



POULTRY AND PROFIT

WILLIAM W. BROOMHEAD

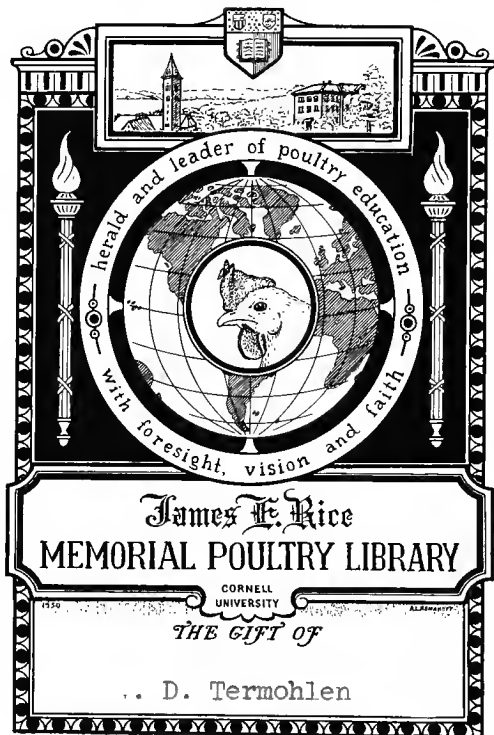
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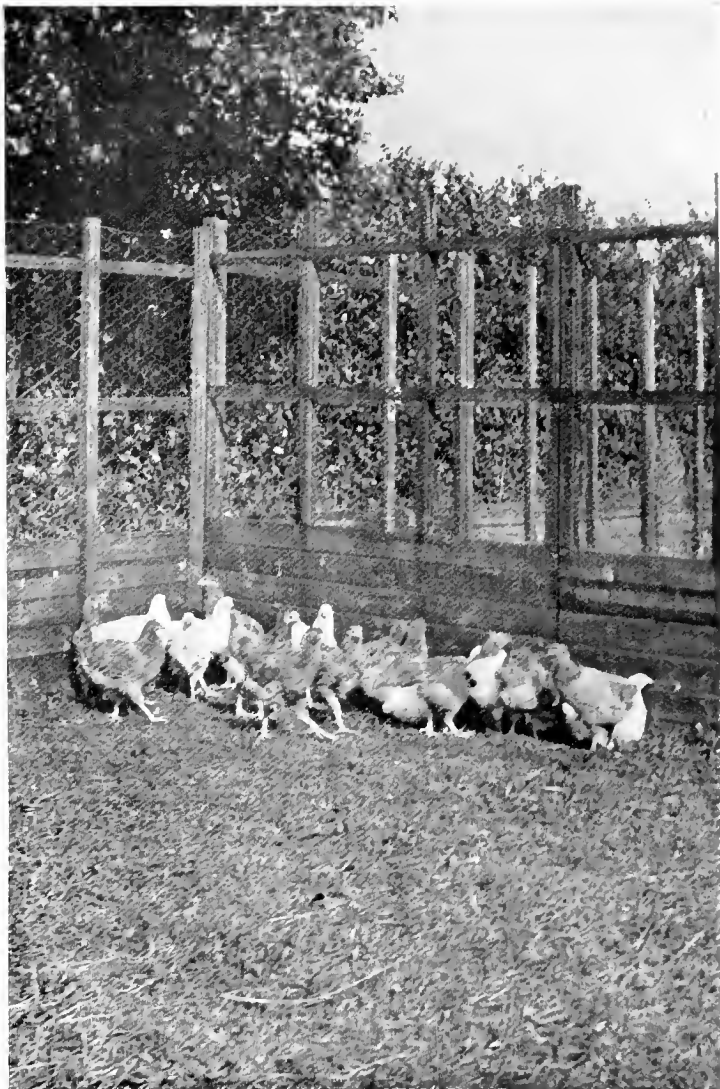
POULTRY AND PROFIT



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SOME PROMISING CHICKENS (BUFF ORPINGTON AND WHITE WYANDOTTE) IN A WELL-SHADED RUN

POULTRY AND PROFIT

BY
W. Hill
WILLIAM W. BROOMHEAD

Editor of the "Poultry Club Standards," Vice-President
Poultry Club, etc. etc.

WITH EIGHT FULL-PAGE PLATES

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INTRODUCTION

“PROFIT from poultry? Impossible!” It is quite a common expression in these days. There *are* people who firmly believe it, and they will tell the inquirer that “cocks and hens are really not worth troubling after.” The object of this handbook is to disprove that statement, to show how the keeping of poultry, and fowls in particular, can be turned to good account. There *is* a profitable side to poultry-keeping—it is a matter of paying attention to details, nothing more. What follows has been narrated solely in the interests of the “home” poultry-keeper, the “small” man, as he is so often called; and although there may be in it some hint or other that will be of service to the fully qualified expert, it does not pretend to teach those who are seeking a fortune from poultry “how to do it.”

WILLIAM W. BROOMHEAD.

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POULTRY AND PROFIT

CHAPTER I

WHY WE SHOULD KEEP FOWLS

“GOOD evening, Mr. Tapley. I’ve come around at last for that chat on poultry. You’ve told me so often that I ought to keep poultry, I am beginning to think there must be something in it. And so, like the children, I am anxious to know the ‘whys and wherefores.’”

We had not long taken up our abode in the country; and having a notion that the small piece of land attached to our cottage could be turned to good account, I determined to get all the information there was to be obtained ere launching out in this, to me, new direction. I had taken the move into the “wilds” with the chief idea of seeing if I could add something to my income, because, I do not mind admitting it, I was not overburdened with the good things of this life. As a matter of fact, we were living practically on the outskirts of a town; but since green fields were within sight, and the air was fresh, we were pleased to call it the country. I had selected Mr. Tapley as my “guide, philosopher, and friend” in the matter, because he had the best garden in the district and he kept some of the choicest fowls I had ever seen. Moreover, I had known him long enough to find out that he was making both the garden and the birds pay.

“Pleased to see you, my boy. Be seated, and fill your pipe. We will then begin our chat. I can always talk better over a smoke. You want to know the ‘whys

and wherefores.' Very good. Have you ever read the trade and navigation returns?"

Having assured him that my inclination for light literature did not lie in that direction, he remarked, with a kindly smile: "I suppose they are not in your line. You are a bit young yet for such dry reading. Still, if you would care to glance through some I have kept pasted up, you can take the book home and look it over at your leisure. You will find there a very good reason why all of us who can find room for a few fowls should do so." Thinking it would be an offence to refuse, I thanked him and promised to study them; yet I really get more than enough of figures at the office to satisfy me.

"You may not be aware, perhaps," continued Mr. Tapley, "that until war broke out, we—and by that I mean Great Britain—were very large importers of eggs and poultry. You can see to what extent from a glance at the returns. Figures are wearisome things, no doubt; but since it is often only by employing them that lasting impressions are made, I intend to weary you for a very brief space by placing a few before you." Maybe I groaned, but it went unheeded—my friend was keen on enlightening me. "Let us for a few minutes consider one or two items from the latest returns available before man settled down to war conditions," he ran on. "They record many things, but those of special interest to poultry-keepers are the ones dealing with our special industry. In this direction, then, it is shown that in 1914, from January 1 to December 31, the total number of eggs imported by Great Britain was no less than 17,905,285 great hundreds. And a great hundred, let me add, is ten dozen, just one hundred and twenty. You are good at figures, my boy, so you may be able to work out that sum! The total value for that item in hard cash was £8,653,004. But that is one part only. To it must be added £755,263 for imports of dead poultry during the same year; hence there is a grand total of £9,408,267 paid out for poultry produce alone." Mr. Tapley paused.

Readers will believe me when I say that these figures somewhat "staggered" me. I had no notion that the poultry industry of this "tight little island" was such an enormous one; and I said so. It delighted Mr. Tapley—he had driven his first point home.

"Yes, the sum is enormous. It shows the millions that home consumers were practically giving away to the foreigner, and I have no doubt that our Continental neighbours and others wondered at our shortsightedness in buying from them what we might raise ourselves. In the meantime, throughout the late autumn and winter of 1918, as you no doubt experienced, English new-laid eggs were by no means plentiful; at times they were almost unprocurable at sixpence each. Indeed, in this very district they were once so scarce as to be sold, retail, at 12s. 6d. the score."

This was no news to me since I had paid eightpence each for new-laid eggs at the time. It would certainly appear from this that the poultry-yard is neglected in England—in the autumn and winter seasons at least; and I interrupted with a remark to that effect.

