the best feed, but forced to satisfy themselves with a very meagre supply of filthy water.

Now these chicks that we have been feeding this morning are still in the colony house where they were put immediately after being hatched, the hover is still there and its curtain is still down in its old position, but no heat has been supplied for the past three weeks. This is to harden off the flock so that it will be prepared for its first moving, which is to occur this evening. The sooner we can get our chicks accustomed to go without artificial heat and to supply the warmth required from their own bodies, the better. We must not do this too early in the season, or in the life of the chick, for we are liable to have some cold storms in the latter part of April and in May, and a cold chick will sap its vitality by endeavoring to give out more warmth from its own carcass than nature intended. But just as

soon as we can be assured of decently fair weather we should supply a "cold" brooder—that is, a hover under which the chicks can snuggle and maintain a sufficient warmth without other heat supply. The feather brooder is an example of the principle involved.



Courtesy of H. Cecil Sheppard

After we have gone our rounds with the grain pail, we begin all over again with the dry mash hoppers and see that they are well filled and in good working order. At this time the assistant follows us with pails of oyster shell and grit for the younger chicks, he also supplies charcoal. We

do this every morning so as to get into the habit of it, for it is astonishing how soon the grit and shell hoppers will be found empty. My experience shows that the average flock will take a small amount of charcoal, a fair amount of grit and a very large amount of oyster shell. After all this is done we retire for breakfast, our visitor seeming a little haggard and lean about this time, but both of us as fit as fiddles and ready for a hearty meal. It is perfectly astonishing how far we find ourselves behind in the day's work if we neglect or are unable to do this feeding and watering before breakfast, it seems as if we never did catch up on such days. Shortly after breakfast we get out the sour milk pans and lay before our charges one of the most relished and most healthful of its luxuries. As before mentioned there is nothing better for growing chicks than sour skimmed milk, if properly served and taken of.

And so the day goes on in its round of systematic and regular care, and the only thing that will break the monotony is the moving process, reserved always for the evening. The colony houses on range have been duly prepared with cold hovers, feed and water receptacles, and each is provided with a fair sized run, which is to be used for the first few days only. As the handling of chicks can always be done better after dark than at any other time, we never move flocks except in the evening. Where chicks are handled after they have retired they can be easily caught without frightening, and can hardly realize they have been moved until they awake the next morning in their new quarters. Never handle chicks in the day time, unless you are looking for lice. When transferring chicks to colony houses, we tell the assistant to take particular pains to properly size the flocks, that is, only birds of the same size

should be put together, otherwise the big chicks get most of the food and the small ones have to live on experience, which does not tend to make them prize winners. Not over fifty chicks should be put in the average sized colony house. If we can make it forty, or even thirty, it will be even better and should we be fortunate to have plenty of range, the cockerels should be separated from the pullets at this time. It will have to be done some time and the sooner the better for cockerels are always a nuisance when running with the flock, and especially does this seem true with the earliest hatched birds. We will see later that the cockerels need different care and different feeding than the pullets. This moving process should be done with gentleness and without confusion or haste. The chicks should be frightened as little as possible. The transition from one home to another should be made as easy and as comfortable as may be, and if we are systematic and know just what we intend to do, the job can be accomplished in a comparatively short time. Each colony house should be provided with a card, upon which may be written the date of transfer, the number of chicks, the variety and the approximate weight of the average chick. The door and the chicks' exit should be closed and all other openings protected with strong half-inch mesh wire; we do not know what nocturnal prowlers may be about and it is a pity to expend our energy on raising the flock thus far, only to have it decimated by some marauder in the shape of a weazel, a cat, a 'possum or a dog. And right here we tell the assistant he must not expect to take from each of these colony houses the full number of chicks first put in. When the fall count is made it will always be found that five to ten per cent. of the chicks are not there. We have not seen any dead ones, nor have we observed

any evidence of slaughter by enemies; nevertheless a percentage will have mysteriously disappeared. The added work today has given us a touch of the "tired feeling", especially as the weather has been particularly warm and we are pretty well ready to retire to our bunks, which should at this season of the year be outdoors. There is no sleep so restful or so perfect as that taken in a Gloucester hammock located on a sleeping porch. And as we fold the blankets over us we should be reminded that an abundance of fresh air is just as important for our chicks as for ourselves. And while our eyelids are drooping we are thinking out a lesson on ventilation which we must prepare for the assistant and which we will go into at some length in the next chapter.

Courtesy of Bloomfield Farm

CHAPTER VI

POULTRY POSSIBILITIES

The other day a large Packard touring car drove in; the driver was a lady and she was accompanied by her three children, one of whom was her son whom she was endeavoring to bring up in the way he should go, including what she thought was a proper education in poultry. I don't remember just what her first question was, but at any rate it led to a very pleasant talk, ending in the knowledge that she was bringing up a flock of chicks which I had sold her as "day olds".

After this conversation I was particularly impressed with my responsibility which led to the thought that I had read in years past many an article which did not seem to have been written by a person with any real practical experience. How often have we seen well illustrated articles telling us how it is perfectly possible for a railroad conductor who has been busy on his train all day to raise a flock of a thousand chicks on the side, or a beautiful effusion in one of the handsome all around magazines on the subject of how to build a hundred-foot poultry house for about $37.50. We don't want any such misleading advice to be taken seriously, you can't do something for nothing, nor can you raise a thousand chicks properly without devoting much time to the work.

So we turn to this sixth chapter with a fixed idea that we have said, and will say, nothing that is impractical, or not from our own experience.

At the end of the previous chapter we made reference to the important question of ventilation which we will now consider fully.

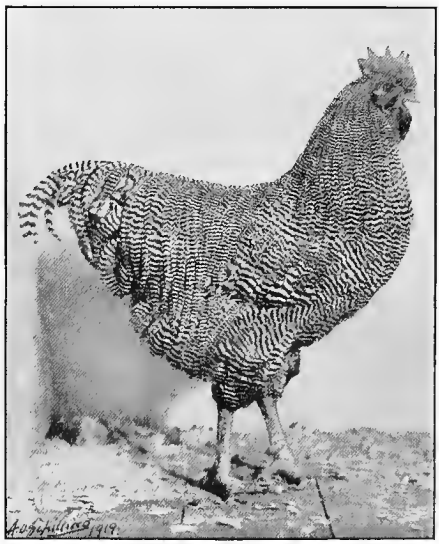
No doubt all of us have been through the tenement districts of some of the large cities; we have seen ten, or possibly hundreds of living souls cooped up in a single building where the rooms were small, the ceilings low and the windows few and generally closed at that. We have observed the pale washed-out appearance of the inmates of these so-called homes and especially have we noticed the lack of vitality and poor physical appearance of the children. This condition is caused mainly by two factors, lack of proper nourishment and want of sufficient fresh air to breathe. Further investigation has shown us that a child who really does not get enough to eat can still make fair progress if it has sufficient fresh air.

What is true of the human is equally true in the poultry kingdom, and perhaps more so. A young chicken is more independent than a child for it can pick up quite a large proportion of its food, while a child is dependent on another individual to supply it with the necessary sustenance; and a chicken, just like a child, needs and must have for its proper development pure air to breathe. The answer that many farmers give to this problem is not the ideal one; not many Madison Square Garden winners are raised by turning them out to forage for themselves and letting them have all the fresh air they want by roosting on the fence: this method is a bit harsh: what we are after is a comfortable place in which the chicks may sleep without being wet to the skin on a rainy night and without being sweated to death on a warm one, and I must admit that the question of adequate protection from the elements and from ene-

mies, coupled with the supplying of the necessary quota of oxygen is a difficult one and has never been worked out to my entire satisfaction. By the time I am eighty or ninety years old and too old to look after the chicks myself, I shall probably have perfected a real colony house.

And the problem is probably far easier for us who live in the Eastern States than it would be for those who bring up their flocks in sections of the country where great and sudden changes in the temperature are frequent. Whatever the design of the colony house we use, it must be so arranged that the chicks receive a maximum of fresh air with a minimum of draft. It is certainly a very discouraging thing to open your colony house on a very hot morning to feel in your face a rush of hot air which has been breathed over and over again and to see your chicks with their mouths open, wings held away from the body and panting away for dear life; you may rest assured that they have lost considerable vitality during the night and are not in the best of condition to begin their day's work. Certainly as much of the front of the house as is possible should be open, protected only with one inch wire mesh. A hood extending some distance from the front of the house like an awning both helps to draw out the heated air and also to protect the interior from the direct rays of the sun during the day time. Such houses as these however, that is, those which are too much open, generally expose the inhabitants to a good wetting when there is a heavy driving storm from the South, but this does not happen often and is perhaps the lesser of two evils. Openings should be provided on the sides of the house, both at the high point and the rear, so that the hot air will get a chance to escape and all precautions should be taken to so place the colony house in the shade of a tree that

it will not be unduly heated during the day. I think perhaps my ideal of a colony house would be a large, gently sloping roof under the center of which was placed a much smaller all wire cage; in such a house the chicks would be protected from rain, from too much sun and from attacks by enemies, and the possibility of drafts would be elimi-



Courtesy of E B. Thompson

nated for there is no chance of a draft in a house where all sides are open. It is like sleeping in a hammock outdoors; you may feel the breeze blowing over and around you but you cannot be in a draft, whereas, if you were sleeping in a room where the bed is located between two open windows and the wind is blowing in one and out of the other, you are directly in the draft which generally results in a cold.

I have noticed with interest that a number of the laying and breeding houses are provided with the King system of ventilation, or other systems similar in principle. By this method fresh air is brought into the house at the top and the "foul air" (not fowl, no pun intended) is taken out at the bottom, this makes the upper air somewhat cooler and insures a constant passage of clean air through the building, carrying off all bad odors also; this is the system I use in my cow stables and which I find perfectly satisfactory; if it could be applied without too much expense to the poultry colony house I believe it would give most satisfactory service. The ideal is generally too expensive in the poultry game and we must do the best we can, remembering the object we wish to attain. If we have colony houses that have solid front doors, these can be swung open and held with hooks and a wire door fitted for the opening. This with the window makes most of the front open and the house is generally deep enough to protect the chicks in a sudden shower. Roofs of colony houses should be covered with tar paper or branches so as to keep the interior cooler, and it is often found desirable to raise the house from the ground, thus both making the floor cooler and also providing shade underneath for the chicks in the daytime. No more chicks should be placed in the colony house than can be accommodated without crowding or over-heating, and it is much better to have a large number of small houses than a small number of large ones. If the nights are hot, the sooner we can open our houses in the morning the better and if we are not afraid of night prowlers, it is better to leave the houses open at all times. In any event, late opening of colony houses in the morning is sure to result in Summer colds which are never relieved until the cold weather in the

Fall, and there is nothing more debilitating to the chicks, or more distressing to me, than these Summer colds evidenced by rattling in the throat and pasted up nostrils. It is very rare that any chickens so affected ever reach their otherwise possible perfection.

Perching should be taught at an early age and the perches should be wide and of sufficient capacity to accommodate all the birds without crowding; this is what will show you better than anything else the real capacity of your house, six inches of perching room is little enough and a six-foot perch will accommodate only twelve birds.

Culling will also help as the birds grow larger. Keep culling regularly and do not give too much benefit to the doubt with birds that you are morally sure will not come up to requirements. These birds when properly fattened are just as good as if they were perfect exhibition specimens and the flock looks so much better without them.

We were going along with this matter of culling when we noticed that the assistant was looking rather dazed and we concluded that there was enough in our sermon on ventilation to give him food for thought for a while, and we could see in his eyes the determination to perfect a perfectly safe and perfectly ventilated colony house easily transported from place to place and not costing too much; we admired his determination and inwardly wished him the best of luck, but we knew he had a hard nut to crack and felt that he would be burning the midnight oil for some nights to come, so we told him that he better make sure of one good night at least by retiring right away. And so we left him to his own devices as we saw him winding the alarm clock from our room across the hall.

CHAPTER VII

KEEPING THE CHICKS GROWING

We last left the assistant when he was trying to comprehend the question of ventilation and the proper construction of a colony house that would solve this troublesome problem.

Today we are concerned with questions like perching, dividing the males from the females, the feeding of protein, and the question of how much grain to feed.

Remember that our chickens have been growing for the past thirty days and if their feed and surroundings have been proper they have greatly increased in size.

It is perfectly astonishing how a flock of between thirty and fifty chicks will expand and fill up the colony house when they really start growing on a generous scale. When we first put them into the house they occupied a comparatively small corner thereof when they lay on the floor close together at night, now the same flock occupies nearly all the floor space and is then crowded some. The droppings of the birds are more profuse and seem to have increased in size even more than the birds and it is manifest that something must be done to prevent congestion and to get the birds' mouths away from the contaminated floor; if we do not do this a decided check in development will result and birds that started to be winners will not have a look in when the show comes. The farmer has answered this question in the past by letting his birds roost on the fence lines without protection from the elements, or, has erected within the

colony house a crude set of perches composed of narrow round poles to which the birds resort upon the same principle that induces wild birds to perch in the trees, the underlying motive of which is to get away from enemies. The modern poultryman, however, sees to it that his birds are taught to perch in a scientific manner, just as he has taught his birds to eat in a scientific manner. He also sees to it that the perches upon which the birds are taught to roost are proper perches so that the birds will not be harmed or deformed through their use; many a crooked breast-bone is formed through the use of a round perch, although bent and crooked breast-bones may be caused by other means.

The assistant is told that when the time comes when it is proper that his birds should perch, that he must first of all supply a sufficient number of broad flat perches to accommodate his flock; second that these perches should be accessible or easily reached by the birds; thirdly that his birds must be shown how to use them. During the day time we resort to the colony houses and place in each a sufficient number of good, strong perches about four inches wide; at night when it is dusk we again made our rounds and gently place each bird on a convenient roost, lining all up facing the door Some will struggle and jump off and it is better to make a second round so as to get these willful birds back on the bed where they belong, for if we allow some to roost and some to lie on the floor underneath, order is not maintained and the plumage of the floor birds will be sadly damaged. Upon these nice comfortable perches the birds are surrounded by clean fresh air and are in their natural and appropriate position for sleeping.

Many people say that chicks are wholly devoid of intelligence, that they are stupid things at best and that there

is no use wasting time in trying to teach them anything. If one of such persons would follow the assistant around for a couple of nights while he is making sure that the birds have learned their perching act, I believe he would change his mind. While it is natural, in a sense, that birds should try to perch, nevertheless, they are creatures of habit and once having formed the habit of sleeping on the floor it would seem as if it might be difficult to teach them to go up on the second floor to go to bed, but the attendant will find that they will very readily respond to the new regulations and after a very few rehearsals, know their act perfectly. Some of the reasons why I think perching is better for the birds than resting on the floor are that they get a current of air all about them; that they are not resting on manure and fouling their nostrils with its odor and that they cannot crowd when the perching system is resorted to.

If it is possible to divide the males from the females at the time we begin our training to the perch, much good will result. There is absolutely no question but that this separation of the sexes must be done at some time and if our accommodations are sufficient and we are prepared to take care of the males in separate enclosures or other buildings than the regular colony houses, the earlier we do this the better. Long before the perching age is reached, the ability to distinguish the males from the females will be evident and, as we know, in due time and sometimes at a very early age, the males will make themselves obnoxious, by chasing the females and themselves about. It is only a question of time as to how long they will be allowed to run in the general flock. Getting them out by themselves not only avoids this nuisance but also gives the pullets more room, more air and a more quiet and peaceful existence. This separ-

ating process should in no case be delayed after the time when the first males are noticed chasing the females; the age when this takes place varies with the breeds and among individuals of the same breed.

At about the time when we are teaching our flock to perch and getting out the cockerels to be housed separately, we should notice carefully the feather development in our birds. Lack of protein in the rations and an absence of the necessary grain feed both retard the development of the feathers and also give rise to the habit of feather pulling or eating. I have seen flocks that have been kept too long in the brooder house look almost like dry picked poultry—such birds will have even their main tail feathers pulled by the others and will be stalking around with bare breasts and looking like bald-headed eagles. The remedy for such a condition is to get the birds out on range at once and to give them an abundance of mash containing a high per cent. of protein. Almost immediately an improvement will be noticed. The chicks no doubt have had a setback, but nature will rush to their assistance and very soon they will be covered with new plumage and look comparatively respectable again.

Now this process of putting on plumage is a very trying one on the birds; it is a great drain on their vitality and we must always bear this in mind so as to see that the chicks are constantly supplied with the full measure of mash. Many mash hoppers are better than one big one for this divides up the flock, prevents crowding, insures a plentiful supply and tempts the birds to eat more than perhaps they would otherwise do. Mash is by far the cheapest and the most easily fed; it is absolutely essential to proper growth and development and no expense should be spared in se-

curing a large supply composed of the very best ingredients. The mash hoppers should never be empty and never closed.

Courtesy of Hillview Farm

The only reason why the farmers' chicks, most of which do not receive any mash, look so well is that they have free range and are therefore able to pick up any loose grain,

weed seeds and especially live insects, to counter-balance the grain drier that is given them morning and evening—they are partly able to balance their own ration, but they never attain the size possessed under a scientific and properly regularized system.

Heavy feeding of mash means rather a light feeding of grain. Where free lunch in the shape of a high protein mash with the protein finely ground so that the chicks must eat it and cannot unbalance the ration, is given, it is unnecessary to feed any more grain than the chicks will eat up clean in five or ten minutes. These grain feedings should be made at set times in the morning and evening and are necessary in the middle of the day. It is a sad sight to see mounds of uneaten grain lying about the colony fields only to get musty and mouldy; this is sinful waste and will undoubtedly lead to woeful want; if the chicks do not eat it they are not in need of it and yet I have seen this thing on many plants, some of which were successful despite the bad methods employed, but most of them with a poor flock of chicks.

In other words, I tell the assistant that I am a strong advocate of the full mash hopper and the hand feeding of grain in such amounts as the chicks shall then require it. At the present prices of grains one is not inclined to waste a single kernel but by this I do not mean that the flock should go hungry for the want of grains which are as essential to it as is its water.

All feeding must be done with a watchful and intelligent eye for I explained to the assistant that his flock will take more on one day than it will on another; what they crave and need they must have, but never more.

We were about to launch into another subject when we stopped to reflect that possibly we had given the assistant all the food for thought that he needed just at this time and we therefore conclude to rest on our oars and let him put into practice the ideas that we have tried to make clear to him. We knew that all he needed was to get the idea, for we had found him thirsty for information and eager to put his teachings into practical use.

CHAPTER VIII

WHAT WE MEAN BY "NURSE"

I never did fancy the word "nurse" as applied to poultry raising. It sounds too much like sickness or disease or weakness somewhere.

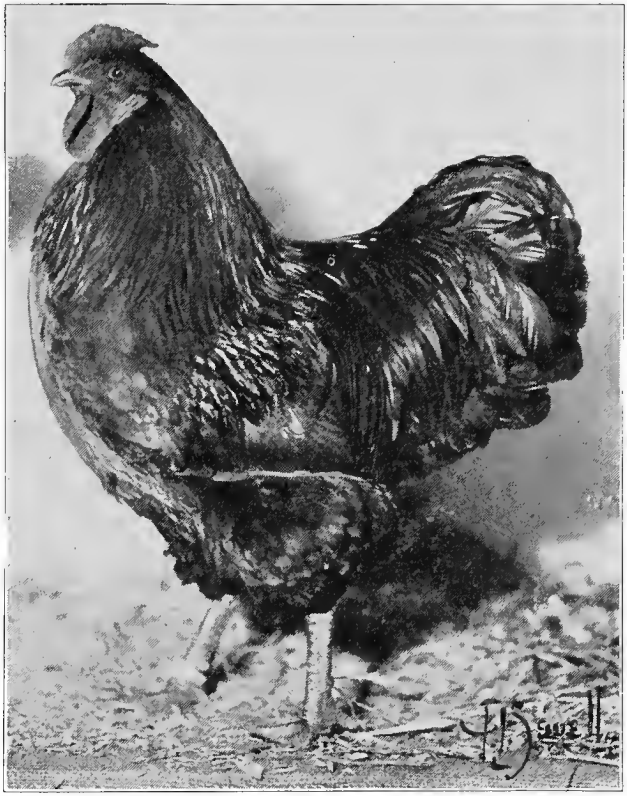
But a nurse is one who specializes—one who is careful and regular and systematic and methodical; one who makes it a business to be always on hand at the proper time to do the proper thing in the proper way. And so this is the word that came into my mind when I thought of the right term to apply to the sort of person who ought to be in charge of the raising of a flock of chicks. I did not mean what most of us mean when we say that "We must send for a nurse," but more the kind of person that we can remember was the one who watched over us when we were "kids"—and really brought us up.

Most of us remember our old nurse. She was the person who meeted out praise or punishment with entire impartiality. If we were good we got our word of thanks from her and perhaps an extra bit of jam on our bread for supper, if we were bad she "handed us what we deserved with equal enthusiasm!"

We shall always retain her image in our minds and we can never forget her tender care of us in sickness or in health—rain or shine she was always on the job, forgetful of self and mindful only of those who had been placed in her charge.

Thus should the chicken nurse act towards his flock and it must be borne in mind that his children grow up so

much faster than "humans" that his patience is not tried to any great extent. In one season his pupils will graduate



Courtesy of Sunbrier Farm

from the infant class and become sturdy adults, more or less able to look out for themselves.

All this we have gone over with the assistant and we like his mental attitude toward his flock. We think he is naturally fitted to become a good poultryman. We can see that he really takes a personal interest in his birds and that he is trying to think of their comfort at all times; if there was anything he could do that was not laid down in the "rules" he would do it if he thought his youngsters would benefit thereby. And this is the only kind of a man that is going to make any great success with poultry. He must not only go through the regular routine of feeding, watering and cleaning, but he must always be looking for something more that he can do to help things along and in order to be that kind of man he must be one who loves his work and who takes an interest in each particular bird.

And the time has now come when it is much easier for the assistant to give this "special treatment for individual cases" to his flock. The cockerels have been separated from the pullets and this makes each flock much smaller than it was—it generally divides the flock in two for there is ordinarily about an equal proportion of males and females it is a 50-50 proposition.

In a small flock each bird "stands out" much more plainly than in a large one and its particular development is observed more readily. And not only should the sexes be divided one from the other, but each sex should be "sized" according to age and development. This means that there are now perhaps five separate flocks of cockerels and four or five flocks of pullets, each in its own run, each representing birds of about the same size and each requiring a distinct kind of treatment.

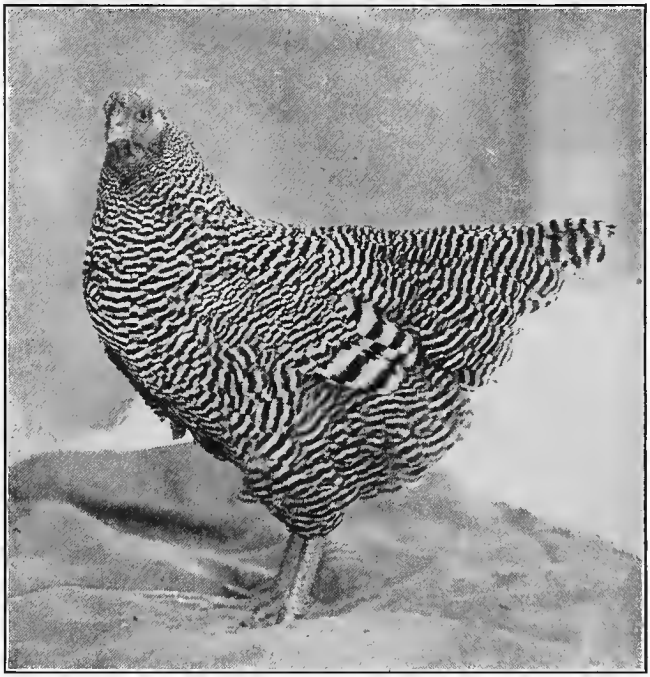
Let us walk over to the cockerels for a few minutes and talk with the assistant about them. The first lot is a big,

husky bunch of birds whose average weight is about four and one-half to five pounds; they look ungainly and loose-jointed just at this stage and fail to show the finished plumage and roundness of form that they will take on later. And yet we can see plain evidence of maturity in most of them. The final coat of feathers is beginning to sprout and the combs are getting a little larger and are showing a real dash of red. And as we are admiring them, lo and behold a couple of pairs begin to fight and are apparently about to do themselves considerable harm.

We point the scrappers out to the assistant and tell him that, while the budding spurs are short and harmless at this time, they will be growing fast from now on; that while these first encounters are only bluff just now, they will be real fights very soon and we direct him to go and bring over a nice big old cock bird to put in with these youngsters to quell the riot.

As soon as the old fellow is put into the yard he looks about him in amazement to find himself so suddenly surrounded by so many of his own sex and he is still more surprised when the scrappish member of the gang comes strolling over to him, quickly puts down his head and shows every intention of assuming the aggressive. Down goes the head of the old fellow to meet his antagonist; then suddenly there is a jump in the air and a pair of real hard spurs strike the head of the unwise youngster and he goes sprawling over on his back, his brain reeling and his sudden valor quite knocked out of him—he is sadder but wiser. We explain to the assistant that the old cock will be very useful if he is left here and that there will be no more "trouble" in that yard.

We notice, too, that in this pen there are one or two birds that are not quite so large as the others. They do not seem to be doing just as well as their companions and the assistant is instructed to take them out after dark and



Courtesy of M. S. Arey

transfer them to yard No. 2. We explain that these changes should in every case be made after dark. We know that if this method is not practiced there will be a general scrap all around and that some damage will result.

A night together and an awakening at dawn makes them all think they have always been together and everything passes off accordingly.

One more glance at Yard No. 1 enables us to see two other birds that look particularly leggy and are "shy" in breast development. They do not give the appearance of ever becoming anything but the ordinary and seem to spoil the whole lot. These we immediately catch and put into the yard which is devoted to the fattening of roasters, for we know that they are better on the table than off it. And so we make our way from one yard of cockerels to another, making a few changes here and there and seeing especially that the younger birds are getting all they can possibly eat and that there is a plentiful supply of given food in each enclosure. These males are looking good to us and we note that the sour milk they have been receiving has given them big frames and heavy bone.

They look full of "pep" and their bright eyes and alert expression indicate vitality and abounding health. Just as we are going to praise these big fellows the assistant pulls a paper out of his pocket and from it he informs me that the first big Fall poultry show is going to be held in about three weeks and asks me if I think any of these birds are going to be good enough or old enough to show there.

He informs me that he is very anxious to make his first show and actually is counting the days until he will be allowed to go.

We had not realized that the time was slipping by so rapidly and at once we go back to the oldest bunch for another look with eyes that are searching for something else besides mere size and health.

We know that this ability to pick out a winner from an undeveloped lot—this ability to see what is not there now but which will be there in a few weeks under special feeding—is the supreme test of a master eye. We feel at once a keener sense of interest in each bird than we did before and we know that we shall lose some of the confidence of our young helper if we fail under the test. Carefully do we go over the lot observing each bird from all angles, the ideal of the standard always in our mind's eye. We explain to the assistant that we do not want to take out any but the right ones, for once out of this yard for a week or two they cannot be returned under penalty of more fights and serious ones at that. From this lot of 25 we finally select five specimens of similar type, of good size and of particularly mature development and with these we march over to the conditioning house and deposit them in a big pen, heavily bedded down with shavings over which a thick covering of clean rye straw has been thrown. There we leave them "for future reference" and will deal with their special care and handling in a further installment of these articles.

A visit to the pullet range is next in order and off we go. These pullet runs are much larger than the cockerel yards and there are 50 pullets in each. First we make our regular tour of these runs to see that all is being kept up in a proper manner; we go through practically the same routine that we did with the cockerels except that we caution the assistant that he must not "force" the pullets as he is doing with the cockerels.

We show him how much more developed the pullets of like age look as compared with their brothers and we tell him that his duty is to hold these birds to a nice growing ration rather than to try to push them too much. We all

know that the female (in humans as in poultry) is much more "precocious" and "forward" than the male and that to bring them up to look alike at the same age one must be held back and the other rushed forward.

We don't want our pullets to lay before their time of full development and we explain that in the show room a pullet never looks the same after she has laid four or five eggs.

The assistant is at us again here about picking out his show string and accordingly we select ten pullets and cart them over to the conditioning house, putting them as far away from the males as we can get them. We want ten pullets, for we expect to show an exhibition pen and we will be lucky if we are able to pick four that really look alike out of only ten originally caught up. The range pullets look even better to us than the males did and at first we might be led to think that they had received better care and attention but we knew that this was not so. The effect is due solely to the fact that the pullets are quicker in maturing than the cockerels and therefore look older. After the morning work and when we are eating our noon meal we cannot resist the temptation of complimenting the assistant on the good work he has done to date. We tell him that his birds look well and act well and that he will soon see in concrete form the results of his labors—and that we believe he will be pleased that he has so closely followed his instructions.

Inquiries are already coming in and we think he will find this a profitable, as well as a pleasurable season. He is much pleased with our commendation and we can see that he is taking it in the right way. No swelled head or important manner are in evidence but merely a sense of comfort and relief that he has, partially at least, accomplished the task he set out to do.

We know that he will take great interest in getting his show string in shape, having seen him reading up show rules and conditioning and training articles in the magazines and we know that his heart is in the show room. In as much as our own heart is just like his in this request we send him off to bed, both of us feeling the better for the day's experience.

CHAPTER IX

THE TRUE FANCIER

And now we come to those chapters which will probably appeal most strongly to the out-and-out fancier. I cannot quite define or describe the true fancier, but I know that his eye is very apt to brighten considerably when the show season approaches. He has the love of competition firmly fixed in his heart and is just as ready for the test as any other thoroughbred.

To the lover of hunting the cool nights of the Fall season, the dropping of the leaves and the threat of frost awaken his dormant desire to be out of doors and roaming over the fields with his dog and gun. For the poultry fancier Fall and Winter mean the preparation of his show string and the exhiliration of seeing his pets in the exhibition pens, the admired of all who behold them. How fortunate it is that hope continually rises in the human breast; how lucky we may count ourselves that there is ever present in our minds that feeling that this year's crop of youngsters is surely the best we have ever raised!

If it were not for this ever-present hope, little would ever be done to improve the existing fanciers of our feathered tribe—indeed all of them would soon pass out of sight and all of our poultry would revert to the common ancestor—the jungle fowl.

And so the approach of the show season warms the hearts and kindles the feelings of many a man all over the world—he loves the sport and, if he is a real fancier, he is

sure to show his sportsmanship in the ring as well as out of it. We left the assistant looking up the date of his local show and apparently much interested in the thought that possibly some of his charges might be good enough to get in the ribbons. With our help we had selected a few cockerels and some pullets and had started them on their road to fame by giving them separate quarters with the idea of special care.