"That is so," assented Mr. Tapley, "and it is a fact that in many cases where poultry are kept, no system is adopted either of breeding for killing or breeding for egg-production—the birds simply run wild, and are allowed to breed and lay in an indiscriminate manner. It is to help to remedy this state of affairs that I have suggested these chats with you; and I hope you will mark well and learn, and put your knowledge to a practical test. What we want in this country is better poultry and more of it. I should like to see scattered through the length and breadth of this land colonies of poultry, the profitable domestic fowl, not so much for exhibition as for general use. I am convinced that if more attention were given to the keeping and rearing of poultry by farmers, cottagers, 'back-yarders,' and amateurs, it would be a wise and beneficial undertaking, and good for the country at large."

No doubt about it, my friend was a great enthusiast

on the question of poultry-keeping, and I felt sure that I had not made a mistake in going to him for advice.

"But to return to those figures," he continued. "A glance at the list will show you that almost forty per cent. of the eggs imported by dealers in the United Kingdom were produced in Russia; in fact, if the truth were known, the great bulk of them came from Siberia. You are surprised? No wonder. Like many another, the name Siberia makes you shiver—'ice-bound morasses and snow-clad loneliness,' as one of the scribes put it! Well, poultry are kept in Russia. In 1914 English buyers imported from that country alone no fewer than 6,870,827 great hundreds of eggs. You look doubtful, but here are the figures. In Russia, aviculture had advanced to such an extent prior to the war that it was a prominent branch of the agricultural industry. And yet the vast proportion of that enormous egg trade was in the hands of the peasants. You wonder how it was done? I will tell you later. The same thing occurs in most of the countries from which Great Britain drew her poultry supplies—the greater bulk of such produce is 'grown' by cottagers and by people in quite a small way. It happened before the war, and it will be as great again when the world settles to peace conditions.

"Now it stands to reason, doesn't it, that if in other countries such enormous quantities of eggs and poultry can be produced in excess of those which are required for home consumption—a certain quantity is consumed 'on the premises,' so to speak—poultry-keepers in the United Kingdom should supply the demand that exists practically at their own doors? It is well known to those who are interested in such things that Great Britain is the largest importer and the largest consumer of such commodities, and moreover she offers the highest prices. All countries strive to supply her markets, and not only with eggs and dead poultry, but with yolks and whites without shells, aye, and even with down and feathers. I tell you candidly, friend, that there is no reason whatever why the majority at least of these commodities should

not be produced within these islands, and at a profit to the producer."

Certainly it was enough to make one consider the matter in a serious light. If the annual demand is so great, there *must* be "something in it," and I at once decided to go in for poultry.

"If you care to look through some other statistics I have here, you will see that for several years now the declared average values of imported eggs have steadily increased," continued Mr. Tapley. "In 1904, for instance, these were 6s. 9d. the great hundred; in 1914 they were 9s. 8d., an advance in the ten years of 2s. 11d. the great hundred. And this has been due not only to the increased demand but to the improved methods of marketing."

At this point I felt that I had to interrupt, since it did not take me a great time to find out that, even at the higher figures, the average worked out at less than a penny an egg. I said so, and since I had heard that poultry-keeping these days does not leave any margin for profit when eggs are sold at such a rate, I asked why home producers should attempt to compete with the foreigner at those prices.

"Ah, just so," exclaimed my neighbour. "I should have explained the reason for the apparently low average. It is this; there are certain trades—I need not mention which, because it is immaterial, although they are not to be reckoned as actual consumers as far as we are concerned—that must have cheap eggs, and the prices paid for such articles—*not*, mind you, for table purposes—are certainly not remunerative, at least not to the home 'grower,' although they doubtless are to the dealer.

"It is in the direction of edible eggs that producers in this country should capture the market. Certainly, even here, the foreigner often has what may be termed the 'whip hand,' and simply because, unfortunately, there are certain classes of consumer who are ruled by price rather than by quality. With them anything that is cheap is almost sure to meet with a ready sale, even though it be,

to use a common and quite true expression, 'cheap and nasty.' I can assure you that it is a most difficult task to convince such buyers that the first cost is not the true test of cheapness, and that, for instance, a so-called 'breakfast' egg, generally imported and preserved, is not so cheap as a genuine new-laid egg at double the price—the former, if not actually bad, is certainly the reverse of what a new-laid egg should be, and contains very little, if any, nourishment. It is right here, perhaps, where the chief difficulty lies when one is going in for poultry on an extensive scale. What is the most rational method to be adopted by home producers to increase the demand for the best article among home consumers?

"Well, my boy," said Mr. Tapley as he finished his pipe, "I am afraid I have wearied you enough for one night, so I will leave the question of marketing until some other time. This I will say, however: the way to make a success of poultry-keeping, and thereby turn it to profitable account, is to begin with the determination to overcome any difficulty that may arise. It is not sufficient to keep poultry; they must be kept on business lines—in a clean state, fed on sound food, and attended to regularly, which is half the battle, and, in fact, the only road to success. All people who keep fowls cannot do so to compete in the actual markets with the produce of the foreigner. Nevertheless, if the 'flock' is restricted to half a dozen hens, and the object is the supply of new-laid eggs for one's own table, it will be more profitable than purchasing shop samples. Moreover, you can take it from me that it will give you more relish for an egg—there will be no risk of 'meeting' a stale one, a risk often run when breakfasting off the shop variety."

CHAPTER II

SUITABLE ACCOMMODATION

“You tell me that you have made up your mind to go in for poultry. I’m glad to hear it; and I can assure you that you will find it not only a very fascinating hobby, but one that gives a good return for your ‘trouble.’”

I was back at Mr. Tapley’s once more seeking information, and at his suggestion I had gone round early in the evening so as to put in a good talk. “Now a hobby is all right in its way,” said Mr. Tapley, when we had settled down once more to our pipes. “It takes one away from oneself, and if for no other reason then it’s good there are such things. But a hobby is all the better when you can make something out of it; at least, that’s my opinion, and I don’t mind admitting it. Well, that is just how it is with my poultry. I find that they get me out in the open, and they yield a very good return for outlay. And that’s how it will be with you, my boy, when you’ve got your hand in. However, that is not the topic for to-night’s ‘sitting,’ so we will get to it.

“When one has finally decided to take up the keeping of poultry, the first point to settle is that concerning the accommodation—runs and houses. When I took to fowls I did what I suppose others have done. I was ‘smitten with the fever’ by seeing some birds put under the hammer for ‘next to nothing,’ as the auctioneer said. I straightway became the owner of a pen, brought the fowls along with me in a hamper, and thought nothing about where I was going to keep them until I reached home. It was a mistake, and so to prevent your falling into a similar error I tell you to consider the accommodation before getting the stock. It is not possible, of

course, for every aspiring poultry-keeper to select the ideal situation for his birds. It might be, if he had plenty of the 'needful' and was anxious to go in for the business of poultry-farming. He could then pick and choose, or pay an expert his fee to do that part of the work for him. But poultry-farming and poultry-keeping are not one and the same. I am going to tell you about the latter. It is an adjunct, as it were; a filler-in-of-spare-time, if you like. Maybe you will drift into the thing as a business when you have had a few years' experience at the other."

At the time I thought I would. An import of over eight millions per annum struck me as a really good thing, and I was keen on getting a part of it.

"Well, in our circumstances," continued Mr. Tapley, "and we are the 'small' men, you must remember, the best must be made of existing conditions, always provided that the said conditions are not too bad to be utilised for the purpose. Poultry on the whole are very hardy creatures, and they can rough it without much apparent harm being done to them. There are, however, some places in which they cannot thrive sufficiently to yield a profit, hence such places are best avoided. It may be as well to mention that the word poultry embraces more than one class of feathered biped, and thus under that head are grouped fowls, bantams, ducks, geese, and turkeys. Sometimes guinea-fowls are included, sometimes even pea-fowl, and occasionally swans also. For our purpose, however, there is no need to deal with the last three. Guinea-fowls can be profitably kept in some parts of the country, and I once had a flock that paid well enough. But they are most disagreeable birds, even when in runs by themselves; and, moreover, their 'come back' call is apt to jar on the strongest of nerves. Pea-fowl, too, are very noisy creatures, and their scream on the approach of rain is enough to make one wish that they were kept many miles from habitations. If you want to keep the peace with your neighbours, my boy, cut those two species of poultry out of your list. Swans

have their uses, no doubt; they look pretty on the water; they live to 'a ripe old age'; they, so 'tis said, make good birds on the table when killed young. But one would scarcely keep swans for profit; hence they, like guinea-fowls and pea-fowl, can be dismissed with this brief mention. Thus our subject is fined down to four species."

"But what about bantams?" I queried. "Surely they can be considered as suitable for such a place as mine?"

"Maybe, my boy, but I don't set a great store on bantams as utility birds."

This was a surprise to me, because at the bottom of Mr. Tapley's garden and in the "horticultural" section there was a pen of these birds, and as pretty a lot as I had seen. "You keep yours, then, at a loss?" I suggested.