Now, at the very outset, we explain to the assistant that we would not have permitted his hopes to rise if we had not known that some of the birds we chose from the flock were good enough to win in fair competition. It would have been very unfair to this young fancier if we had allowed him to hope where there was no hope; such a proceeding would surely not be useful to him in after years. We realized that too hard a fall at the beginning of an undertaking will sometimes so discourage a man as to cause him to take up some other kind of work. While it is much better for the beginner not to win too much "the first time out," nevertheless he should not be put to shame by coming home with his hands entirely empty. A little luck and a little praise ought surely to be his reward for all the good work he has put in for all these past months. And thus, we hope and believe that he will have some ribbons to hang on the wall after his first show experience, and with this end in view we cheer him on in the good work, all the time admiring his spirit and his love for the truly beautiful. And right here we were almost on the point of giving him quite a lengthy discourse on the question of the fancy as contrasted with the utility side of the poultry business and of proving to him, if only for our own satisfaction, that it is the fancy that has made poultry possible, and that without

Courtesy of Gildersleeve & Buchanan

it the utility men could not exist. But we feared that this might be dangerous ground and we knew that we would become so interested in our topic that valuable time might be wasted, for we could readily see that this young man was

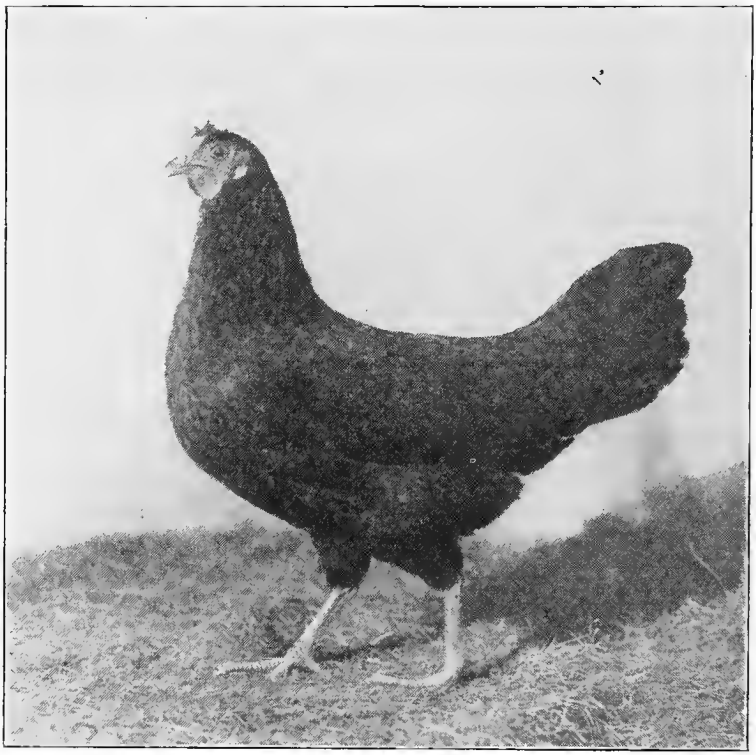
a fancier at heart anyhow. So this bright October morning we made our way together into the conditioning house as soon as our regular rounds were over and looked again at the special birds we had chosen for the first try-out in the show ring and they looked good to us at the very first glance. But we knew that there was a lot of work to be put on these birds before they could ever hope to be crowned with the approval of any judge—be he a licensed American Poultry Association man or not!

A suggestion that we weigh the specimens brought out the scales, and here was where the assistant got his first good lesson. When the birds were selected, uniformity in size was a leading consideration and we had guessed that they would all be of almost the same weight. The scales, however, disclosed the fact that there was considerable difference, as much as a pound in one case, and this meant that some special care must be taken with those which were not quite up to par. The first thing that we pointed out in this connection was the fact that, while these birds seemed tame enough on range, they strenuously objected to being caught when they were in smaller quarters. This would never do. No judge can properly pass on a wild bird, for he cannot tell what its type may be and the best specimen of the lot may go without a ribbon just because it will not stand in a natural position or display its good points to the best advantage. We explain to the assistant that the judges at the early shows have a great deal of trouble with these wild birds and are often criticised unjustly because of the difficulty of really knowing which bird had the true shape or type. A tame bird is half the battle and often wins over another which is really a good deal better specimen. So the need of special and individual care is apparent and

we proceed at once to set up about twenty exhibition coops along the back of the room, first being particularly careful to see that they are not jammed close to the wall, for this allows only one side of the coop to be inspected and secondly that they are absolutely clean and free from lice. Then we bed them down with new shavings, put a water cup, a feed cup and a grit and shell cup in each and are ready for business.

The cockerels come first and each is weighed, carefully dusted with the best quality louse powder and placed in one of our training coops. Most of them either lie down or at least are afraid of stepping on the shavings which they have never seen before. A few of the birds are apparently very wild and try to fly out of the coop by way of the ceiling. These last are the kind of birds that one meets at the fairs when the owners tell us (apparently with some pride) that they received no training whatever, but "are just picked right up out of the yards." We notice that very few of these birds ever get under the ribbons and we do not propose to be handicapped by any such foolish way of displaying our wares. We explain to the assistant that he is not to have these cockerels in their cages too long at first —certainly not over night for the present. They must be put back together often so as to avoid fighting, for we have not yet decided which ones will be in our final selections. Some of the cockerels, as we have already noted, are a good deal heavier than others, and this means that the lighter ones (which are of the same age) must receive special feeding apart from the others. As a preliminary, all the birds, cockerels and pullets alike, are given a good dose of salts so as to insure a good, clean system before the heavy feeding begins. Those that are particularly light are treated

for worms and thereafter show a lot of improvement and take on weight at an astonishing rate. With the pullets, our



Courtesy of George L. Russell

first selection is with an eye to picking out five which look alike for a pen. We select five because there is always the danger of the death of one, and we cannot then put any strange female with the others, or there will be a great tear-

ing of hair and scratching of faces. This job of securing five pullets which really look alike is a very hard one, even in the best line-bred flocks, and the best results are generally secured by finding five full sisters, if that be possible.

At Madison Square Garden last Winter there was shown a pen of White Wyandottes in which the females were as alike as peas in a pod—the very best matched pen I have ever seen. Inquiry revealed the fact that the birds were full sisters and I have seen other instances in the chicken family where the sisters really looked awfully alike, always where the parents were line-bred and mated in line. The reason why sisters in the human family are generally so much alike is that no line-breding is possible with the human race. This task of selecting a pen is very instructive for the assistant; he must have a keen eye and a good sense of comparison and he must be patient and careful to a degree. Every bird that we have selected will probably have to be handled. We start first with a pullet of a certain type and size and can only find two others of this same class to put with her, so we are compelled to start over again and select a different bird to start with, and we are lucky enough on this second trial to find five birds of very similar size, type and general appearance, good enough at any rate to put together as a pen with a fair hope that they will remain alike as their development goes on.

Then we get down to the choosing of the single entry pullets and have a much easier time. But here again we must take a lesson. It is not wise, as we tell the assistant, to pick birds of different types in the hope that the judges will like one of them. What we want to show is an even string of birds showing unmistakably the type of female we are breeding. This represents our ideal of what the

female of our variety should be. If we are correct in our ideas of type, or if the judge knows the proper type, we will win; otherwise we must learn our lesson and come to realize that our idea of type was wrong; this will be a great education to us. Where a judge finds a lot of birds of different types to judge it makes it hard for him to make proper selections and equally hard for the public to know which of all these types nearest approaches the Standard. Let us study our Standard with great care and try to breed the birds as near that Standard as possible. If we succeed the judge who knows his business will give our birds the ribbons. Any man who attempts to show birds and has not a Standard better be sent to the hospital for careful examination as to his mental powers, and yet I have seen them try it!

The assistant is told to put his few pullets in a yard by themselves and not to let them mingle with the other birds; they must get to know each other perfectly and must become fond of each other so that when confined within the narrow limits of an exhibition pen they will not quarrel over their food or their surroundings. We next go to the selection of a pen male. He should be large and commanding in appearance and bear a nice disposition. With all he should be a showy bird—one which stands erect and alert at all times—and he may be somewhat more up on the legs than the single entry cockerels. This will make him truly the center of the pen and will attract the judge's eye at the start. We remind the assistant that a pen is scored by scoring the male and adding the average score of the females; many a good pen of females has been left out because the male was not good enough and one more often hears the phrase "the male carried the pen" than the

reverse. Good females are very desirable, but a good pen male is essential. After selecting the male for this pen we take him out and put him with the other cockerels, for we do not want the plumage of the females damaged by his attentions. It is always well to take to the show sound unafraid females with which the cockerel may run, so that he will not immediately begin to tread the pen pullets as soon as he is put with them in the show room.

After we have come to the end of these labors, we find that it is late in the afternoon and time to get the evening meal to our regular flock so we throw a liberal feed of grain into the deep litter of our show string and proceed to our hum-drum rounds. We can see that the day has been an enjoyable one for the assistant and we know we have had a lot of fun ourselves. We look forward to the new duties of getting this string of birds into the best possible condition and we know that the competition will be so strong as to tax our abilities all along the line. Of this we are glad for we have no desire to go to the show only to find that there is no competition—there is nothing more oppressing.

Let us have plenty of competition for it is the life of the poultry business, just as it is of any trade.

CHAPTER X

THE PROPER HANDLING AND TRAINING

We are back in the training room once more; it is a hard place for us to keep away from.

When we last saw the assistant he had just finished going over the birds to make his second, and perhaps, final selections. The single entry and pen cockerels had been decided upon and most of the females had been given "the once over" with the idea that they would ultimately find their way to the exhibition hall to take their chance with America's best. The "show spirit" of the assistant had been kindled and he was all alive to the duties and responsibilities of the situation. He had been passed out of the first degree of his initiation, but needed schooling for his second—and this we are about to give him. Thus, this fine November morning, the first question we ask him is—what is a show string? Did he ever hear of an exhibitor of cattle or swine starting on the road with young stock only? Must not a complete string be a well balanced one and if so must it not include both old and young? There is, obviously, but one answer—yes; but the assistant explains to us that he wanted to show only those birds that he has bred himself. He says that he knows he would stand a better chance for the "display" prize if he could show some cocks and hens and he tells us that next year we will see him completely rigged out.

But he insists that the only thing he can take any pride in is his showing of young birds all bred, fitted out and

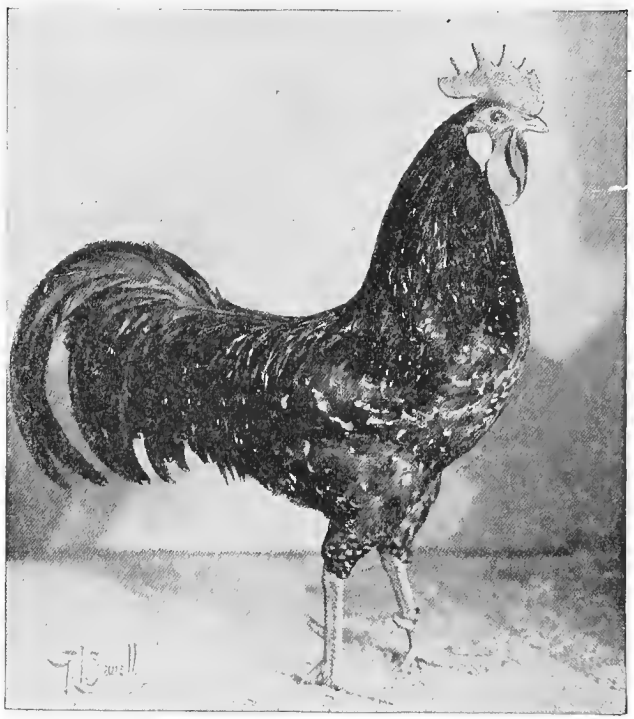
shown by himself. We are more pleased over this statement than we care to admit, for inwardly we note that this attitude is the only one that the true fancier will take; and we are more than ever convinced that the lad has the right stuff in him. This gives us an opportunity to preach a little sermon. We tell the assistant that we like his stand in the matter and that we hope he will always feel in the same way.

We get a copy of the latest poultry paper and turn to several big ads. "We breed our winners," "a breeding establishment," etc., etc., attracts the attention at once and we will tell him that half of these men do not breed their winners and that they never will. We show how deceptive this is and how the public gets fooled by the advertisements of these men who are really only hucksters. We tell him that all his ads. must in every case represent the truth. If he really has bred his winners he has a perfect right to say so, but if he has not he must keep his mouth shut. "Honesty is the best policy—and if it is not—stick to it just the same" is the motto for him, now and always.

This is the policy that will win in the long run and that will bring back old customers. We see that his ideas along this line are sound and we mentally mark him up one point higher in the scale of a poultryman.

But preaching does not fit and condition show birds and we must do some work. Let us look at the birds. Do they look in prime order? Is there anything amiss with them? Do some want to be held back and others pushed along? These are our thoughts as we walk along the alley way and look into the big pens, deep in clean straw. Yes, we can see that some individual work must be given these chicks. Already the combs on some of the pullets are showing too

red to suit us—they will be laying too soon if we don't look out. But let us begin at the beginning.



Courtesy of H. Cecil Sheppard

We ask the assistant this question: What thing, outside of lack of feed and water, will put a bird out of condition the most? His answer is the correct one—lice.

So we take up every bird and by the light of one of the big windows examine it carefully all over for signs of these

pests. We look in the hackle feathers as well as at the vent and under the wings—and we find a few on almost every bird. Louse powder is applied freely and carefully to all spots where the little things could be and we explain the damage that they can make in turning and twisting the feathers of the hackle so that they will never lie properly. How about the feet and legs? Do they show a nice clear, healthy yellow or are there signs of dirt or "scaly leg" anywhere? To our relief we do not find that the "scaly leg" parasite has found its way to any of them for otherwise we would have to doctor them with a mixture of sulphur, lard and disinfectant. But we do find that dark stains of dirt are to be seen at the edges of each scale on the legs and we must prepare to "manicure the nails" in a proper and efficient manner. So we send the assistant back to the house for some real hot water, a cake of ivory soap, two Russia towels, two old tooth brushes and some wooden toothpicks. When he gets back we tell him to do just as we do; and, accordingly we take a bird out, wrap it carefully in the towel so as to prevent its fluttering and place it on our lap. Then we mix up a strong suds with the hot water and soap and scrub the legs hard with the old tooth brush—some of the dirt comes off in this way and the scales become soft and pliable. Then we take a toothpick and, very carefully, we go under each scale and remove all remaining vestages of sand and soil. Each bird must be treated in this way and it is astonishing how much better they look after the operation.

Now all this fussing with the birds gets them used to being handled and makes them tamer than they were when we first picked them up off the range, but they are far from being coop-trained yet. This requires patience and an un-

derstanding of the disposition of each particular specimen.

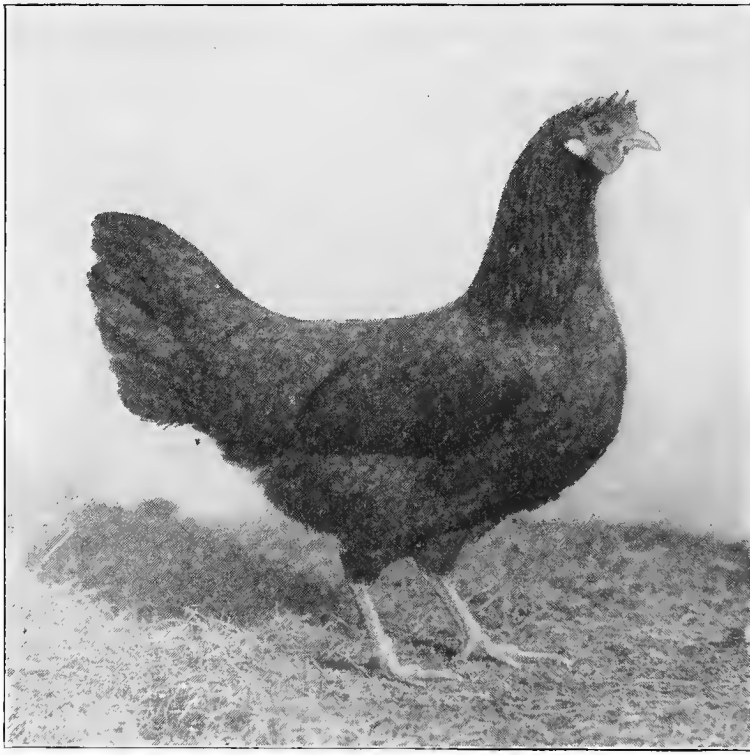
We decide that it is high time to begin and that every bird must be taken out for at least part of the day from now on and put through his paces in an individual training coop. We take out four cockerels to begin with. Before putting them into the cages we handle them a bit just as the judges would do in the exhibition hall. We open the wings, look at the tail, open up the back, sides and breast and examine the undercolor and the color at the bases of the feathers. We handle the comb, lobes and wattles and look over the legs and toes for evidences of stubs. Then we put the birds in the coops and try to handle them. This is where the patience comes in and sometimes the birds seem hopeless when we start.

Most birds do not understand this procedure at all, they resent being deprived of their liberty and try to regain it in every way possible. Some try to fly out by way of the top; some insist on coming out suddenly through the door and others put their heads down and simply sulk. But all of them must be reduced to reason and every bird can be overcome if enough time and gentleness are put on the job. About the quickest way to tame a bird is to stroke it under the wattles or "chuck it under the chin." This seems to have a magic effect in almost every case, but the difficult part is to get to the birds head without frightening it or putting it into a fit of sulks. Some birds need to be held to one side of the cage with one hand while the other starts the stroking of the wattles. The eye of the bird follows the finger that is petting it and in a short time the "holding" hand may be gently removed and the bird will stand perfectly still with its eye fastened on the finger that is being rubbed under the throat, apparently "hypnotized" and

spellbound with the operation. When a bird is well trained it will remain perfectly still and in the proper position as soon as the door of the cage is opened and the finger of the attendant is pointed toward it. Don't handle your bird the first time too long, he has only partly gotten the idea and is tired by the unusual strain.

But also do not forget that you wish your bird to take the very best position possible to show off his good points and hide his bad ones. Study your bird carefully and determine how he looks best—and then train him to take this pose—and to keep it. As we have already remarked, there is nothing that will so disgust a judge and therefore handicap your birds as much as when they are wild and unused to the show cage; indeed, it is almost impossible to properly judge a very wild bird. The writer was asked not very long ago at an early fair to come see a bird of which a novice exhibitor was very proud. When we attempted to take the bird out for examination it opened its wings, jumped for the top of the coop and simply filled our eyes, mouth and neck with dirty shavings from the floor of its pen. We must confess that our opinion of both the bird and his owner was not very flattering and we made our escape as soon as possible. This taming business is a pretty long, tedious job, but it must be gone through day by day until the birds are in such shape that they seem to like the petting they are getting—and I believe they really do. They should be rewarded for good behavior by the giving of something that they particularly like. One of the best things is raw meat, run through the grinder. Many a stubborn male has been brought to time by offering him this dainty—and it is good for them if not fed too abundantly.

Succulent bits of green food should also be used in this connection and plenty of greens must be supplied a string



Courtesy of George L. Russell

of cooped up birds, for they have just been taken from the range where they got all the good green grass they wanted. We find also that cooked food, such as hominy, oatmeal,

corn bread or any left-over cereal from the house is relished. If the bowels seem to be too loose, boiled rice is excellent and should always be given just before the birds are put in the shipping crates for delivery to the express company. This is sustaining and regulates the bowels so that the birds do not get dirty before they reach the exhibition hall. A variety will be appreciated by the birds, just as is the case with people. Use some buckwheat, some kaffir corn and some sunflower seeds if they will eat them and above all give milk. A good wet mash once a day will work wonders and some sour milk will tend to prime condition. We have always found it advisable to use for one meal a day, or every other day, Spratt's Poultry Food No. 3. The birds will receive this when they are at the show and must get used to it. It is a heavy food and generally relaxes the bowels, but it is a grand feed and we have worked wonders with it in hurrying on birds that were a bit behind or lacking in weight. This food should be soaked in water until it is crumbly, and speaking of weight reminds us that we should weigh each bird every three or four days; this is interesting and instructive and may prevent our making several mistakes. We should endeavor to show birds up to, but not greatly in excess of the standard weight. Most over size or very fat birds are clumsy and sluggish and do not show to advantage and, moreover, the standard weights laid down for each breed are correct. The attempt to "fill the cage" with big monstrosities that are two or three pounds over the proper weight is a big mistake. These birds could, and should, all be cut for over-weight; rest assured that the weight given by the standard is the best and most appropriate weight for the breed and don't try to exceed it. If your bird is low in flesh he should be kept in

the coop for a good part of the time, but given enough exercise to keep his blood going and he should not be exposed to too much cold. A stove must be provided in every fitting room and the temperature kept at a proper degree of warmth, but not too warm. A real warm room makes the combs grow and takes the life out of the birds, as well as exposing them to colds, especially if the stove goes out—as will happen, even in the best regulated families.

But the freezing of a comb or of wattles generally puts a bird out of the running—so we must be careful. Pullets that are inclined to lay must be moved to new quarters very frequently, for a pullet that has laid more than a very few eggs soon loses her "bloom" or fresh-looking appearance and this puts her entirely out of condition. Her tail is very apt to rise and become pinched and she looks over-done and "stale." It is best to be as much with your birds as possible while they are being prepared for the show; the more life there is in the room the better for we are then imitating the conditions that will prevail at the show, where visitors are passing all the time.

As a great treat the show string should be given one feed of sprouted oats a day and two or three times a week an onion cut into small pieces will be eagerly relished. Be slow and quiet in your movements among the birds; get them to like you and be looking for you whenever you come in. As soon as you are good friends, the task of conditioning is half over and the work made much lighter. Look out for mice and keep several traps constantly set. Many a grand bird has been ruined by having his tail feathers chewed off at night by some adventurous mouse—don't let carelessness in this respect spoil all your good work. We explain to the

assistant that we like nothing better than looking after a nice bunch of birds that are going to the show and we only wish this sort of thing was going on all the year 'round.

Lock up the fitting room at night but before doing so see that the stove is all right for we don't want to have all our plans "go up in smoke."

CHAPTER XI

FEEDING BEFORE SHIPPING

Enthusiasm is certainly a wonderful thing. If we have it not we can make but a poor success of this life. Plenty of enthusiasm will carry a man through many a tight place and bring him out on top—and, indeed, way "over the top." And this quality of extreme interest in the work—of real love for all that is connected with it—is just as essential in the poultry business as it is in any other—and perhaps more so.

In the profession of raising high-class Standard-bred poultry there are always times of depression, set-backs, disappointments and losses and the followers of the game must have the spirit and the temperament and the nerve to take the bad with the good—and on working just as if nothing had happened. He must be a philosopher as well as a student and an enthusiast. And so it does our heart good to see the assistant go about his work of preparing the show string with so much real interest and love for the proposition.

He has always acted to us as if he was proud of his calling and glad that he entered upon the job, but now that the show time is actually upon us he seems particularly full of "pep" and especially imbued with the idea of "never say die." He is up in the morning before we are so that he can feed, water and care for the regular flock as soon as possible in order to have more time for the training quarters. It is late when he leaves these special quarters, yet I

also observe that he will take his lantern and make a special round just before he goes to bed; he wants to be sure that everything is O. K.

But we have kept drumming into his ears the slogan—"everything cannot always be right"; there are always some losses to be accounted for in every business. So don't be too disappointed if some plans fail or some birds die "or go wrong."

So, this particular morning we find on inspection that one of our best hens is out of sorts and that a cockerel has succeeded in tangling a sickle feather in the side of the cage and breaking it half off. And there is no time to make any substitutions for we are going to wash our string today and ship them off day-after-tomorrow. One half of the morning is spent in putting the pen birds together just once more to see if any improvements can be made; to carefully handling the single birds for off-colored feathers or other concealed defects, and to a final touch or two in perfecting their training.

Then we repair to the washing room and get ready for the only really disagreeable job connected with the exhibiting of fowl. The writer must confess that he does not like to wash white fowl for exhibition. He has never been able to see anything very entrancing about the job. He thinks it is pretty much all work. But it is work that requires much skill, patience and experience, if good results are to be obtained. In connection with this business of washing white birds the writer is reminded of two incidents that seem very amusing to him now, but which at the time did not strike him just that way. On one of these occasions a string of 41 White Wyandottes was being prepared. In those days it was the custom to put his tubs on the floor and

to kneel before them on a mat of slats. His helper would change the water, bring the birds to him and assist in many ways.

When only a few birds had been washed the helper was completely laid on the shelf by an attack of lumbago and the balance of the string had to be attended to by the writer alone. At 1 o'clock in the morning he completed his task but was so weary and cramped from his kneeling posture and the stooping over the tubs that he could not get up from his knees and it was some time before he could get any reply from the house to his calls for help. Finally help came; he was lifted up and backed against the wall, where, after a bit, he straightened himself out and was able to crawl home to bed.

On another occasion, the writer was preparing a small string which had been sold for a very early fair. The day was hot and the washing was done in the laundry of the house. All went along merrily until about four birds had been done, when a very peculiar feeling came over the writer. He had never felt anything like it. The room seemed to grow a little dark; he was not able to see the birds very plainly and the tubs acted as if they were not steady on their benches. He went outside, sat down and smoked a cigarette. After a few moments, everything seemed to be all right again and he went back and started ahead.

This time the same feeling of illness came over him while he was washing the second bird. He was just clear-headed enough to look at the thermometer in the room—to see that it was 112 degrees. He had simply been faint and did not know it. He staggered out again on the porch but this time left the door open and as soon as the cooler air had revived

him he went back, threw open the windows and saved the birds, which were in as bad condition as himself. But we

Courtesy of A. & E. Tarbox

don't have to encounter these hardships now—at least not the worst of them. Our washing room must be warm

enough to be perfectly comfortable for us personally and not cool enough to reduce the temperature of the hot water to any great extent—about 80 degrees. We believe in a separate room for drying and this room should be kept at 90 to 95 degrees.

Both the assistant and the writer have read so many articles on washing white birds that we are not going to set out here in detail just what we did to our particular string on this occasion, but there were a few points that we believed the assistant should know—and we proceeded to instruct him therein. We tell him first that his water must be soft water. Washing poultry in hard water is like washing your hands or your clothes under such circumstances—very unsatisfactory. Then the water must be clean; it should be strained through several thicknesses of cheese cloth.

Plenty of soap should be used and an excellent combination is ivory and lux. The ivory now comes in flakes and is, therefore, in very handy form, but we still stick to the soft ivory—made by boiling it down to a semi-liquid. A little borax is a good thing and a fair amount of blueing in the last rinse water. Don't fail to have the last rinse water cold. The system that we employ is to stand each bird on a perch in the drying cage. The perch should be so placed that the bird can only get down from it with difficulty and we try not to let them get down at all until they are put into the shipping boxes to go on their journey. The water and feed cups can be so placed in the cages that the birds can readily get at them without moving from the perches. This makes it impossible for the birds to soil their plumage from the droppings and also enables the operator to readily and easily remove the droppings—which he should do every

few hours. The giving of a whole pepper-corn to each bird just after the wash tends to prevent colds and warms and brightens the bird considerably.

Birds that are drying should not be placed too near a stove or the source of heat; the whole drying room should carry the temperature evenly in all parts, if possible. Don't try to dry too fast and don't try to press any water out of the plumage once you have placed your bird on its drying perch. Let it plume itself and dress its feathers all by itself; you will make an awful mess of it if you attempt to assist nature on this kind of a job. It is very well to leave a little light in the drying room at night. This induces the birds to go on with their toilettes as soon as the feathers become dry enough to warrant it; and I have found this particularly good with old hens who generally feel the effects of the washing more than the others and are pretty apt to be "doppy and lazy about straightening out their "white garments." Perhaps the most tedious part of the preparation of the birds is keeping them clean after they are washed. Many a time the writer has been with the outfit until 3 or 4 o'clock in the morning and back again as soon as it was light. Eternal vigilance is the price of really clean birds. Shipping boxes must be perfectly clean—free from even dust—before the birds are put in for shipment. The shavings must be new and each coop should be given a good airing in the sun before the shavings are put in. You don't want loose bowels in birds that are going to be shipped for you want them to keep clean while in transit. So it is very desirable to get them to eat a good meal of boiled rice before they start.

Don't serve this damp and sloppy but get it as dry as possible for well cooked rice. You may have to starve

some birds into eating this rice; most of them never saw it before and many do not take to it very kindly. Keep your shipping coops as dark as possible. You must have good ventilation but you want the birds to lie quiet in the boxes and not be stirring around, scratching in the shaving or looking for food. Each single coop should be of such size that the bird cannot turn around and when you are unpacking you ought to find them in exactly the same positions as when they started.

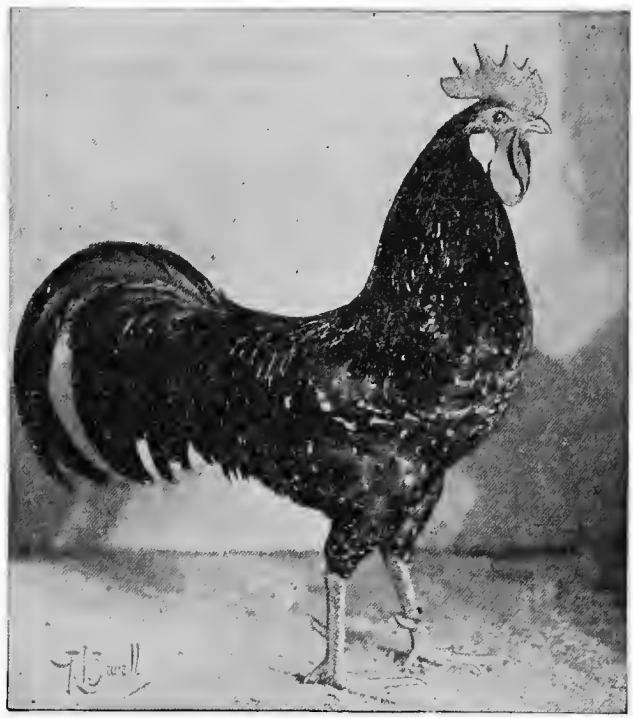
Be absolutely sure that you put the right tag on the right bird.

Don't forget to mark on the corner of each tag just which bird is under it. This will save a lot of time in the show room and prevent birds being taken out and then put back again—which always disturbs and often musses them up considerably. Unless it is out of the question, don't ship your pen males in the same box with the females. Put him in a separate box and mark him "old" or "young" pen male. As stated in a prior chapter you ought to take a couple of extra hens along with you to put with the males before you let them into the cages with the pen females. If you do not do this the male will at once start to tread the females, and, as a consequence, you will have a lot of mussed feathers and dirty ones, too.

Be sure that you make a full and complete list of all your coops and just what each one contains before you let the express company have them. Keep this in a little book in your vest pocket.

The writer has often seen exhibitors who did not know accurately just how many coops were in their consignment and as a consequence would be "cussing out the express

company for losing one or more when, as a matter of fact, they had all that they were entitled to.



Courtesy of H. Cecil Sheppard

You should also have with you a small satchel in which you keep the articles which will put the finishing touches on your pets before the judge comes along. A couple of small clean sponges; a few pieces of flannel for polishing up the legs; a small bottle of peroxide to take off spots or stains;

a little alcohol for brightening of the combs and wattles, a box of condition pills and cold tablets, and a couple of good white silk handkerchiefs will all be found very useful.

Keep right after your birds every minute until the judge begins his work, so as to be sure you have done all in your power to make them look their best and, therefore, to attract his favorable attention.