"Well now, you have beaten me," said my neighbour. "As a matter of fact, those bantams are not mine. No; they belong to the 'missus,' and they are her perquisites for looking after the fowls when I am away from home. They are not kept to pay; they are there for ornament." I remarked on their beauty. "Yes; they are pretty, and I don't mind telling you that they set off my bit of flower patch. Oh yes, they lay," he added, in reply to a question from me on that point. "And their eggs are all right for kiddies and those who cannot eat the large kind. But as I was saying, I do not reckon to keep them for profit; and that is what you are after now.

"However, to get back to the point at issue. It is a common enough sight to see fowls, ducks, geese, and turkeys all running together and using the same house and range, on the ordinary farm where poultry are kept. It's a mistake; and I have no doubt that it is just that which makes farmers—at least, most of them—say that 'poultry don't pay.' It gives the best results to keep each class of poultry distinct, and not to allow them to mingle with each other in their range, no matter how large that range may be. They require different treat-

ment; so if you want to know anything or everything about them, I'll tell you all I can some other time."

I hinted to Mr. Tapley that I was anxious to learn all I could of poultry, since I had an idea of some time, maybe, giving up other work and going in entirely for the business. And I got his promise to be put right on those subjects in due course.

"We will first consider fowls, since in the majority of districts they are the most popular branch of poultry-keeping, and the one that will be likely to yield the best returns. It has been stated that in England we have an excellent climate and a splendid soil for poultry. That may be so; but long experience in different parts of the country has satisfied me that there are some places where poultry cannot thrive. This applies particularly to fowls. They dread most of all cold and damp. A run that seldom or never gets the sun, and one that for ever resembles a swamp, will not do for them. Mind, I would not condemn a heavy clay soil if the drainage is very good; worms and insects abound in it, and suitable herbage can be grown there. And, granted the drainage, some breeds will give good results when kept on it. Nevertheless, it is injurious to many kinds, and consequently I would not select a heavy clay soil if I had to make a choice. A dry sandy situation has been advocated by some authorities as the ideal land for fowls, and presumably because the drainage is good. Howbeit, my experience of such land is that it can be easily surpassed; it does not produce good vegetation, particularly in summer, and animal life in such a place is never abundant. Moreover, I have it from a friend who has some Orpingtons in Surrey on a very sandy range that he has a trouble to keep the birds' legs and feet in a good condition.

"In my opinion a light clay soil on a flint bottom cannot be excelled. It is such land as this on which I am keeping my fowls; and since, as you will see, the runs are just over the crest of the hill and on its southern slope, they are especially good for the birds. The ground is sufficiently light to be fairly dry even after the heaviest

shower of rain, yet it is heavy enough to be full of worms and other animal food; and almost any kind of vegetables, besides fruit, can be grown in it."

I told Mr. Tapley that I was not living on the hill, and that as far as I could judge—by having put the spade into it when preparing it for some cabbages and other greens—my land was more of the clay than the flint nature, and fairly heavy clay at that.

"Well, my boy, that need not trouble you a great deal. I know the place, and it drains fairly well, well enough at any rate for your purpose; and you will have to put down a path or two of flints—you can pick them up here for next to nothing—so that the birds can have a dry spot on which to run when the rains make the other part a bit spongy. I know that many people who reckon to be authorities on fowls are dead set against a run that is all of a clay nature. But if they would only have good, hard paths made through them they'd soon find out their error. Why, one of the biggest poultry farmers in this country, and one of the most successful, too, makes a great point of it—actually advertises that his birds are reared on clay land and are just the hardiest stock going! So you can be certain that there's something in it, eh?"

"Well, so much for the soil. Now for the position of the run—the one is as important as the other. Many people evidently don't think so, and that's just why so many do not make their fowls pay as well as they ought to do. Shade is essential, and something is necessary to break the force of the winds from the north and the east, although at the same time the range is best exposed to the sun. The southern side of a hill, provided the slope is not too abrupt, is the place to choose. As you say"—I *did* break in here—"all keepers of poultry cannot live on a hill. It's the ideal place, mark you; but the southern side of any good barrier, such as an embankment, a thickly-set hedge, a closed fence, even a wood or a wall, if the ground is not low lying and swampy, is about equal to it. Some folk consider it a fine thing to have the fowl pens arranged under the shade of large trees. Such a

position is unquestionably a good one during a hot summer, but it is not one that I would select as a permanent run. In wet weather, except when the trees are in full leaf, I have invariably found that pens directly under trees are in a continually damp state—the surface of the ground becomes trodden by the fowls constantly using it and thus the water is prevented from draining properly.”

That put the oak tree in my bit of garden out of it, thought I! “But what about a wall, Mr. Tapley? I have a good one across the bottom of my patch.”

“A wall is all right in a way, my boy. A favourite position for the fowl run, and particularly with town-dwellers, is against a plain brick wall. This would not be so bad if a proper gully were arranged at the bottom of it to carry off any rain. But how often is that done? There is no doubt that a wall acts as a good barrier; but it also acts as a good water catcher during a storm! And if the rain happen to be driving from the direction in which the run faces, it soon swamps the ground. Then again, most kinds of bricks retain the moisture, with the result that a small or narrow run against a plain wall is generally unduly damp in a wet season. If a brick wall must act as the barrier, it will be found advisable either to run a gully in the ground, or to train ivy or bushes on it to absorb most of the moisture. The drain must be well set, and it must have a run-away out of the fowl pen; and when properly done it looks and acts well. Of course, to have the wall covered with ivy is by no means as expensive as putting down a drain, although it is quite as effective, while to have fruit trees or bushes trained against it is not only ornamental, but is likely to be profitable.”

Fowls and fruit, my neighbour declared, went well together; and he assured me that if fruit growers were only aware of it there would be much more poultry on the land than there is at present. He told me of many interesting experiments that had been carried out in this direction; but there is not space here to set them down—they would fill a volume of goodly dimensions.

“I have wandered somewhat from the subject in

hand," said Mr. Tapley, as we filled our pipes once more. "We were discussing what may be termed natural barriers to act as shade. To resume, therefore. There are others, and such as a handy man can knock up at little expense and in a short time. A sheep hurdle, one too old to be of much use to the farmer, can be purchased for a shilling or two, and laced with thatch it makes an excellent 'cover' for old and young alike. A wooden frame with a sack stretched over it, a row of pea or bean sticks, a—but there, when you recollect that fowls must have shade you will be able to rig up any sort of old thing that will do for them. Of course, out here in the country we have a better choice of such things, as indeed we have of land, than do those who dwell in towns and cities, amid 'fields of bricks and mortar.' Nevertheless, there is many 'a bit of back garden' in town that could be turned into an excellent fowl run; and there are many splendid fowls, both from a utility as well as an exhibition standpoint, reared in such places each year. One of the secrets of keeping fowls at a profit in small places is to give them a dry spot in which they can exercise in rough weather, where they will be sheltered from the wet and the wind; to keep their outside run as fresh as possible by having it 'flicked' over with a besom twice or thrice a week; and to keep in the places just as many birds as the runs will hold, no more."

"Touching on the question of numbers, Mr. Tapley, how many fowls can be kept in a run?" I queried.

"It depends," he replied, "depends on many things. For instance, the text-books tell us that, as the minimum, ten square feet should be allowed for each fowl on gravel, and just ten times that amount for fowls on grass. As a rule this is not a bad guide; but it needs qualifying in most cases. To begin with, most of the so-called gravel runs are not gravel at all. They are not grass, and that's as near as they get to the other kind. They are part of the garden, and fowls on such ground at the rate of ten square feet each will not be likely to thrive at all well. In the circumstances I would give the birds at

least 100 square feet each, that is, of course, on an open run one without a roof. If the run has a good wooden roof, then I would not allow the birds ten square feet a head, because they will do all right with less. But that means that the place is practically a scratching shed, of which more when we get to the houses. Then as to the grass plot, the 100 square feet is a very fair allowance for fowls of the light or active breeds; but for other kinds, and especially those with feathered legs and feet, it isn't anything like enough—if you want to keep the grass in decent condition. But the whole secret of keeping fowls on small grass runs is to keep the grass short and clean. There's no doubt about it, fowls do trample the grass if it is at all long, and they soon have the place like the proverbial pigsty; and that can be easily tested by giving a flock of fowls the range of a field that is down for hay. No, in small runs keep the grass short, and keep it clean by using a besom as I have mentioned. And give the birds a place to which they can retire when the weather is rough."

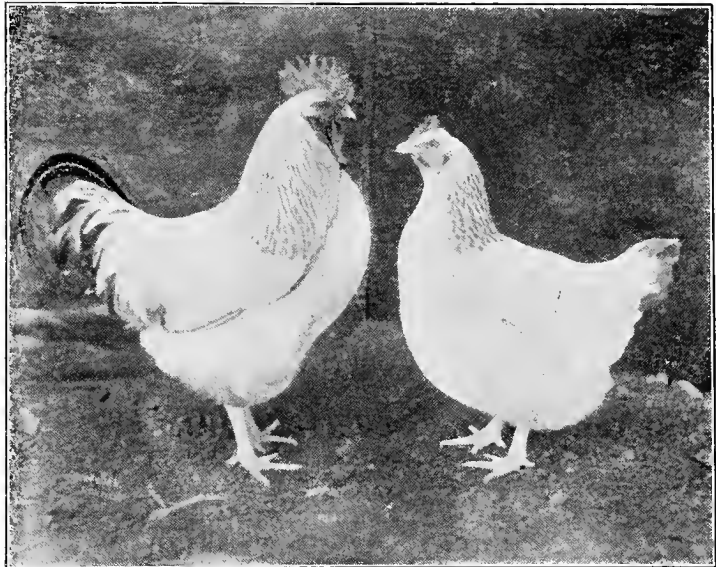
"I have seen it stated," I said, "that fowls damage the grass; and I once heard a farmer say that the poultry—they belonged to his wife—cost him quite a small fortune each year, not only by damaging the grass but by fouling the land and preventing his cattle feeding on it."

"Stuff and nonsense!" exclaimed Mr. Tapley, "stuff and nonsense! They benefit the grass. You wait until you've seen my runs. The grass is in particularly good condition. It resembles a well-kept lawn, compared with some of the grass plots I have seen, and the turf is close and fresh. That's so, and the birds have made it what it is. Some years ago this place of mine was under cultivation. They grew oats and I don't know what not on it. It was oats the last crop they took off it prior to allowing it to go to waste for building purposes. When I came to live here the field was the rankest I have seen. It had been eaten down by stray horses and others whose owners wanted them to get a cheap pick—and the people about here are great at that sort of thing! Well, it was never



A FEW COOPS IN A "BACK GARDEN" RUN

(Over 100 chickens were reared here in the one season, and the grass was greatly benefited by the birds.)



LIGHT SUSSEX

(By permission of the Sussex Poultry Club.)

put down to grass, but for ten years or more I have had my poultry on it; I cut it twice a year, and that's just why it is such a fine piece now. There's a big poultry farm in Hampshire that a score or so years ago was nothing better than rough heath land. But you should see that place now to see whether the fowls have damaged or benefited the land. You will not be able to find better grass land anywhere.

“Then as to poultry poisoning the land for cattle, there is no truth in that statement. I know that many farmers do say so and firmly believe that cattle will not graze after poultry. But I repeat, it is not so. Poultry are beneficial to the pastures for the grazing stock. That is my experience in different parts of the country. And to prove that I am not alone in this, I may tell you it is borne out by some of the greatest authorities on poultry. Speaking on the subject at a Poultry Conference many years since, one lecturer said: ‘. . . The next question to be considered is whether poultry on the farm actually interferes with the grazing of the stock. For horses it does not seem to matter how thickly the birds are run, as they specially delight in grazing just around the fowl-houses on the most poultry-tainted spot in the field. I have watched my team horses repeatedly when turned out in a summer evening walk across to a poultry-house before commencing to graze, although hungry after a day's work. With cattle and sheep I have not observed this preference shown, but where birds are running not more than fifteen to the acre the land grazes evenly, so that they evidently do not reject any on account of the poultry taint. Indeed, instinct seems to teach animals only to avoid their own excrement; for instance, partridges never spend two nights upon the same spot. Similarly, horses and cattle follow each other for choice, and each grazes the rank over-manured grass that the other avoids. So, reasoning by analogy, poultry taint, however injurious to the birds themselves, as it undoubtedly is, may be positively beneficial to the other stock on the farm.’”

“Well, well, how I do wander from the point! We

were discussing the fowl run. I think I have told you all I need do on that subject."

"But what about planning it out, Mr. Tapley?" I asked. "What of the fences and such like?"

"Yes, of course," he replied. "I get off the track so often that I'm apt to forget these things. And I'm glad you pull me up, my boy; it shows that you are interested, and you're on the right road to make a success of it. In planning out a run that has to be fenced all round make it as square as you can, that is, get it as near square as possible—it means saving a bit of material. You see, as an example, suppose you have a plot of 25 square yards to enclose. To make it dead square means 20 yards of fencing to go round it; if it's oblong, say 10 yards by $2\frac{1}{2}$ yards, it will take 25 yards. Similarly, a 500 square yard lot, running 25 yards by 20 yards, and to divide into five equal runs, is cheaper to split up into four spaces of 10 yards by 10 yards and one of 20 yards by 5 yards than five of 20 yards by 5 yards. It saves 20 yards run. These are small things, no doubt, but they 'tell' in the long run.

"As to the fencing, probably the cheapest material to use is galvanised wire netting. In some districts pheasant fencing can be had for quite a small outlay; but wire netting is generally the thing, and the two-inch mesh is about the best for the purpose. The uprights to support the netting should be stout posts placed some ten or twelve feet apart. If the ground is soft, it will answer to drive them in with a mallet. Personally, however, I prefer to dig a hole for them, a spade or so square and rather more than a foot deep. It may sound like harder work, this latter way; but have you ever tried driving in a seven or eight foot post when mounted on a pair of steps and swinging a heavy mallet? If you haven't, then follow Mr. Punch's advice to those about to marry—Don't! Take the word of an older man. I do not figure well in that position, I can assure you. It is a three-man task to be done properly—one to hold the post, another to hold the steps, and the third to strike the blow, maybe to fell the post-holder! No, do it single-handed. It makes a

better job of it. The hole can be filled in and the earth rammed hard around it. Dear me, I nearly forgot to tell you to give the bottom of the post a coat of tar for two feet up, so that the end in the earth will not rot.

“A six-foot fence is generally high enough to keep most breeds of fowls within bounds. With some, a three- or four-foot fence will do. It depends on the breed, and on the way the birds are handled. If you have ‘flyers,’ either clip one of their wings or cover the run with string (garden) netting, or—yes, there *is* a third method of preventing fowls clearing a fence—run two strands of wire along the top of the fence, a foot from it and each other, and fitted to posts running inwards and upwards. As to making the fence, have the wire-netting stretched tightly from post to post, fixing it at the top first and catching it at the bottom with a nail prior to securing it finally to the post. Work from the top downwards, and stretch the netting as you go. Use the wire staples—if you don’t mind an occasional rap on the fingers with the hammer—or put in French (wire) nails and bend them up to clinch the netting. If two or three runs are to be made adjoining each other, it will be necessary to have a solid division at the bottom for three feet up. This is not only to prevent the birds in one run fighting with those in the next, but to keep the enclosed fowls contented with their lot. I always think it a pity to let fowls see beyond their own place; it makes them spend much of their time trying to get out, and it does not improve the appearance of the run.

“One more little item and we will have finished with the runs. If the pen is a single one and you do not like to go to the expense of putting up a solid division at the bottom, take care that the netting is well pegged down, the pegs being as close as a foot to each other. This is a simple matter. Get some 1-in. thick wood, point one end, and drive a wire nail in about an inch from the other end with half an inch or so to act as a hook; put tar on the pointed end, place the wood through the bottom run of

the netting, and drive the post home until the nail is at least level with the ground.

"Did I tell you of what to make the divisions? No? Well, almost anything will do. Mine are of galvanised iron sheeting, for the simple reason that I was able, many years ago, to pick up a lot at a cheaper rate than wood. Half-inch deal boards will do, and given a coat of some preservative (gas tar and paraffin-oil make a good one), it will last for ages. Stout painted canvas that is sold for pheasant sheltering is also good for the purpose."

The evening was "wearing on," but Mr. Tapley was not tired of his talk. Neither was I. "And now for the houses," said he. "There are so many, and all good ones, my boy, that I scarcely know which style to recommend you to adopt. If you come around when there's light enough to see them, I'll show you mine. They are really of all sorts and sizes! I'm a bit of a faddist on the house question, and I think I can show you a few different patterns. However, the most important points to get in a poultry-house are a solid roof well overlapping in front, a dry floor, and plenty of light and fresh air. I am great on those two latter points. Some so-called authorities—good theorists, no doubt, but hardly much use when it comes to the practical part—say that hens will not lay in a light house—the birds want the dark in which to deposit their eggs, so that when they have done it no one can find them! It may be so with fowls in their wild state, with the fowls in the jungles of India, for instance. But the birds we get nowadays have been domesticated for so many generations that much of their original nonsense has been knocked out of them. You can take that from me as a fact, and particularly as regards their laying.