But, we explain to the assistant, we are going to talk to him later in regard to what he ought to do and what he ought not to do when he gets into the show room; so that we say nothing more on this line at this time. We tell him, however, that he should be careful to value his birds to the full amount of their worth before he lets them leave the station. It is much better to get back the real value of a lost bird rather than to be compelled to accept perhaps $5.00 for a bird that is worth ten times that amount.

Don't put an excessive value on the birds, but be sure that they are received as valuable articles and you will find that the company will take much better care of them if they know that they are not just ordinary dunghills.

Stay at the station until you see all your crates carefully loaded into the express car; don't run off and leave them to the tender mercies of a man who has no idea of how much a win means to you or of how much money you might loose if the best bird did not get there at all.

And the assistant follows our instructions and tells us, as he returns from town, that they are all safely on board bound for their first view of select company. And so we say to him, as we go upstairs to bed, that the next time we meet will be in the show room itself and thereby will hang another chapter in this book.

CHAPTER XII

AT THE POULTRY SHOW

We have been looking forward to this time, the assistant and I. It is the time—the moment—of the show; the climax, as it were, of our efforts. For the past month or six weeks I could see that the days and hours were passing all too slowly for the assistant. At certain hours of the day and often in the evening he would look pre-occupied—would act as if he were not attending strictly to business and would seem to be thinking about something else. I knew what it was but held my tongue. The boy was simply indulging in some day dreams.

He was anticipating his entrance into the show hall and was already finding a lot of blue ribbons on the fronts of his cages and, indeed, had gone so far as to sell a bird for $150, and to take numerous orders for "hatching" eggs. Once in a while he would "wake up" to the realization that this was only a dream thus far and that a lot of hard work must come first. Some of this work we had already done together and the reader will remember that in our last chapter we had placed our shipping coops on board the train, bound for our first show. It was not long after the assistant's return from the station with the report that so far all was well that we packed our small grips and started out in pursuit of our pets; we wanted to be sure to arrive at the hall before the birds. We had made absolutely sure that our list of coops shipped and the numbers of our cages at the show was in our pocket and that we had with us the

necessary articles with which to clean and make ready the cages where the birds would make their home for the next week.

On arriving at the exhibition building, our first care was to find the office of the secretary and to make ourselves known to him. I found him an old acquaintance but he, naturally, did not know the assistant and was much pleased to know that the lad was "making" his first show. His friendly offers of help were much appreciated I could see, and made a favorable impression. How much better it is, thought I, to see a show secretary who has a cheery manner of welcome and a kind word for the beginner, rather than the curt nod and over-worked expression that one sometimes sees on these gentlemen. A show secretary is really the host of the occasion and should act accordingly. After the introduction, off we went to find our coop numbers. This did not take as long as we anticipated, although we had some difficulty in locating the pens. Then to find our shipment. We made the acquaintance of the door man who checks in the arrivals and found that our birds had not yet reached the building. This gave us just the opportunity we wanted and we set to work cleaning house. Each cage was washed inside—front and back and sides—the shavings were leveled and added to if necessary and the feed and water cups disinfected and emptied. Small signs were put on each cage bearing the words, "Do not feed or water," meaning that we would attend to this important job ourselves. All this time other exhibitors were constantly arriving and the assistant was introduced to a lot of my old friends who seemed to take an interest in him on my account and said some nice things to him which I could see made him feel much more at ease, for he was beginning to

feel that nervousness that always comes to a man on his first venture into a new field with considerable at stake. It is like the feeling of an athlete as he stands at the starting mark, or the captain of a football eleven just before the whistle blows.

And yet the assistant had kept his head very well during this trying few hours. His birds had not arrived and yet he was not unduly anxious nor did he keep pestering the doorman with questions that were impossible for him to answer.

He did not seem to be confused by the noise and confusion that were all about us, but went around the hall with a quiet (if suppressed) manner, learning the locations of the other exhibits and the general arrangements of the interior in a way that pleased me very much. He had not even come to the point of "cussing" the express company for their slow work in attending to our birds, although there were several exhibitors who had already been heard to murmur some sharp sentences of disapproval of the express company, with threats, in some cases, of the disaster that would fall on its head if things were not different.

In other words the assistant was displaying almost an ideal manner for an exhibitor and I could see that he held his emotions well in hand. His patience was soon rewarded for within an hour our whole consignment arrived in apparent good order and we began to coop our birds, being greatly assisted by the special information that we had placed on each box: "Young pen male," "cock No. 1," etc. We put all the birds in except the pen males. All had arrived in excellent condition and all were pretty hungry. Each was given a good drink with a little tonic in the water and about a half portion of grain and then locked up, so as

to prevent the "curious" from handling the birds until after the judging.

Courtesy of Sheffield Farm

Our collection of coops was then carefully removed to the cellar and stored in an out of the way place where they

would be readily accessible. The pen males were fed and watered in their boxes and were then allowed to run out with a couple of the extra hens we had brought along for the purpose of "taking the edge" off these males before they were put upstairs.

Then we went out and had a real good dinner—I would be ashamed to say how much it cost—but we both felt that we were entitled to it and, indeed, must have it, for we had done quite a bit of work that day; had been under a strain all the time and must do quite a bit more labor before the show was over.

The remainder of the evening was spent in the show room chatting with our friends, making new acquaintances and taking an occasional look at our birds to see that they were resting quietly. I explained to the assistant that there was no reason to "fuss" with the birds at this time. They must be allowed to get accustomed to their new surroundings, to rest up and get a good sleep before the judging day so as to be at their best when the awards were to be made. All that was necessary to do was to keep the birds clean and not let them overeat themselves.

We went to bed early because we must be up real early the next morning. We would give our entries the "once over"—and a careful "once over"—just before the judge came along. We would see that they were perfectly clean; that their combs and wattles were bright and shiny; that their shanks were free from stubs and that they were in all respects as good as they could be. One of the fatal errors we point out to the "assistant" is to start the morning comparing your birds with those of the other exhibitors. This does not make your specimens any better or the competition any worse than the judge is going to find them. Reserve

all this for the days that come after the judging—and attend to your business while there is time.

There will always be little things to attend to the morning of the judging and it is your place to see that they are done. The pen males must be put into their cages; all the birds will need a good feed with something a little out of the ordinary and if there are any which show signs of being a little "off" give them a good condition pill—and then let him alone. There is no use trying to tame a bird after it gets to the show room; if he is not tame when he gets there he won't be tame at all. Don't pull your birds in and out of the coops to show them to some friend who "just wants to handle them once." Tell him that he can do so to his heart's content after the awards are made but that just now you want to see that all is right before judging time and that you have no time to delay. Unless the bird is sick, don't make any changes, especially in the pens. You have done the best you could at home in selecting the right birds and don't falter in your judgment now. We have seen lots of ribbons lost by an exhibitor changing the females in his pens at the last moment. Remember that the original birds have been together all along; have come to know each other and are quiet and contented. The moment you put a strange bird with them there is trouble—and the danger of a fight which may result in your losing the very prize you are after. If you think you are weak in one class you may be sure you are strong in another—and you don't know yet what the judge is going to think. You can feel pretty sure that you are not going to win all the blues and you made up your mind before you came that you were going to take your medicine—whatever it was.

Courtesy of Sheffield Farm

As soon as the judging starts, get away from the judge and let him do his work in peace. Hanging over his shoulder or watching his every move does you no good and generally annoys him. Go look at some of the incubators or run upstairs and see the moving pictures or listen to a lecture. This will distract your mind. You will find out very soon what you are going to win and if the judge ropes off the isle, as he should do, you will not know anything anyway until he is through. The ideal way in which judging should be done is to exclude from the show room all the exhibitors until the awards are made. This is the system used largely in England and it works to perfection. We are going to come to it in this country in many shows sooner or later. Furthermore, don't lose confidence in the judge or believe the stories told about him by other exhibitors.

The name of the judge you knew when you made your entries, and you were satisfied to show under him. The fact is that he is doing the very best he knows how and that he is strictly honest in his actions; his reputation is at stake and he knows it. Dishonest judges very seldom get a second chance and there are mighty few of them. Some may be incompetent but that is their misfortune, not their fault, and it is up to the show secretary to fill their places with better men the next year. Don't be drawn into discussions with other exhibitors as to the qualifications of the judge. You will find that if they do not like him it is because he did not give them all the blues the last time they showed under him. They had the same privilege you had —they could have stayed out if they had wanted to. And what good does it do? He is there and is going to judge the class and you must abide by his decisions.

So off we go on a tour of the hall. We see some wonderful new inventions in incubators—one that is only about ten feet square and yet holds 10,000 eggs; we have a long talk with several of the feed men on the high cost of poultry living and we float up to the educational department and hear a splendid lecture on the use of home-grown food in the poultry yard. It is just about noon now, so we come back to our birds and find that we have won fourth cock and second and fifth hen. This is as far as the judge has gone and we feel pretty well pleased, as we counted much more on our young stock than on the old. Indeed we hardly expected to do so well on hens. This is certainly going to help even if we do not get any further awards.

The remainder of the afternoon is taken up with "post-mortems" over the judging of the other classes, while the judge goes on with his work on the youngsters. Again we refrain from much comment on the judging. As a matter of fact, after we have looked things over, we make up our minds that he was about right. Our fourth cock is nice in color and condition, and has plenty of size, but the birds above him either are stronger in breast or back or comb or some other point that entitles them to be placed over ours. Ours is a good bird and a good breeder, as we hope to show—and he beat quite a lot of other birds which their owners thought were invincible. Just as the light is beginning to get really poor in the hall the judge finishes his work and we are delighted to find that we have won two firsts—on cockerel and on young pen. We also get third and fourth on pullet and second old pen. This is really a great win for our first attempt and we are tickled to death to see some of the older exhibitors congratulating the assistant. He takes it very nicely, but we can see that he is

simply bubbling over with satisfaction and excitement and that he is fully repaid for all his conscientious work and patience.

We warn him at this time to be modest in his manner of speaking and especially to refrain from saying that "he has better birds at home." We tell him that if there is one thing that should never be said, it is this—whether it be a fact or not. We point out to him that he should study the birds that beat him and find all the good points he can in the birds that he beat. There are merits in them all and he can see them now much better than he could before they were judged. He may not agree with every award, but on the whole the work has been well done—especially as the judge never before saw any of the birds. You want to meet him and have a nice chat with him and after this you are still more impressed with the fact that you are a beginner and that he knows his business. And when it is all over you are at liberty to put up your cards and signs on your coops and that evening you will perhaps begin to do business.

And when closing time comes that night you find that you are about as tired as you ever were in your life. You did not realize until then how much of a strain you had been under all day. Before you leave the building you see that the birds are all right, lock up the cages and put a good piece of thick paper over the coops that are in the top tier and walk over to the hotel to roll into bed—and dream sweet dreams of all the sales you are going to make in the next few days.

CHAPTER XIII

THE EXHIBITOR'S OBLIGATIONS

We are still at the show and propose to remain until the end. We are having a mighty good time and are enjoying the affair more than any other similar event we ever attended because we have the assistant in tow and are trying to continue his course of instruction in a place where he must exercise good judgment, tact and business ability. The poultry show is not only (and perhaps not mainly) an exhibition of birds specially prepared for this event, but it is also an exhibition and a tryout for the exhibitors themselves. Within its doors is assembled a collection of breeders and fanciers from all parts of the country—perhaps from every part of the world—all of them interested to the fullest extent not only in the awards made but also in the very latest fashion or fad with respect to their favorite variety or to the poultry industry as a whole. Most of the really wise exhibitors are there to learn as much as they can and to take back home with them at least some little thing that will help them during the season that is just starting. If times are good the spirit of cheerfulness is clearly manifest in the aisles and talk is optimistic; but if, as was the case during the war period, things look pretty dark for many of the breeders of fancy fowl, there is always some gloom floating about the atmosphere of the hall, although we have always found that there were a few cheerful souls that could not be downed and whose hopeful words were a great relief.

The man who wins naturally wears a broad smile while the loser draws a long face and sometimes goes home before

the show is over. The secretary is generally so busy that his usual manner is entirely changed and he appears "offish" and pre-occupied to many; while really the case is that he has so much on his mind that he can never catch up with all he wants to do for the exhibitors and he is actually working his nails off to please them.

The cooper and floor superintendent is just about in the same fix. He is kept on his feet until he is about ready to drop and yet must go hither and yon, at the slightest pretext, to perform some little task which the exhibitor could just as well do for himself. And all the while he must keep smiling.

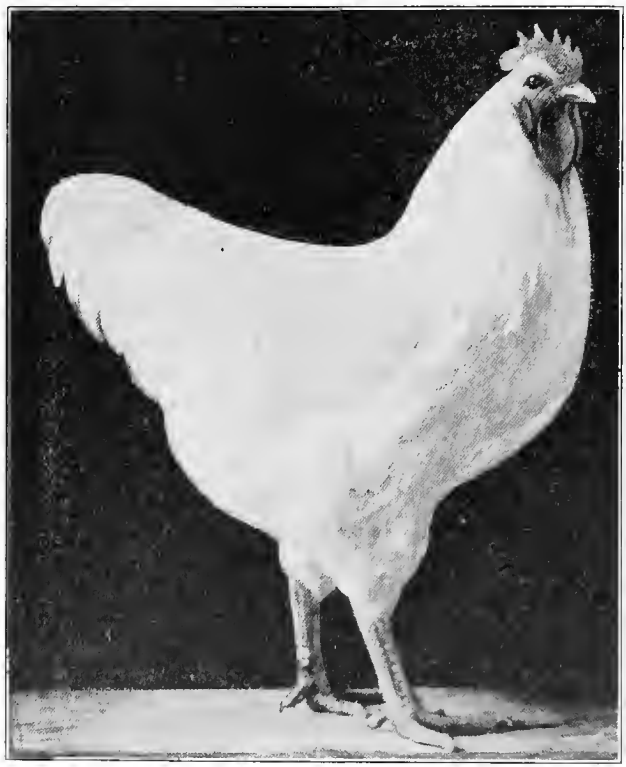
It must be remembered that a big poultry show is a big business rolled down to one week in which everything must be done and therefore all those who have anything to do with it are working at top speed and under high pressure. The work must not only be done, but it must be done accurately. There are often 500 or even 600 exhibitors. An account must be opened with at least one-third of them, for about thirty per cent. of all exhibitors win some money—and it would be a pretty good business that opened 200 accounts in a week. Suffice it to say that for the secretary and other assistants actually in charge of the running of the event, a poultry show is a big mass of little details, none of which must be neglected, but all done, to please everybody—if that is possible. And not only is it a place where the officers have a lot on their shoulders but the exhibitors also have a good deal of work and responsibility which many sometimes neglect. They have obligations to perform both toward other exhibitors and toward the management; they are going to be tried out as men and sportsmen and they are going to get a chance to see whether they can

sell chickens as well as they can raise them. The writer has always believed—and has invariably told the assistant—that an exhibitor had three distinct parts to play at a show: First, to determine and establish his relations with the management; second, to fix and maintain his manner and bearing toward the other exhibitors and the judge and, third, to develop and cultivate his ability and power to sell his wares to the very best advantage.

We want to stay with the assistant during his first week at a show so as to see how he is going to deal with these three phases of an exhibitor's life—and to prompt him, if the occasion arises.