"It wasn't long ago I was out in the garden doing a bit of hammering. I do a little carpentry as a change in my spare time—to keep me out of mischief. I was making a coop, and I'd got the wood and tools all over the place, when in the middle of the job I was called in to dinner. I had noticed a pullet standing around as if I

were in her way. I must have been, because when I returned there was an egg laid in the nail-box! Pretty place to select, wasn't it? But there was the egg; and the bird was letting the neighbourhood know all about it, too. Dark for laying! Not a bit. I have got nest-boxes on one of my houses, a couple of outside affairs, as you will see. But in the others the birds have to make their nests each day. No, they don't go about and collect all the pieces of hay, straw, and such like material that may be in the district; they just hollow the nests in a corner and lay there. The first layer of the day does the work, and the others, as a rule, use the same place. You see, such nests as those cost nothing, and that means one item less in expenditure. But, there, I've got off the track once more; and as you have not pulled me up, my boy, you must be getting tired of my cackle." I assured him that I was not; but—"We'll close down for to-night," said Mr. Tapley. "And when you have knocked off to-morrow afternoon for the week come along here with the 'missus' and have a cup of tea. While the ladies are discussing domestic affairs I'll take you around the 'estate' and show you the sights. And we will get the fresh air while we are concluding this topic anent accommodation."

* * * * *

Needless to add, I went along on the Saturday afternoon, and saw how the birds were housed and the runs laid out. This was no poultry farm; it was a "back garden laid out for fowls," as Mr. Tapley called it. The runs were of grass, and the divisions were of corrugated iron sheeting with wire-netting above them. The gates were wide enough to allow a man with a wheel-barrow to go through in comfort, while a six-footer could easily pass under the top support without damaging his head.

"You see that I have wide and high gates. That's profitable." I may have been dense, but I had to admit that I could not see the connection. "No, I don't suppose you can," commented mine host. "You have never

kept poultry, which explains it. Suppose the gates were narrow and a man with a barrow wanted to go through them. He'd find that he couldn't, and maybe he would give up the attempt. But it's highly probable that he would not do so until he had made several struggles to get past the post. Result, gate damaged in some part and not likely to last so long. As to the height, there's nothing I dislike more than to be told to mind my head; it generally means that you don't take the warning, and, having found the wood harder than your head, you—well, that's why I make the gates to my runs so that I can pass through them without stooping. You will find all my gates are easily hung, free of the top and sides by half an inch or more, and a good inch from the ground. Profit again, my boy. How? Get a gate that sticks, and ninety-nine men out of a hundred will kick it open. I'm in the majority. But the kicking is not an improvement—it soon means another gate."

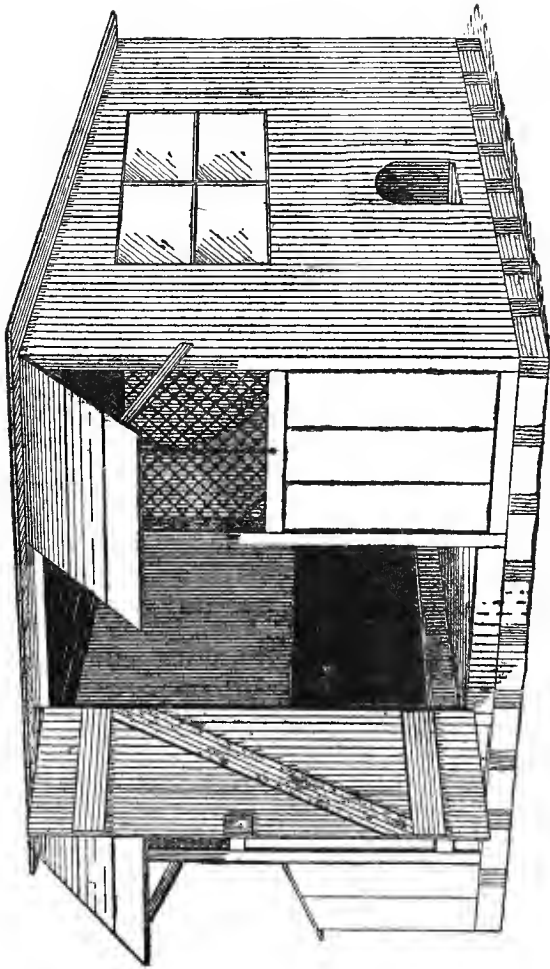
We had reached the houses. They were, indeed, of different styles, although one and all were of the open front principle. They struck me as being nice airy places for summer, but I thought they would be cold in winter. I said so to Mr. Tapley. He told me, however, that they were ideal places for fowls even during the coldest winter we have had in this country for some years past.

"I have kept my poultry in that kind of house for many years now," said my neighbour, "and I have never had cause to complain of the eggs the birds produce by being so kept. My aim here is winter layers, because I am satisfied that for small runs such as mine the winter layers pay the best return. Mind, I don't say that winter layers are the most profitable fowls to keep on every place, taking cost of food as against the prices realised for eggs. Oh, yes, I know that the 'great' authorities say there's nothing like the species of egg laid in winter for profit; but I am not quite convinced on that point. It is so, in small runs, because food costs the same all through the year. But on a farm there are times when fowls can be kept in fine laying form at no cost at all. I've seen

some out on the stubbles for close on two months at a stretch, and going strong in the egg line, too, without it costing the farmer a penny for food. However, we are on the housing question."

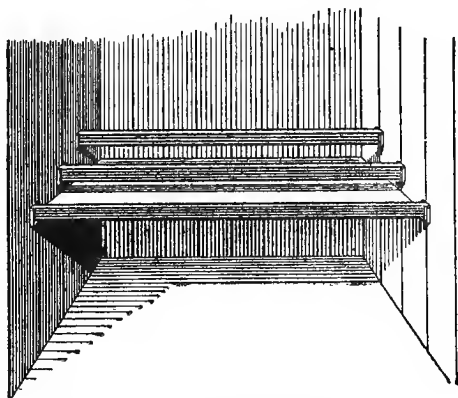
I asked Mr. Tapley if he made his own poultry-houses. "No, I do not," he replied; "and solely because I feel certain that it doesn't pay to do so. I *have* made them, but after paying for the wood, nails, hinges, and the other items necessary to make the house complete, I have found that nothing was saved; in fact, reckoning up my time at full price, I daresay I would find that the home-made article was the most costly! It is all very well making your own house when you can buy a job line of suitable wood. But the appliance makers are so numerous nowadays, and the prices cut so fine, that in ninety-nine cases out of a hundred it pays best to buy one of the catalogued sort and improve or alter it to suit your own ideas. That is what I do now. For instance, those weather-boards are my own idea, and they were not on the house when I bought it. The same with the window; that's home-made. The outside nest-boxes, too. They are additions, put on at no extra charge—when they are home-made."

We were looking at what Mr. Tapley called a good field house. The measurements were 4 ft. high in front sloping to 3 ft. at the back, 4 ft. deep, and 6 ft. long. It was made of 1-in. wood (planed), with good supports; and altogether it was a very substantial affair. The inside "fitments" were simple—two perches running lengthwise, as near the middle of the house as they could be, and about 9 in. from each other, each end fitted into a wooden socket so that the perches could be easily removed when it was necessary to clean the interior of the house. A window had been let in the east end, where, too, was the small hole for the fowls to pass in and out, while the nest-boxes were opposite, on the west end. The back was solid, but the front was in three parts, the middle being the door, of wood, and on each side of it was a wire-netting "window" fitted with a sliding, or rather a pull-



FIELD HOUSE FITTED WITH WEATHER-BOARDS AND OUTSIDE NEST-BOXES

up, wooden shutter. It was here that the weather boards had been fixed. They were 15 in. deep, with a gentle slope downwards, and as wide as each window; and it was easy to see that this simple little arrangement would prevent a driving rain entering the house, and at the same time permit of an abundance of fresh air. An extra height had been given to the house by its being placed on a footing of bricks; but I must admit that I did not like its low roof. Of course, as Mr. Tapley said, it was about the cheapest house on the market; but he assured me that it was quite suitable for fowls, and that in it he



PERCHES AND DROPPINGS BOARD

generally had from a dozen to fifteen layers, summer and winter alike, although in summer the door was never shut, a temporary weather "board" of light canvas being arranged at the top to keep out any rain.

There were other types of fowl-house on the place, and the larger ones, those 6 ft. high in front and about 5 ft. at the back, certainly took my fancy. They were, of necessity, more expensive; but since Mr. Tapley stated that the "life" of a house of that kind was ten years at least—he showed me one that was twenty years old and

none the worse for wear, despite some alterations that had been made in it—I figured that the annual depreciation would not be a ruinous item to put on the “wrong” side of the balance-sheet. In these larger houses, the inside arrangements were somewhat different from those of the small kind. Here the two perches were fitted at the back, the farther one about a foot from the wall; and under them, about 4 in., was a “droppings” board. This consisted of a wooden platform, 2 ft. 6 in. wide, running the whole length of the house, and with a 2 in. ridge along the front of it, and fitting closely to the back and each side. It was covered lightly with any kind of dusty material to absorb in part the excrement dropped while the fowls were at roost.

I thought it a very good addition to the house; but Mr. Tapley had something to say for and against it.

“Yes, it looks a great idea. It is—in one way. It prevents the floor material from becoming as foul as it otherwise would do; and that is just why it was ‘invented.’ But it has its disadvantages. It makes extra labour, since the boards must be cleaned each morning, the material removed, and fresh stuff put down. It’s only a matter of a few minutes for each house, I agree; nevertheless, what would it mean for, say, twenty such houses? They could not be done properly in less than an hour, and it would mean quick work at that. I’ve known a poultry-boy take the whole morning to do just that number—until his boss ‘hustled him some.’ That is number one objection. The next is, some hens, despite the provision of ample nest-boxes, select the platform as a suitable place for the depositing of their eggs; result, broken eggs, except once in a hundred times, may be, and broken eggs invariably lead to egg-eating! Thirdly, some birds, and generally the females, prefer the ‘droppings’ board to the perch at night; and with others on the perch it does not add to the beauty of their plumage. Fourthly, and lastly, unless the board is thoroughly cleaned it will be an excellent breeding place for that terror of the poultry-yard—the ‘hen flea.’ Just so, the

place *can* be kept sweet by being dusted with lime or some suitable disinfectant powder; but I cannot see that it is quite healthy for fowls to sleep with their nostrils in such close proximity to disease killers. Those are my experiences with the 'droppings' board. Nevertheless, it is largely in vogue, so possibly its advantages are much greater than its disadvantages."

We had reached the last grass run, and it had been a climb all the way; but I had not seen all there was to be seen in the house line. There was just one more.

"I think I told you that if the run had a good wooden roof to it there would be no need to give the fowls as much as ten square feet each," remarked Mr. Tapley. "Well, here you see such a house. It is technically a 'scratching-shed' house. Maybe it has other names as well. Of recent years there has been quite a boom in them; and keeping fowls on that plan is referred to in certain quarters as having them on the 'intensive' system. Why 'intensive' I can't just figure; but the boom came over from the United States of America under that title, so I suppose we cannot do better than let it go at that! Out there, as here, the houses get different names, and each fellow who thinks he's found something new promptly attaches his name to it. That's just why, for instance, in America there are the Tolman, the Kellerstrass, and a few others. But they are all aiming for the same thing—the minimum of floor space with the maximum of sunlight and fresh air. Mind you, my boy, the Yankees have taught us a thing or two in the poultry line; at least, when they've found a good thing they have not kept it to themselves, but sent it out broadcast. That's where they beat us. We look to the personal element rather than to the good of the cause. However, to return to our mutton.

"The idea of the scratching-shed house is to keep fowls on the no-yard plan, that is, to have them year in and year out in a covered run and never to give them any outdoor exercise, not even so much as half-an-hour a day in the garden! I have mentioned the system to one or two 'great' authorities, but they pooh-pooh it. They say

it is impossible to have healthy fowls under such conditions. But it isn't, you take my word for it! Anyway in the States they have done wonders with it; and so have I, in certain directions. I've given it a trial for a year or two, and I am quite satisfied that it is the only way to get the maximum of eggs in winter. There is more labour attached to it, and more expense, too, compared with keeping the fowls out in the open, if in the latter case they can get much of their food. But for small holdings and back-gardens there is no plan to equal it. It is, in fact, the back-garden plan that is invariably followed in cities and large towns; and I can tell you where hundreds of really good fowls are so kept for laying and breeding, and have been for many years. You see, it is not a new idea after all; but as 'intensive' poultry-keeping it is likely to attract more attention than it otherwise would do.

"The most important part of the system is to keep the place clean. In my house there is not a board floor, simply because the ground drains so well. But if there were any likelihood of the place being damp I should not hesitate to put one down. As it is, I rammed down a good floor of flints, getting the finest pieces on top, and making the surface level and hard. On this, as you will see, is peat moss litter, and I put in about a bale of it once a year. The litter is raked over each night when the fowls have gone to perch, and the 'droppings' board is cleaned every morning. I take care, also, to see that the fowls are free of lice. The interior of the house is white-washed once in six months and it keeps 'sweet'; and as the building is next to a grass plot, it doesn't catch the dust. The birds in this house are not fed the same as the others—they don't get much soft food, at least not the usual kind. However, that's another subject to be discussed some other time. I think I've told you all there is about accommodation, as much as you require to know, at any rate for the present. Consequently, since the ladies must be lonely, what do you say to tea?"

I was certainly ready for a cup, so we adjourned. I might here say that the measurements of this scratching-

shed house were, roughly, 8 ft. high in front sloping to 5 ft. at the back; 8 ft. wide and 16 ft. deep. The front was boarded for 3 ft. from the ground, and the open space was covered with half-inch mesh wire-netting. The roof, which overlapped some 2 ft. in front and 1 ft. or more at the back, was covered with vulcanite felting, as, indeed, were those of the other houses on this place. The perches were at the back of the house, and there was a "droppings" board in use. The door was in the side; and the drinking fountain was under the shelter of the front boards. The house was occupied by twenty-five pullets, all looking as "fresh as paint"; and since there were a dozen eggs in the nests, there was plenty of evidence that the fowls were not idle.

CHAPTER III

SELECTING AND MATING THE STOCK

TEA over, and the ladies off to a lecture on cookery, we settled once more to our poultry chat.

“When you’ve fixed on the type of house that you are going to adopt, and you have it up and the run planned out and ready for occupation, you will have to think about the stock you are going to have in it. It wants to be carefully considered, because a slip now may mean a loss instead of a profit. It’s an important point—an important point,” said Mr. Tapley. “Several things have to be noticed. I suppose you will begin with what is called a breeding pen, a cock and a few hens, so that you can get eggs and hatch some chickens. It is about the best way for a novice. Of course, it would be cheaper to buy a dozen eggs and a broody hen, cheaper as regards the initial outlay. But you will find it more satisfactory to commence with fowls which are likely to lay, and so give you a return soon after you get them. Very well.

“There are two branches open to you in the utility line, viz., table fowls and eggs. As far as this neighbourhood is concerned, my boy, you can put the first out of the running. There is a bit of a call for table fowls, but it is not such that will warrant you or anyone else going in specially for it. I did once have a notion of educating the residents up to it; but, to cut a long story short, it did not pay me, so, hobby or not, I soon dropped it. Just about June we get the higgler in the district keen to buy any likely chickens for the big demand during Epsom week, and it is easy to dispose of any young birds then at a good price, about 1s. 6d. to 2s. per lb. live weight. But, take it from me, it will not pay to go in specially for a

table breed even at that rate. No, you must look to layers to give you the best return, and kill the surplus cockerels and old hens for the table. And as brown eggs are generally sought for more than white, well, you will have to get some of the hens which lay such eggs."

Like many another, I had certainly heard that brown eggs are the richest; although, possibly owing to my ignorance, I never could see the reason for it. But here was my opportunity to hear an expert opinion on the point, so I did not hesitate to put the question to Mr. Tapley.

"There is no difference in the quality," said he, "and those who say there is are greatly mistaken. The quality of the egg, that is of its contents, is governed solely by the food eaten by the hen or pullet which produces it, and the colour of the shell has 'nothing to do with the case.' Feed a fowl in a proper manner, and, no matter whether the shell be white or brown, the contents will be all right, provided, of course, the egg is a new-laid one. That's what tells. I know the fad exists, but it is a fad and nothing else. However, if buyers are willing to give a better price for brown eggs than for white, it should be the business of the producer to supply them. Brown-shelled eggs cost no more to produce than white ones, although, as a rule, the layers of the former (the brown) belong to what is known as the 'sitting' class.

"I might have told you that the various breeds of fowls can be divided into several different sections; but for our purpose it will suffice to keep them to two, since we have decided not to touch those which are purely table fowls. Thus, then, there are (a) the sitters, and (b) the non-sitters. In the former are found most breeds which are good for all-round purposes, that is for sitting, laying, and eating, while the non-sitters are good only for laying. The eggs laid by class (a) are brown, and those laid by (b) are white—as a rule. There are exceptions. Just why one class of fowl will colour its egg-shells while another will not, when fed on precisely the same food, and kept in the same way, may appear strange; but don't let that

worry you, my boy. The fact remains. Some folk, as I say, prefer brown eggs, just as some people will have the 'black hen's eggs'—the biggest in the basket. It's a fad and nothing more. What you have to do when you start selling eggs for table purposes is to see that your 'clients'—that's the term for buyers nowadays, sounds so much better than 'customers,' you know, in the private house line!—get the strictly new-laid article, and ten to one—pardon the 'horsy' expression—they will not mind whether the egg-shell is white or brown. However, *if* they must have brown-shelled eggs, see that they get them rather than lose an order. You've got to have your eye to business if you want to run the concern at a profit.