We noticed the excellent start he made when we first entered the exhibition hall. He went at once to the secretary's office, introduced himself and only remained five minutes at the most. This was thoughtful and showed that he realized that every moment of the gentleman's time was taken up with necessary things; and yet he had courtesy enough to pay his respects to the man who had been working for him, as well as all the other exhibitors. If there were no show secretaries there would be no poultry shows and I could see that the assistant was well aware of this fact. Then again, I failed to see him run in to ask the secretary any one of those foolish questions which many exhibitors seem to find it necessary to think up just when it is not wanted. He had remained away from the office except to get a copy of the premium list to look over the list of specials. But above all I was particularly pleased to note that on the third day when the first rush was off the secretary's office he quietly walked in and congratulated the secretary on the excellent way in which everything was going. Any one could see that the secretary was pleased; he saw the lad was in earnest

and that this was not one of those bits of camouflage that is often done because it is thought necessary. He asked the



Courtesy of H. W. Halbach & Sons

assistant what he had won and they had a nice little chat together.

Both felt better after the interview and I could see that

each liked the other. I took occasion to commend my pupil right then and there and proceeded to tell him how disagreeable an exhibitor can make himself to a secretary if he sets out to do so if he forgets that he is not the only person in the exhibition whose rights have to be protected. I told him of some of my pleasant and also some of my unpleasant experiences in being a secretary and he finally said that he did not see how they got any men to take the positions. This also showed the right spirit and was an excellent sign that he realized that life must always be a question of give and take.

We also had noted his manner toward the judge when he met him soon after the awards were made.

He was respectful and eager to know about the other winners as well as his own. There was no attitude of "my birds are all the best and you will have to show me why they are not." He was just as much in love with his birds as ever and yet realized that they were not perfect—and he wanted first-hand information as to their most glaring faults. He knew that the judge had never before seen any of the birds he was going to judge and that he could therefore look at all with an unprejudiced eye; he was playing no favorites and would hand out strict justice, just as he saw it. The assistant came to me on the second day and said he could not make out why there was so much grumbling over the awards. He said he heard it quite frequently all over the show—not only in his own variety but in almost all the classes.

This gave us a splendid opportunity which we proceeded to grasp at once. We first pointed out to him that there were not so many exhibitors that were grumbling; it was only a few but they grumbled continuously. We showed

him that the best, or leading, men in each variety were satisfied that their birds had been properly judged and that it was only a few exhibitors in each class that were making all the row. And in every case that we ran down together it became plain that the grumbler had not the least reason to utter a word of complaint. His birds did not stand a ghost of a chance to get in the ribbons.

We pointed out that there is always a small percentage of men in any contest that have no sporting spirit and that no amount of showing—either winning or losing—will ever stop their mouths from saying unpleasant things about the judges if they think any one except themselves is getting a finger in the pie. We also explained to him that an association of fanciers had been formed with the idea of putting a stop to all this sort of nonsense. It was one of the main objects to promote the true fanciers' spirit in and out of the show room, by talking to those short-sighted exhibitors and pointing out to them that this was not the manly or proper way to take things. That no one could always win and that there must always be a loser; that many a man who had not won a single ribbon at his first show had come back later and almost swept the decks and that fault-finding and grumbling did not either change matters or make anyone feel any better.

Indeed, we told him that at some shows the rules provided that where an exhibitor made an accusation hinting that the judge was not entirely honest or above-board in his decisions, any other exhibitor who overheard the remark could summon the author of the slander to the secretary's office and there compel him to prove his case or be expelled from the show, together with his exhibits.

We told the assistant that these discontented exhibitors are not wanted at the good shows and that the best thing for them is either to go out of the fancy or else get up a little show of their own where they can have the argument and hair-pulling they want among themselves.

A spirit and manner of sportsmanship is natural to a good sportsman—and we do not want any other class in our shows.

Then, too, (we go on to say) the attitude of the exhibitor to his fellow-exhibitors is of the utmost importance for any man that proposes to be in the show game.

Strong, lasting friendships are made in the show room, but they cannot be made if an exhibitor is jealous or suspicious or unnatural with his fellows. They are all there together to take what luck befalls them—they are co-workers in the square field and should work together for the benefit of the great industry which has brought them there and gives them the opportunity to do something for each other.

How disgusting it is to hear one exhibitor running down another behind his back; how useless and unkind is petty jealousy at such a time. You may know that a fellow-exhibitor has bought every bird that he is showing, but why tell others about it? This does not make your entries any better, nor does it cause your hearer to think any the more of you. Live and let live is an excellent motto and its application is very plain in the show room. It is most interesting and instructive to become intimate with your fellow-exhibitors.

You can learn their methods and you learn of their experiences. Some have had a hard battle while others have had wonderful success right from the start. Some are poor

and some are rich, but all have one common desire—to make their birds better and better from season to season.

The winnings that the assistant has made naturally attract both visitors and other exhibitors and we watch with keen interest his manner toward intending purchasers.

At first he does not seem to realize that his birds or their eggs are in demand—he does not fully appreciate the value of a good win. Gradually he sees that ribbons are not the only thing he can win at the show and he starts off by selling his third prize pullet for $25.

After this is over he comes to me and asks if he has done right. We tell him yes, but he must be careful to decide just what birds in his string he is going to sell and must now make up his mind just what he is going to ask for each one. We point out that there must be only one price on each individual and that some of his birds are to be retained and not sold for any price—no matter how tempting the offer. We ask him to think of his birds at home and plan how many of them he can sell and how many settings of eggs he believes he can turn out and sell without cutting his own supply too short.

Further, we give him some advice in regard to approaching a visitor who seems interested in his birds and we make it clear that this selling game is one of strong competition and that if he does not make the sale some one else will surely do so.

We make him keep his card racks full of cards and caution him that if he is to sell he must keep near his birds and be watching out for buyers constantly.

A pleasing manner—gentlemanly, but confident—must be maintained toward all inquirers and he must take pains to find out the real wants of his intending purchasers and,

if possible, the extent of their pocketbooks. He has faith in his stock and he must impress people with this faith before he can induce them to buy. If he really believes that a bird is worth the money he asks it will make the task of selling it for that price all the easier and he must not ask too much for anything—but be sure to ask enough.

We can see that he is greatly interested in this aspect of the show game and we think that he is going to make a success of the selling end. Especially is this so when we see him go up to a well-dressed man who is looking at one of his pen entries. Soon they are in earnest conversation and by and by he strolls over to me and tells me that he has just sold the gentleman a breeding pen of ten birds and a cockerel for $200, and has already received the money.

I am delighted and content. It has been a pleasure to be with the boy during the show and I feel that I can now wander about the hall a bit and have some good old-fashioned talks with my close friends whom I have rather neglected until I saw that my pupil was fairly started in the way he should go.

CHAPTER XIV

SELECTING AND MATING THE UTILITY FLOCKS

We are home again and rather glad of it. This proposition of showing is rather tiresome—physically we mean. The excitement, change of regular hours, comparatively little sleep and general upsetting of city life have been hard on us, especially as this was the assistant's first experience at a show.

Mentally we are refreshed, however. It has done us no end of good to get in touch with these bright fellows who are "wise" to the very latest thing in the poultry game.

We are fired with new enthusiasm and look on our business with a keener eye. We see a brighter future in it than we ever thought possible. Before we started for the show we believed in the poultry business; we thought that fair returns could be secured from growing good chickens and selling good eggs; but we really had no conception of the size of the industry nor had we any correct idea of the number of people that were starting in to follow our example and "get into the game."

The show had been crowded with people, but at first we thought that the majority of them were merely curious to see the display. Our surprise was genuine when we discovered that most of these people wanted to buy and were perfectly serious in all the questions that they asked.

One evening we concluded to take our stand at our young pen and to keep track of the number of persons who voluntarily came up to us and wanted to book orders for either stock, chicks or eggs. We remained at our post the

entire evening and there was not a moment when we were not in conversation with one or more persons who wished to be customers—and there were generally a couple of new arrivals who were waiting their turn.

It was truly wonderful and we would never have believed it unless we had been there in person to experience the thing ourselves. Then, too, the number of cards that had been taken was an indication of actual interest that could not be disputed. These cards for the most part were not taken by children, but by serious-looking, sober-minded citizens who were bent on finding out all they could in regard to the standing and responsibility of the breeders—so that they could place an order. That particular evening the assistant had sold 800 eggs for hatching; over 1,000 day-old chicks, and several small orders for pens of breeding stock—indeed he had to decline to accept any further orders until he had reached home and made some calculations of his ability to fill those orders which he had already agreed to fill.

And this healthy desire on the part of the public was reflected all through the show and was both a direct and also an indirect benefit to all. For example, we found that we were receiving so many orders for day-old chicks that we would need more incubator capacity. So we walked over to one of the space exhibitors and gave him an order for the necessary equipment.

We had to make arrangements for more day-old chick and setting egg boxes and finally concluded that we had better have a couple more brooder stoves.

And so it went all over the floor. One order led to another and everybody was happy.

The show was also a great benefit to us in another way. We learned a lot about our pet variety and about our own birds.

The comparison that had been made with other specimens of the same variety and the talks with the judge had been a great education. We were more critical than we had been before. We made our showing and we certainly saw the faults in our stock much more clearly than we did before. We had found out the very latest fashion and had seen the kind of birds that were most likely to win and we had begun to master some of the art of showing the birds to the best advantage.

We had heard the gossip of the breeders and, better still, had gotten some of their good ideas and advice for future reference. We felt that all this was going to help us very much and that we would be able to make a better showing the next time we entered the arena.

If we had remained at home and had our light under a bushel we would never have known a lot of things that we acquired at this one show and we felt that the information that we had secured was beyond price to us and that the very best investment we ever made was our payment of the entry fees and the spending of the small amount of money in connection with our showing experience. We had actually taken in ten times our expenses in sales and the experience and knowledge we had gained was all velvet.

But when we had thought the matter over once more we concluded that by far the greatest benefit we had secured at the show was the friends we had made there. How delightful was the recollection of the help and encouragement that these men had given us. They were perfect strangers

to us when we first made our appearance and, before we left, we felt that we had known them for many years.

Many of them had promised to visit us and we had agreed to return these visits. We had had long talks with them in which the future of our pets was discussed and planned. We had learned something of their methods and they of ours; each had, perhaps, gained something from the other and both had a better understanding of the relation of exhibitors toward each other than ever before. It had certainly been a pleasure to meet these men and it made us look forward with new interest to our next showing. We certainly intended to make some of those promised visits for we know that we would be received with true hospitality.

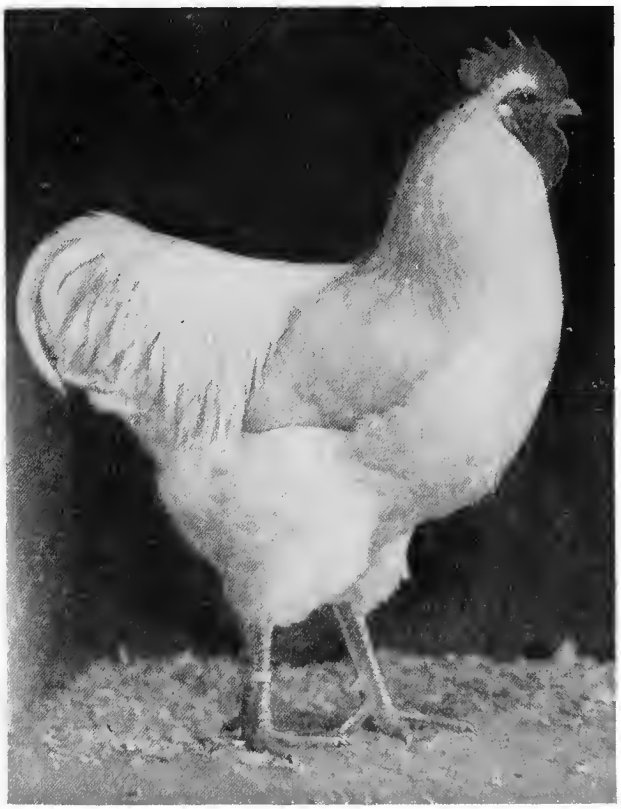
I explained to the assistant that I had been all over the country and had visited most of the well known breeders in my variety and that I had never received anything but a cordial welcome and that every visit, without exception, had been a most pleasant one. Truly life without friends would be a dreary thing.

But while we were talking all these things over the telephone rang and the expressman at the depot informed us that our birds had arrived.

Off went the assistant to get them and very soon we were uncooping them and putting them back in their cages in the conditioning room. There were one or two things that the assistant must know about birds that have just come back from a show and now was the time when he must learn them. The birds were very tired. They had been confined in small quarters all through the show, had been fed heavily on rich food and had lost much sleep and quiet.

Then they had been packed away in dark shipping coops and had had nothing to eat or drink for eighteen hours. All

this must necessarily tend to upset them and we are lucky indeed if we do not find at least one bird that is actually on



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the sick list. We explain this to the assistant and we tell him to go about his feeding and watering with care and to

work the birds back easily and slowly to their normal rations. At first we give to each bird a small meal of wet mash. This is easily and quickly digested and eagerly relished as they have had none since they left on their eventful journey; chickens enjoy a change of diet almost as much as humans.

Next we allow each bird to drink a small amount of water to which has been added a fair amount of epsom salts. This is to flush them out and rid their systems of any over-dose of "kindness" that they may have received at the hands of the show assistants. Before evening they receive a moderate meal of good, sound grain and in this a liberal "dose" of oyster shells.

Most shows do not supply either grit or shells for the birds and they always suffer from lack of "teeth" with which to grind their food. The lights are out early in the conditioning rooms that night and the birds are allowed to get the first real good night's sleep that they have njoyed in a long time. This gives us a chance to look over our mail and we are surprised to find a number of inquiries directly from persons to whom we have talked at the show—and there are two orders from men we had given up as "impossible."

In the morning the birds are brighter and we do not find one that needs a doctor's care.

Some of the older hens are pretty fat and not as active as they should be and this extra flesh must be worked off before they are placed in the breeding pens. These hens are taken from the small cages and placed in the exercising yards with plenty of straw to scratch in and only a light feeding of grain. They are mighty glad of this freedom and are soon as active and lively as pullets, digging away for the grain

and flapping their wings over their heads in their delight in being able to move about naturally once more. The males must also get an opportunity for more exercise than they have had during the show week and this is rather a harder problem as they cannot be placed in runs next to each other unless the partitions are boarded up solid; otherwise there would be as many fights as there were males.

We are prepared for this, however, and built our yards with this end in view. Thus this morning there is a prodigious scratching of straw and much noise in the conditioning quarters. The males are calling the hens and crowing over their apparent freedom; the females are "singing" or announcing that they have laid some eggs and one would think that they knew their home and were telling each other how glad they were to get back to it. This "cooling out" process should be carried out with all birds that come back from shows. It gets them into good breeding condition again and gives time to see whether they have contracted any contagious diseases while they have been away. It often happens, for example, that a string of show birds will look all right when they first return, but suddenly break out with a violent attack of chicken pox, especially if they have been to a southern show, for in this locality chicken pox is more prevalent than elsewhere.

Keep your birds away from the general flock for about ten days or two weeks and you will be safe. It is a hard matter for the assistant to wait this length of time for he is anxious to get his pens mated up and begin hatching from the best pens. But we point out to him the folly of expecting these birds to be in proper breeding shape immediately after such an ordeal as a show and tell him that he will have plenty to do in looking after his other birds; getting his in-

cubators clean; bedding down the small pens where he expects to put his gilt-edged matings, leg-banding the birds, etc., etc.

His utility flocks must be culled and mates picked out for them and this is quite a task in itself.

His desire is to give the very best value he can for the money he receives for the eggs and chicks from these utility pens and too much care cannot be taken in seeing that every bird is a good one, not only in shape and color, but in health. Every specimen that has any sign of a disqualification or that is not right in any way must be taken out and put in the killing pens, and males of good type, well bred and vigorous must be selected to mate with the females. We tell the assistant that we have been to plants where the system was to select all the good birds for the exhibition matings and to throw the rest together with the males that happened to be left—and to call these last pens "high class utility stock." We point out that this is not honest, nor is it fair, to the customers and is a practice that should never be followed by men who want to make a reputation in the poultry business.

The assistant then asks me how long I feel that I can stay with him. He says some nice things in regard to the help I have already given him but tells me that he is very timid in regard to the attempt to mate up the birds and to getting the system of trapping and marking the chicks started.

After thinking the matter over for some little time I agree to remain until the pens have been mated and also to start him with his incubators and setting hens.

He seems greatly relieved and goes up to bed that night with a light step.

CHAPTER XV

DOUBLE MATING

The assistant certainly has a persuasive manner and a nice way of getting at a thing. He wanted us to stay a while longer with him. We thought it was about time to go back home and let him take entire charge. The result is that we have agreed to postpone our departure.

Now, he accomplished his purpose so quietly and so nicely that we hardly realized that we had changed our mind until the thing was done and we had given our word. After it was over we began to think that this youth ought to have been a diplomat rather than just a plain poultryman. But we are really glad to stay with the lad. Thus far we have gotten along splendidly together. There has never been a cross moment nor an ugly word nor any friction.

He believed in us and we have tried to teach him what little we knew, feeling sure that the seed had not been sown on barren ground.

If there was any real ability in this young man we wanted to bring it out and make it useful; if he was not cut out for a poultryman it was just as important for us to discover the fact and to warn him that he was engaged in the wrong occupation.

The older we grow the more we are persuaded that there are, and always will be, only a small number of men who will actually succeed in the poultry business. "Many are called but few are chosen" is a motto which applies with great force in the practice of raising chickens. Let any man

seriously sit down and count up on his fingers the number of his friends who have started in this business—and then let him also count those who have remained in it for any considerable length of time.

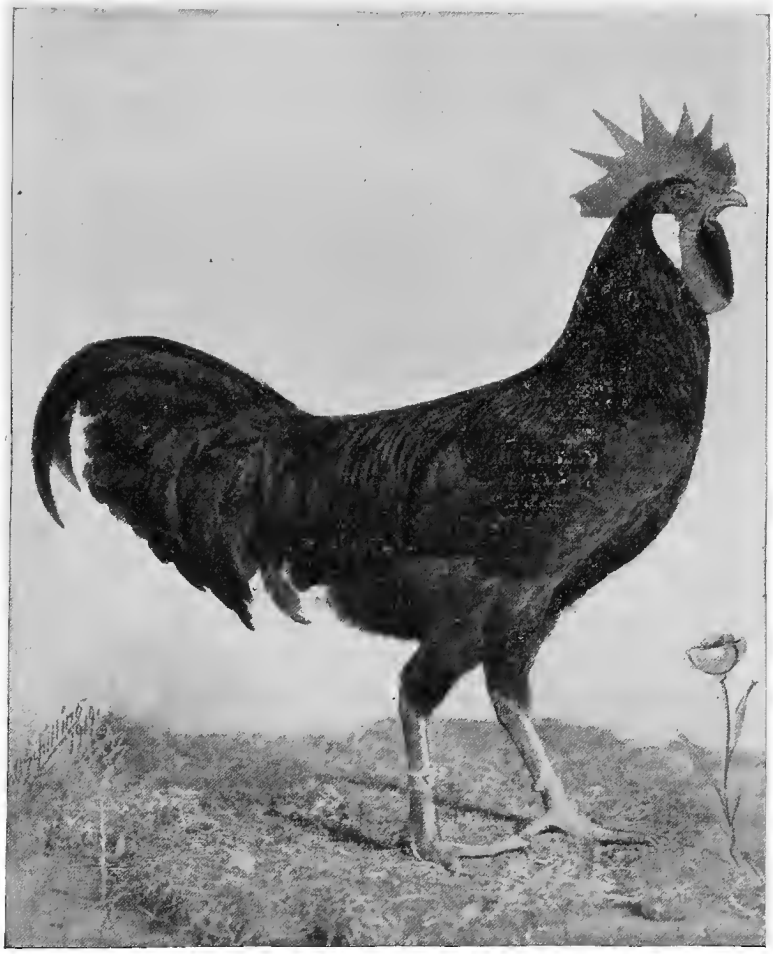
What a big difference there is between the two enumerations! I do not mean by this that the poultry business is something that is dangerous to touch; that it is beyond the ability of the average man or that it is not a sound business venture. What I do mean is that a lot of men who are looking for "easy jobs" (natural loafers); a lot of men who have been failures at everything else; a lot of men who have no real love for poultry, and a lot of men who do not know what they want to do or where they want to do it, embark in the poultry business as best suited to their particular needs. Let us recall that the poultry business is governed by just the same rules as any other business. It takes work, some capital, some brains, some interest in the thing itself—and a lot of patience to succeed. It is no life for a "slacker" nor for one who has no love for living things. There is no magic that makes the poultry business one in which a poor business man can make a fortune. It is a sound, healthy, necessary business by means of which a man can earn a comfortable living for himself and his family—provided he has any ability and is willing to work.

Just as in any other calling there will only be a few who will ever get to the very top and these men are particularly endowed by nature with wonderful ability along this particular line.

These same men if put into any other business might easily make failures. We want the assistant to get to the top if he can and we hope that he will be able to give us "cards and spades" in a few years.

What worried the assistant just at this time was the problem of mating up his pens. He felt that he had not had enough experience in the business to do this alone and he had figured out that perhaps the most important thing in his whole year was this question of how to put together his birds to obtain the best results.

We quite agreed with him that now was the time when his ability as a breeder was put to the test. We told him that the old notion of mating up the birds very hurriedly and then raising all the chicks possible in the hope of securing a few good choice specimens was exploded. This was too great a waste of food and labor and the few good chicks thus obtained were not to be relied on as breeders, for they were sports which might, or might not, breed on. We told him that the first requisite in the art of mating chickens was the attitude of mind. We pointed out that the man doing this difficult work must treat each bird as a puppet in a game; each specimen was like a pawn on the chess board—merely an instrument used to secure a certain result—to accomplish a certain end. There must be no particular likes or dislikes but each bird must be looked at like any other—with a cold eye—and merely to discover whether it could be used at all or must be thrown into "the discard." The eye should be looking for defects—not for points of merit—which almost any one could see. The second requisite, we told him, was to proceed on the principle of "curing" the defects in one bird by mating it to the birds that did not have these defects—where one specimen was weak the other should be strong. We called it the "harmonizing" method and we explained that it applied most strongly to the shape but also in a large degree to the color.



Courtesy of Charles G. Pape

We also told him that most of the fancy or "showy" points came from the male while size and type were contributed largely by the female. A male of poor color should never be used under any circumstances but females of indifferent color when mated to a sound male usually produced chicks pure in color.

We had to explain in this connection that color breeding was a distinct problem in itself and depended greatly on actual experience and the particular line of blood that was being used.

It was also, we thought, necessary to point out to the assistant that the Standard of Perfection required the double mating system to produce both good males and females; that is, that the same pen would not give us equally good results in cockerels and pullets—one mating must be made with the view of getting a majority of show males and another of securing more exhibition females. We believed that this was necessary even where the variety was of one solid color, but it applied with the greatest force where parti-colored fowls must be produced. We must have our cockerel mating and our pullet mating; the females from the cockerel mating would not be good show pullets but were absolutely necessary to use in subsequent cockerel matings while just the reverse would be the result with the pullet matings.

We told him that the big upstanding males would generally be the best pullet breeders while the smaller, more typical males would make the best cockerel breeders; but he must be careful not to use under-sized birds for any purpose, nor birds with any standard disqualifications or serious natural defects.

The third principle, we said, to bear in mind, was the health of the birds. He must not be led into using any bird that did not possess lots of vitality or one that was not perfectly healthy under any circumstances, no matter how much of a prize winner it was or how much it appealed to him from the standpoint of good looks. There was nothing to be gained by putting such birds into a breeding pen for their chicks could not be depended upon to grow up strong and healthy. Such birds should be kept over for another year or at least until they showed that they had fully regained their usual lusty power.

We also said that it was better to avoid the use of pullets as breeders as far as possible and certainly in the early part of the season. Their eggs would generally prove infertile as they were afraid of a male and would permit his attentions only when they had to; and in addition their eggs would not hatch such strong chicks owing to the fact that the pullets have not reached maturity. Late in the season these pullets might make excellent breeders, especially if they had laid out their first two clutches of eggs and, therefore, when these eggs were coming of normal size.

The next principle we laid down was that trapnests should be used and accurate records kept, not only of how many eggs were laid by the pen but also as to which hens laid those eggs and that each hen must be plainly marked with a sealed band.

We told the assistant that he must have a substantial book in which he must record the number of the leg band on each hen; that the eggs from each hen must be marked with her number, with the date when laid, and with the number of her pen. We warned him that there would be only a few hens in each pen that would prove to be good

layers and good breeders and that he must find out which those hens were. As soon as this was ascertained it would be easy to discard the poor breeders but that otherwise he would be groping in the dark and would not really know much about his flock.

To each pen when mated he must assign a toe-punch so as to identify the chicks and this must also be done with each hen whose eggs we wished to set separately. And this warning led us to consider another point in the art of mating—probably the most important of all—namely the adoption of a good system of line-breeding.

We were most emphatic about this. It was all very well to have good birds and to mate them up well and to see them healthy and strong and to have the eggs from each one identified and to mark their chicks with the selected mark, but what would all this amount to if he had no great rule or system by which he could continue to breed them with any hope of preserving their good points or eliminating the bad ones?

It was absolutely imperative not only that he should know how each bird was bred—that is both the sire and the dam—but that he must also adopt a scheme of breeding so as to be able to use this blood for generation after generation without the purchase of any new blood—and continue to progress. A system of line-breeding must be resorted to and maintained with the strictest care and attention if he would hope for continued success.

The excellent results which had been attained for many years—starting long before the assistant was born—surely proved that line-breeding was the only sure way to get results—and hold them and we assumed that he had no other thought in mind but to start his line-breeding operations

now. We told him that we believed that the reason why a number of men had failed after they had once had a good start was because they had neglected to continue this line-breeding or had not marked their chicks so that they did not know what they were doing. We were at once re-assured when the assistant told us that he had never had any other thought in mind and that he was prepared to under-take the task and to go through the detail of trapping his hens, marking the eggs and punching the chicks. He said he knew it was the only way and that he had read much on the subject and already had some birds picked out in his mind which he thought would be fit to start with. This pleased me greatly and I again gave the boy credit in my mental estimate of him. There was still one more point that I wanted to make clear to him before we actually started into the pens to begin our mating operations and that was to breed from just as few birds as possible. I ex-pressed the belief that he did not want to look after any more chicks than he had to. I assumed that he did not want to feed any greater number of adult fowls than was neces-sary and I assured him that there was nothing to be gained by trying to use a bird that did not please the eye, unless that bird was a proven breeder. With a smaller number of birds in each breeding pen there would be fewer birds to keep track of and less confusion would be likely to occur during our first year at this business which was already full of details. I did explain to him, however, that this year—the first—it would be necessary to use more birds than if we were in a position where we knew how any of them would breed—we had no proven breeders and must take a few more chances than would ordinarily be the case. Once we are fairly started in this breeding business, however,

the rule must be—how many show birds can we raise from each hen in the pens—not how many birds can we raise to get a few show birds. There are not many birds that when properly examined will anywhere near come up to our ideals of what they should be—and why should we use any others?

This has been a pretty long talk between us, anyway, and we felt that we had given the assistant about enough to think about until the next morning so we took up our candle and bade him good night.

CHAPTER XVI

LINE-BREEDING A NECESSITY

The mating up process has been a big proposition and we have nearly "cracked" under the strain. It looks to us as if the assistant had lost ten pounds. He has gone at the thing heart and soul and not only has given up every daylight hour to the task but we believe that he has dreamed of nothing else. We have heard more talk of bad ear lobes, high tails, poor breasts, slipped wings, off-colored shanks, crooked toes, light eyes, etc., than we ever thought could possibly be crowded into ten days. If the poor birds could only have realized how they had been picked to pieces we think they would have refused to lay for the rest of the year.

But, tired as we are personally, we cannot but admire and approve the zeal of our young assistant. To say that his heart was in his work is putting it mildly—he was all work and all thought and all eyes during the entire time that we were engaged in the difficult job. This earnestness, we believe, is bound to win in the long run; he was determined to leave no stone unturned—to see everything and to learn everything if he could. The man who takes his mating-up lightly, who thinks that it is not an art, but merely gives what time he can to the operation, does not have his whole heart in his business and will not succeed. The very best of breeders make—and are constantly making—bad errors and a thousand years from this time there will be much to learn.

The assistant has all the qualities necessary for a good breeder. He is first, not afraid of work; then he is willing

to learn; is careful, has a good eye for defects and has the model of the perfect bird in his mind at all times. These are the necessary attributes that the real poultryman must have and we are delighted to see that our pupil has been so well endowed by nature.

After the actual mating has been done we are in possession of a complete description of each bird, how it was bred (if we know) and the number of the leg band for every specimen. All this is written down in our breeding book.

Then we have given to each pen and to each individual that we intend to trapnest a toe-punch by which the chicks may be identified in the fall. The toe-marks are written down in the breed book and then two copies are made—one to be kept in the office desk and the other to be put in the safe so that we may, by no chance, fail to be able to know the exact breeding of our birds when we go through this same process next spring. The punching of the toes of chicks is something that is not done enough in this country. It is the only sure means of identification and is essential to any kind of advancement in breeding. Moreover it adds much interest and eliminates the use of all birds—both male and female—that do not prove good breeders.

It is most instructive to put together in separate yards the chicks from each mating and it is then usually very easy to see where the worst mistakes have been made. Remember, it is not always the best looking birds that prove the best breeders, nor is all the good work done by the male. The female has a lot to do with the ultimate result and we should always be able to say which are the best breeding hens in our yards. Unless a system of line-breeding has been used for a number of years the chicks from one particular pen—

or from one single hen—will not necessarily look very much alike either in size or outline. Some will be small and some big; some good show birds and others fit only for the pot.

If the opponents of line-breeding would follow this plan of separating the chicks in the fall—each lot according to the pen it came from—we believe that it would absolutely convince them that in out-crossing there was no uniformity and but a small percentage of show birds. It is the greatest argument in favor of line-breeding that there is, for almost any man will be convinced when he sees with his own eyes the actual results obtained. On the other hand the chicks from the line-bred flock will look alike; they will have a strong family resemblance and, if the parents were good, the offspring will be good as a rule and not as an exception; some will be quite a bit better than either parent and yet will not be of a different type.

Great care must be exercised to see that the feet of the chicks are correctly marked. Confusion of the worst sort will follow if such care is not taken. On some farms it is a rule that where a chick has been wrongly marked it must be killed at once, the idea being that this chick might grow up to be one which was good enough to use in the breeding pen and that its real breeding might be forgotten and, therefore, its use might upset a whole season's calculations. We think this a good rule and have practiced it ourselves for many years.

The common practice, where the fancier wishes to mark each chick, is to set only eggs from one pen or from a particular hen separately, each setting hen bringing off only chicks from such pen or hen. There is no chance for confusion if this is done. Where marking is practiced and incubators are used the pedigree tray is used just as the eggs

Courtesy of Sunbrier Farm

are about to hatch. This is a tray divided by wire into different compartments, the particular eggs from each hen being placed in separate sections of the tray.

Another incubator method is to put the separate pen eggs in cheese cloth bags which are not to be untied until all the

chicks are out. Man is an ingenious animal, anyhow, and there are always means to carry out an end if care and patience are observed.

But before the chicks can be marked the eggs from which they are to come must be correctly marked and carefully kept sorted by themselves. This means that trapnests must be used and that there must be no guessing or mistake about the work.