"Well, well, how I do get off the track! We were discussing the selecting and mating of the stock. To resume, therefore. My advice to the beginner in poultry-keeping is to start off with two sorts only, that is, one kind to lay white eggs and the other to lay brown. The former are generally 'going strong' in the egg line during late spring and throughout summer, when the others may be falling broody and hanging about the nests doing nothing to pay for their board and lodging. Mind, I don't want to give you the impression that hens and pullets of the non-sitting class never produce eggs except during the times I have mentioned. Bless us, *no!* If that notion got abroad as my opinion, I really don't know what would happen. I once read a letter in a paper from a fellow poultry-keeper saying that after several trials with both kinds he had given up non-sitters for winter laying, as he found none of them to equal the sitting class for the purpose. But he was absolutely 'flattened' in subsequent issues by those who kept the other kind, and he was told, perhaps not in so many words, that he didn't know what he was saying! I'm a peace-loving man, so I advise you to keep both classes of layers. You can discard one if you find it does not pay, and specialise in that which does.

"One important point to observe when selecting the fowls," continued Mr. Tapley, "is to see that they are healthy. Never buy a bird which looks at all 'off colour.' It

does not require any expert knowledge to pick out a good, healthy bird in the utility line. It's different when you come to exhibition specimens; they are sometimes 'doped' specially for the event at which they are shown, and even the best judge is apt to be deceived on that point. But you can imagine what a healthy fowl should look like, and how it should handle. Take the cock bird first. If you can do so, get one from a good laying strain. Good laying is as important on the male side as on the female. No; cocks do *not* lay eggs, and that's not what I meant. However, if the male bird is from a family—that's what we mean when we use the word 'strain' in poultry phraseology—with a bad record in the egg line, he is not likely to sire many, if any, good layers. The text-books tell us that the hen impresses the internal characteristics on the chickens. It is so; but hers is not the only influence in that direction, and practical breeders have found this out in recent years. Such a bird, no matter what his breed, will be full of 'go,' a lusty crower, fiery eyed, with cherry-red face and head appendages, a proud and strutting gait, and ready to do battle with anyone who enters his run. His feathers, when you handle him, will be close, and his muscles and flesh firm. He is just the fellow to head a breeding pen, and one to sire good layers.

"Then as to the hens. Follow similar lines with them. Never choose one with a thick head and dull eyes, because such a bird is not a good layer. Of course, when a hen is broody she often has such an appearance, but she clucks also, so there's an excuse for her looks! A good laying hen has well-grown comb and wattles, a fine head, and bright and bold eyes. When in lay she will have a good appetite; and if food is put down she will eat it in a business-like manner, and not stop to pick out the tit-bits. She will go right ahead until she has had her fill—and she should never be allowed to have more! That's where so many people fail to make hens pay; they over-feed them."

"Now, Mr. Tapley, you have had a long experience with fowls, so tell me, will you, which is the best breed

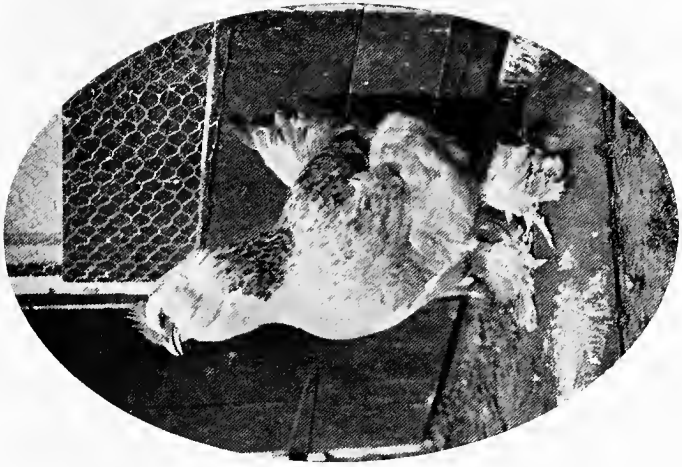
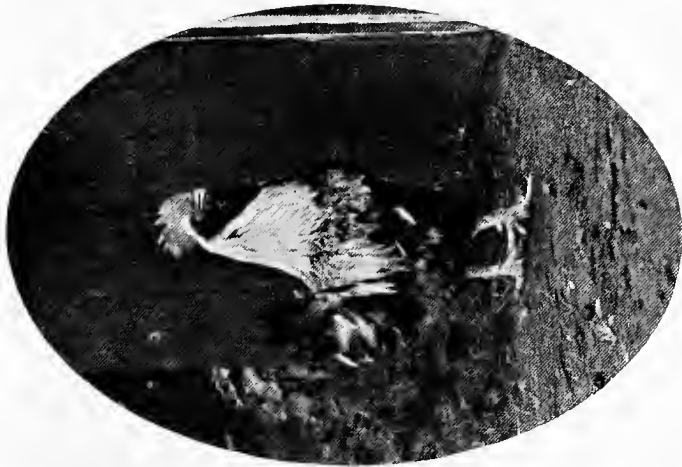
for laying?" I thought I might as well have that information, as it would assist me in my choice. My friend smiled.

"It is the usual question, my boy, and I must give you the usual answer. And that is, there is not a best. You look surprised. It is a fact, however. There is not even a best variety, while in some breeds there are several varieties. No, it is a matter of family rather than breed or variety. There are good, bad, and indifferent layers in almost every pure breed or mongrel. No doubt the several Laying Competitions that have been held in this country of recent times have done much service in showing where some of the best birds are to be obtained; but since it is impossible to include in those competitions one-tenth of the good laying strains there are in this country, it is not the final test. Maybe it will be so when the much-talked-of Government experimental farm gets going! However, the utility men have not been allowing the grass to grow under their feet. They have found out that there is something in 'breeding to points,' as it were, and the result is that throughout the country to-day there is quite a number of reliable laying strains. You will see them regularly advertised in the poultry papers.

"You have doubtless heard of the 300-egg strains, that is, families of fowls whose members average 300 eggs in a year—not when the birds are a year old, because at best a hen can lay only one egg a day—but such a number of eggs in her first laying year. However, it's an exaggeration; it can't be done."

To me it appeared possible for a hen to give such a return in 365 days, so I asked Mr. Tapley why it could not be done.

"Well, I will qualify the statement. It has been reported to have been done, that is, a hen has occasionally given such a result; but since the number of such extraordinary layers to my knowledge is not equal to one in a thousand—probably the percentage is not anything like that—it is somewhat absurd to talk of these 300-egg strains. In the whole of my experience I have not had a



FAVEROLLES COCKEREL AND PULLET
THE PROPERTY OF MR. T. C. BYRNE, WYLDE GREEN, BIRMINGHAM

single hen which has done such a good performance, and I could not name one of my many acquaintances in the poultry fraternity who possesses or has possessed a hen of that kind. Now, you must not think I make the statement concerning the improbability of the 300-egg strain simply because I have not been able to get it. The fact is, anything like a big flock of these abnormal layers does not exist; it is a record of individual layers only. And no wonder. It takes about three months for a fowl to go through its moult; and for a hen to lay any eggs during that period is the exception and certainly not the rule. And, again, the hen must have time in which to form the eggs. No, it cannot be done.

“I have said that a hen at best can lay only one egg per diem. Cases of hens laying two eggs in twenty-four hours have been reported and authenticated. I have even seen mention of a hen producing three eggs in that time, one, however, being soft. It is seldom, nevertheless, that a hen will lay daily for more than a month at a stretch. In my own case I find that the rule is five or six eggs a week. Thus a hen which begins to lay early in the day, say, at eight o'clock, may not lay on the following day until about nine o'clock; and each day she may be later, thus proving, I think, that there is an interval of more than twenty-four hours between the eggs. I have observed this on several occasions, by using the trap nest. What is a trap nest? It's a nest that, once entered, keeps the hen in it until she is released by the attendant. That's an idea we in England got from the Americans, and there is no doubt about its utility when one is forming a strain, and breeding pedigree layers. Of course, it requires a lot of time to attend to it on a large poultry-farm, but it is a certain way of finding out which are the best layers. The birds kept on that system are rung with a metal band (numbered) on one leg, and particulars of their eggs are kept in a book.”

I asked Mr. Tapley if his fowls were trap-nested.

“No,” said he, “they are not. I do not keep a big stock, and, moreover, I can pretty well tell each hen's

egg. This may sound a bit far-fetched, but it is true enough. And I know many poultry-keepers who can do the same. My plan of detecting the eggs is a simple one. As soon as a pullet comes on to lay I take her off the perch when she has retired for the night, and put a pinch of some colouring powder around her vent. It does not injure the bird in any way. When she lays her next egg traces of the colour will be found on the shell, since the shell is generally wet immediately it is laid. I use blue for one pullet, yellow ochre for another, and so on. Each hen, you must know, produces an egg peculiarly her own. Thus among my fowls one white Wyandotte always lays a rather long and pointed egg, another of the same strain an almost round one, a third an egg with a very dark brown shell, a fourth one with a spotted shell, to name only a few. It may be the result of long experience, as you suggest, but it is by no means a special gift of mine, since many other poultry-keepers can readily do it.