Any of the standard trapnests are good or any box or device may be used so long as the hen will use it and be confined securely until the attendant lets her out. If a hen gets into the nest and gets out without notice there should be no guessing that the eggs come "probably" from her—all such eggs must be marked only from the pen she is in and no individual number should appear on the shell. Guessing may be correct but often is not and certainty is far better. Hens very soon learn to use trapnests and seem to like them—probably because most of them are somewhat dark and because other hens cannot disturb her.

The task of going through the houses is not a great one, the only difficulty being that some hens persist in laying on the floor or in some corner of the scratching shed. These must be caught and gently placed in the trapnest; it is not often that this has to be done more than twice, for the hen will soon learn that this is the place she is expected to use and will act accordingly.

An egg sheet should be kept in each pen. This will give the number of the pen, the month, a line for each numbered hen and an extra line for the eggs laid outside of the traps. This will serve not only as a means of ascertaining the total number of eggs laid during the month by all the birds but

will also show which are the good layers—and also the poor ones.

It will also show quite an important thing, namely, what hens are not laying at all. The writer remembers a particular case where he was anxious to get an early setting of eggs from a certain hen in one of his pens. This hen did not go into the trapnest and he spent many hours trying to catch her in the act of laying outside without result. At last he taught her the use of the trap. She would go on the nest regularly—but never laid a single egg. Finally an examination of her carcass revealed the fact that she had an internal cist into which she was laying regularly but from which no eggs could emerge. And all this time she looked as healthy and bright as could be. Truly the trapnest is a great educator and without it the breeding of fancy poultry would be reduced to the system of mating in pairs only—a system too expensive and too full of labor to be really useful. Of course if one cannot spare the time for trapnesting the eggs can at least be marked from each pen.

Progress can be made in this manner but we get the results from the male only and do not know what each hen is doing as a breeder—and what is the use of breeding from hens that either do not "nick" with that particular male or are not good breeders with any male. The sooner they are made into soup the better. It is the purpose of the assistant to use hens almost entirely to hatch his chicks from the best pens, although the utility eggs and some from the poorer pens will be put into incubators. Such being the case we think he should have a short talk on the proper method of setting and caring for the setting hen.

We tell him that he should plan to set his hens in some building which is not too near the noises of the poultry yard

and yet not too far from the paths of work. This building should be clean and heavily sprayed and should have good ventilation.

The boxes used for nests should not be very large—just about large enough for a fair sized hen so that it is hard for her to turn around within the narrowest dimension. A cover the exact size of the nest box should be provided—that is a cover as long and as wide and as deep.

Into the bottom of each nest box should be first put about two inches of sand or dirt—preferably a sod. The nest should then be carefully built on this, straw being used for most of it with fine hay for the upper part and for the bowl where the eggs are to rest. Some china eggs should be put in and a dusting of louse powder applied, not only to the hen but to the nest.

Hens should be set at night. They should be handled gently and placed on the china eggs; the cover is then put on and they are left until the next afternoon. The following day after the first setting the hen should be gently lifted off the eggs taking her under the wings and she should be made to eat and exercise.

As soon as she has returned to the nest the cover should be replaced and she should be made to set facing the front and her eggs arranged under her by the attendant. All this will accustom the hen to being handled and if she is wild or unwilling to be taken off or put on the nest she should not be used. When the operator is sure that the hen will set the proper eggs should be placed under her and the process of taking her off the nest for food and exercise should be gone over each day until the twentieth day when she may be allowed to remain on the nest until the chicks are all hatched and dry. This method takes time but is the best in the end.

There is no fighting, no breaking of eggs and no disturbance of the hen in any way. She is treated like a machine and is always under the operator's control.

Whole corn, coarse grit and clean water should always be kept in the setting hen house and it should be cleaned and sprayed at least once a week. The hen should be powdered at least twice during the hatching period and when she is through her nest should be burned and the box sprayed. The writer used this method in 1913 on 144 hens and secured an average of eight chicks—which he considers good, for it includes all hens that "quit" for various causes and all settings where the eggs proved unfertile.

We were just starting to talk about setting eggs in incubators when we noticed that the assistant could no longer keep his eyes open—he was completely overcome with sleep—so we hustled him off to bed with a cheery word of praise for his good work of the day.

CHAPTER XVII

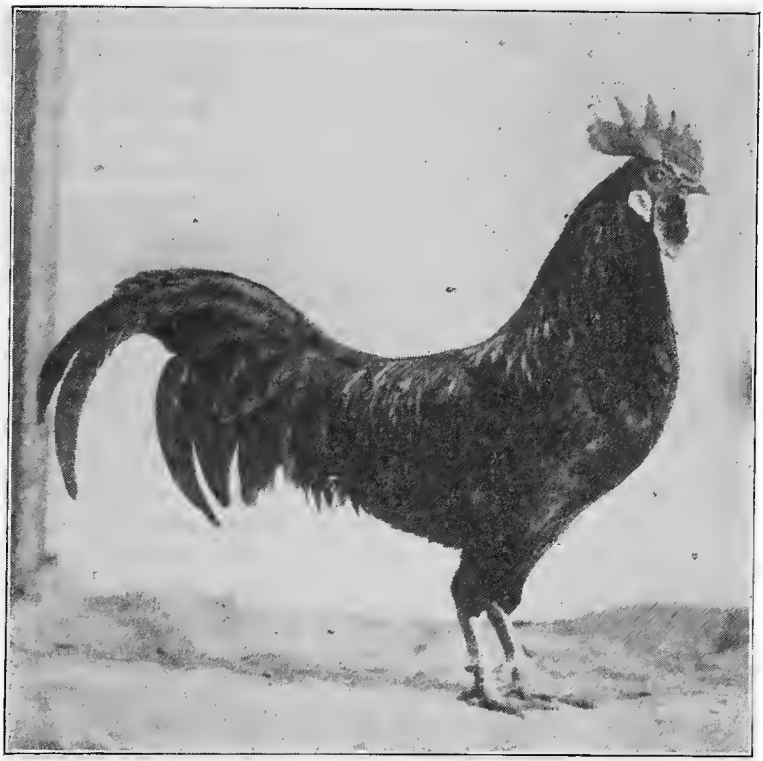
SELECTING EGGS FOR HATCHING

The assistant and the writer were just going down into the incubator cellar when we heard a voice cry out: "Say, want any 'sittin' hens?" As these same hens were just what we did want we both turned on the instant and saw a buggy of the vintage of 1870 hitched to a horse of about the same brand and occupied by a man who fitted the outfit to perfection. In the back of the buggy were a couple of bags and we could see by the occasional motions that occurred within them that the aforementioned hens were confined therein. We got into conversation with the driver and found him an interesting character. He did not believe in the "chicken business", he said, but was devoting his time to bugs, hence his offer of the hens. Finally we bought a half dozen of the hens for less than he could have gotten for them in the market and he drove away well pleased that he had made a sale. An examination of the hens revealed the fact that they had bad "scaly legs" and were infested with lice, but there was nothing unusual about this for we always found farmers' hens in about this condition. The purchase of the hens fitted in very well with our plans for the day for we were about to instruct the assistant in some of the elementary principles of incubation—both natural and artificial. After treating the legs of the hens and giving them a good dose of louse powder we put them on some china eggs and proceeded with our pre-arranged plans for the day.

The assistant had never run an incubator nor taken care of a setting hen and it was our purpose to give him instructions in both of these fundamental "arts."

The new incubator cellar was three-fourths under ground, built of concrete blocks and having the show and conditioning room over it with a storage attic over that so that the temperature in the cellar was very uniform. It was provided with foul air vents opening near the floor and it had a few small windows on both the north and south sides. In the center of the floor the concrete had been left out for a strip about three feet wide for the entire length of the room. This open space had been filled with sand and this was kept moist at all times when incubation was in progress, thus insuring an adequate amount of moisture in the cellar, which moisture could be controlled at will. The incubators had been unpacked and put together according to instructions but they had been left about the cellar in various positions without regard to convenience or order. Our first work was to assemble the lot in the best formation to insure ease and convenience of operation. There were two kinds of machines—the moisture machines and those run without any moisture inside of their frames. There were "rights" and "lefts" in each size, that is machines with the lamps on the right or left sides or ends. We first placed the incubators in pairs, rights and lefts together, so as to save room, and we next saw that each machine was standing level so as to insure an even distribution of heat within the egg chamber. We saw to it that the lamp brackets were put on exactly right and that each lamp fitted snugly and properly under each flue so as to avoid any danger of smoking or of a rising flame after the wick had been turned to the proper height. The bases of the lamps were then filled with kero-

sene and the rough edges of the wicks burned off and smoothed over. We lighted the lamps and turned them low. In the moisture machines the sand trays were filled



Courtesy of George L. Russell

with sand that had been moistened with warm water and in the non-moisture machines the bottom ventilators had been closed almost entirely. We had made sure of our ther-

mometers by securing a tested and guaranteed tube for each machine and an extra one to be watched in comparison. The screws on the regulator arms had been unscrewed so as to allow lots of room for the expansion of the thermostat below and to permit the cap to fit down closely and evenly over the top of the lamp flue. We had a little trouble in some cases with this cap and had to take several off and straighten them so that they would fit down snugly all around. All this made things look as if we were fairly started and as there was nothing else we could do until the machines had heated up to the proper temperature we went off to the setting hen house for more lessons in the art of getting started. This house was originally an old shed open to the south and with an earth floor and no windows. We had altered it over by closing up the front and putting several muslin screens in both the south and north sides and one in each end. A concrete floor was laid and this was covered with about two inches of sand. Several boxes two by three feet and filled with sifted ashes had been placed against the south side and a number of bales of tobacco stems were hanging from the rafters. Such a house as this is quiet, not too light and both sanitary and rat proof; it can easily be ventilated in hot weather and is not expensive. The nest boxes were our own design and had filled the bill in many a season past. The nest itself was built in a frame, without top or bottom and about fourteen inches long by twelve inches wide. In the bottom was placed a spade full of earth or sand; on this was made a nest of tobacco stems and finished off with a final layer of good soft hay. This nest was shaped and pressed down so that it was firm and even all around and was slightly concave so that the eggs would lie in proper shape under the hen. For

each nest there was a cover of the same dimensions as the nest with a top but no bottom and with several one-inch auger holes bored in the sides. This cover fitted exactly over the nest, made it dark and prevented the hen from turning around or getting off the nest; a weight or stone was placed on top thus confining the hen absolutely. A row of these nests looked like a lot of bee hives and was about as different as anything that could be imagined. We explained to the assistant that each hen must be treated like a machine—she must be forced to do her work as we wanted her—not as she would like. She must simply sit quiet on her eggs in the dark and not be subjected to the annoyance or danger of being disturbed or perhaps being driven off her nest by either any other hen or even a stray cat or other member of the "varmint" tribe. She should be placed on the nest with her head facing the attendant, her eggs carefully arranged under her and she must be made to get off daily for food and exercise. This method, as we had explained before, meant more work but also many more chicks. We told the assistant that most farmers or their wives, set hens in barrels or boxes in a room together, put some water and feed in the house and leave them to their own devices. When one enters such a place he usually finds one or more hens practically out of commission from fighting; broken eggs on the floor; eggs broken in the nests and smeared over the other eggs thus sealing them over and preventing the chick inside from breathing and a hundred and one other troubles all of which can be avoided by the method which we explained to him. By our plan each hen is let off the nest separately. She eats her grit, water and whole corn, takes a short dust in the dust box and is then placed back and covered up. There is no fuss

or trouble and practically every fertile egg will hatch. Where it is at all possible eggs from only one hen should be set together. This makes the marking of the chicks easy and sure. A card giving the number of the hen, number of eggs set; kind of eggs, that is the band number of the hen that laid them; date when set and day when due should be securely nailed over each nest and the date pasted in the setting hen book. When the hatch is over the nest material should be taken out and burned and the box and cover thoroughly sprayed before they are used again. By these methods we secure "louseless" chicks from contented hens; we knew when they should hatch, what they are expected to hatch and we can always tell why they do not hatch. Good hens which are quiet and careful and which bring off good hatches should be kept over from season to season as they are fit.

But by this time we had better get back to the incubator cellar for further instruction. Most of the machines are up to 103 degrees and some over that so that regulation must be made. We screw down the screws on the thermostat rods so that the caps over the lamp flues are about a quarter of an inch above the opening at 102½ degrees and see that the machines maintain this temperature for at least three hours—when we can feel safe that they will keep this heat with regularity. We fill the trays with eggs and demonstrate the various methods of turning them. These are of two kinds. The first is by placing an empty tray over the full one and with a swinging motion of the arms, to turn the two over so that the eggs are made to reverse their position—the bottom side will then be the top side. This is to make sure that all sides of the eggs get the same temperature as they lie in the egg chamber. The other method of

turning is accomplishd by taking out of the center of each tray a fair number of eggs and then to turn or push the other eggs about and around so that we can feel pretty sure that each egg has not only been turned to some extent but has also changed its location in the tray. The first eggs taken out are then placed around the outside of the other

Courtesy of Grove Hill Poultry Yards

eggs. This, we explain, is more like the method used by old mother hen and we personally prefer it. We then caution the assistant about cooling his eggs. We tell him that most people do not allow the eggs enough time to cool and to take fresh air before they are placed back into the machine. We remind him that a hen who steals her nest is apt to be off for quite a while and yet she generally hatches every egg and we further point out the cases where the operator has forgotten to put his eggs back perhaps for

all night or all day and yet secures an excellent hatch. Heat, and not cold, we tell him, is what he should avoid. Let our machines run up to a high temperature for only a few hours and our hatch is "done"—the eggs are cooked to a turn and no amount of care thereafter will hatch a single one. Keep the machine about 103 degrees and the eggs will do the rest. We also point out to him the necessity of letting the machine alone once the hatch has started to come off.

Don't open the door to see how many chicks you have for you probably won't have many more thereafter. Keep the moisture in there until you feel that every chick that can hatch has gotten out of the shell and is well dried off. There is absolutely nothing you can do at this time to help the hatch but much you may do to harm it. Go away about your other business and let the incubator have a chance.

Select only good-sized, properly formed eggs for hatching. Don't expect a mal-formed egg to hatch either under a hen or in an incubator. If you do not have enough good eggs when you want to set the machine, wait until you have. Follow the instructions sent with your machine to the letter. Don't think that you know more than the makers; they have tried more experiments than you ever thought of and know just what they are talking about. Keep the atmosphere of the incubator cellar moist and fresh; fill and trim your lamps in the morning when there is light to see what you are doing; turn your eggs for eighteen days at the same hour, morning and evening, and test out and sell to the baker all the clear eggs at the end of the first week. Do not expect that even every fertile egg will hatch; be content with a good, fair hatch of healthy chicks and try to better this the next time. Artificial incubation is still

in its infancy and all hens do not hatch every egg. Regularity about the work of taking care of setting hens and of incubators is very important. A man gets into fixed habits in this way and is very much less apt to forget to fill his lamps or turn his eggs. But remember that we are all human and that sometimes we both forget and also make mistakes. Some seasons eggs hatch wonderfully while in others it is difficult to get even a decent hatch. It will generally be found that in the good years the chicks do not live as well as in the lean years. If this were not so and poultry raising were such a science as to secure the best possible results every year, the world would be over-run with the feathered tribe and there would be no money in the business.

We think that our assistant is fully able now to paddle his own canoe. We wish him the best success in the world and we tell him that if he ever gets into real trouble to call on us and we will respond with all our heart.

We tell him that he must stand on his own legs from this time on in the usual operations of his plant for we are going home tomorrow. We are indeed sorry to part with this fine fellow but we know it is for his own good and, so with a hearty handshake, we leave him, looking, we must confess, a little crestfallen. But we know he has the grit and the power of work to push himself to the front where we hope to see him before long.