“Now as to the actual mating of the breeders. I hope I am not boring you, my boy; but if I am, just tell me.” I assured him that I was not in the least weary of listening to him; in fact, that I was keen to learn all I could on the subject. “I’m glad of that, although I don’t want to overdo it! Well now, as regards mating. Here, again, health is an important matter. The breeding stock must be in sound condition, so that the fowls may go through the season without breaking down. It means a loss—and often a big one—when a cock fails to fertilise the eggs; and if you happen to be selling ‘sittings,’ it will mean a lot of worry and correspondence with your customers—clients, I beg their pardon! Perhaps the best time to buy the stock birds is in the early autumn. Good fowls can then be obtained at very reasonable prices, because many breeders are thinning their yards of the birds hatched in the spring and of breeders they do not wish to keep. Of course, it does not do to mate together young fowls of both sexes, that is, if the male is a bird of the year he is best put with hens in their second laying season, and *vice versa*. Still, good stock of the year,

as well as that of the previous year, can generally be bought well in the early autumn and ere winter sets in.

“ While on that point it may be as well to mention that the pullets should not be forced to lay at top speed during winter, if the object is to breed from them in the following spring. It is a mistake often made, but it invariably leads to a lot of infertility. Forced laying—feeding pullets largely with meat and fish meals—is a great strain on a fowl’s constitution, and if it does not actually ruin the bird it certainly makes it unfit for the breeding-pen in the springtime. A great winter layer seldom makes a good spring breeder, and it is a point worth remembering. If you want eggs in winter—and it is just then that they fetch the best prices in most districts—by all means feed the pullets to that end, and get them to ‘shell out’ the maximum. But you must not expect them to keep at it for weeks on end, and then prove robust breeders in the spring. They will probably come in handy for late hatching, if they have been allowed to recuperate in a proper manner, and as such they may be profitable. Many poultry-keepers are not in favour of these late hatchings, but I find them very serviceable on occasions. One summer I brought off a brood of white Wyandottes in June, and the cockerels came in very useful indeed as table fowls at Christmas, being then plump and fleshy. The pullets began to lay just about that time, and they continued until the following June, with the usual slight intervals.

“ Well, my boy, it’s about time the ladies were home again from the cookery class, so shall I say ‘to be continued in our next’? ”

I hope that I had not been wearing a bored expression! I was very comfortable in an arm-chair, and I was quite enjoying the chat and—the pipe. “ If I don’t worry you,” said I, “ I should much like to know how many birds there should be in a pen for breeding purposes. I suppose there is a limit? ”

“ Right you are, by boy; you don’t worry me. Yes; there is a limit, but it is not an easy one to fix. As an

example, I have bred from as few as two fowls—the limit in one direction—and I have had pens with as many as twenty hens to one yearling cock. In both cases the fertility was good. The more active the breed, the larger the pen; the more ‘sluggish’ the breed—if I may be allowed the term without meaning any offence to the heaviest breeds and their admirers—then the smaller the pen. Again, the birds in the winter pens should not be as numerous as those put together in spring or summer. As a rule, when mating the so-called heavy breeds in the very early season—for December and January chickens—I run three hens with a cockerel, while in the spring I increase the number of hens to six or more. Then with the light and non-sitting breeds I just double the numbers; and in each case I get the usual percentage of fertility.

“It must not be supposed that every egg taken from a breeding pen contains the germ of the future chick, or that every fertilised egg will produce a chicken. There are such things as infertile eggs even in the height of the breeding season, when everything appears to be going along well. It happens, perhaps, that the male bird does not mate with one of the hens, hence the eggs laid by that hen will not be fertile; but it is scarcely possible to distinguish infertile eggs from those you may be putting in an incubator or under a hen, or even selling for such purposes. And it is often due to some such cause that clear eggs do get into ‘sittings,’ and sometimes mean a lot of bother. Then, again, I have seen infertile eggs laid at the end of a batch, two or three perhaps; but I have not been able to account for it. Of course, there is some reason for it, but I do not go in for poultry on what some people term ‘highly scientific’ lines! I have kept exhibition stock, to be sure; the birds I have now are all from purely fancy yards, and simply because I believe in the ornamental as well as the useful. But I do not hold with much of the nonsense that is written about the so-called scientific side. I leave that to the ‘professors,’ those of the fraternity who find the profitable side of poultry-keeping in lecturing. Bless us, not long ago I

went to a lecture in this district at which the speaker, sent along by the County Council, rattled off a whole string of 'scientific' terms, yet when he came to the practical part said that a concrete floor was the best for the fowl run, as it was always dry, kept out the rats, and could be easily washed down when it became dirty; and then proceeded to tell his audience to scatter the fowls' grain on it to give them scratching exercise! Imagine what the fowls' feet would be like if they had to scratch on such material, and what their beaks would be like if they had continually to pick their grain from it! No, I leave the scientific part to others.

"However, I must keep to the subject in hand, and that is, the question of infertile eggs in the mated pens. As I was saying, it is quite possible to get them even when the male bird appears to be doing his duty. That's why I think it is somewhat absurd to advertise, as some poultry-keepers do, 'guaranteed fertile eggs.' Talking of which reminds me that it is not possible to tell if an egg is fertile or otherwise until it has been incubated for a few days. Some authorities say that the germ of a new-laid egg (fertile) can be seen if the egg is broken into a saucer—which would not be of much use for hatching purposes! But my eyesight must be defective. I have seen the spots that old country people still call the germ. But those spots are the 'strings' that are seen in both kinds of eggs; they hold the yolk in position and allow the white to be evenly distributed around it.

"Now, by boy, are there any more points you would like mentioned before we close down for the night?"

No, I had done very well for one sitting, and I thought I had received sufficient information on the selecting and mating of fowls to give me a start, at any rate.

"Good," said my friend, "I will tell you something of the feeding of fowls when you come round again for another chat on poultry. That is the next subject you will want to know about when you have your birds settled and you are desirous of having your own home-laid eggs. Your object in keeping fowls will have to be getting plenty

of eggs and having a plump chicken or so when the family desires a change from the usual joint, or when some friends, who have heard of your poultry-farm, drop in to sample the goods, as it were! Keeping fowls on such lines—I do *not* mean with the sole object of supplying all and sundry friends with a free feed of chicken when they like to honour your board—but keeping fowls for eggs and birds solely for the table, is known as the ‘utility’ side of poultry-keeping. It is supposed to be entirely distinct from the fancy or exhibition side. Well, so it may be when one specialises in one branch, but it need not be, as many poultry-keepers have found out of recent times.

“If you are after making a name in one direction, well and good. You can go in for ‘trap-nested, pedigree,’ and a few more adjectived layers, and aim for that 300-egg strain! You can go in for table fowls only, and fatten the birds on the latest approved lines for the London markets—if you do not make a good thing of it, someone else will, rest assured of that! You can go in for fancy stock only, and leave the others alone. There are some people in this country who, it is said, are making a fortune at each branch. It may be; but there are very many more who have tried such specialising and have lost a fortune in it. What you want to do is to aim at a combination. It’s the safest thing in such cases as ours, remembering, of course, that we are the ‘small’ men. Start off with utility, and keep the birds for laying. Get ordinary farmyard stock, if you like, until you feel confident that you know how to keep fowls at a profit; it will do for the experimental stage. Then go in for pure breeds; and if you have the slightest inclination towards fine points, you will soon drift into exhibition birds, especially if there is a fanciers’ society in the neighbourhood. It costs no more to feed and keep good fowls than to look after mongrels.

“The greatest harm that has ever been done to the poultry industry has been brought about by the fancier—so say extreme utility men, some of them. That is *not* my opinion, so do not let it go forward as such. What

the extremist does not know is just how the fancier does breed his birds, how he out-crosses them to bring certain points to perfection. The fancier is supposed to be a feather faddist—a somewhat alliterative term, I admit. But his only aim, in some people's opinion, is to breed for the special colour or markings of the plumage and not to take any account of other properties; and, in his desire to get perfection in that direction, to set aside entirely the utility points by in-breeding. All stuff and nonsense! However, I am drifting into other channels, and I must reserve them for some other night."

CHAPTER IV

FEEDING FOWLS

“ON what shall we feed our fowls?” It *is* a question, an ever-recurring one, and to the poultry-keeper who has to make his birds pay it is equal to the evergreen “On what shall we feed baby?” to the young mother. When I tackled Mr. Tapley on the subject he replied in one word—“Food!” I forgave him his little joke.

“Yes,” said he, “it is a very important item, in fact, it is probably the most important of them all as regards the profitable keeping of poultry. Just as there are more ways than one of skinning a cat, so there are more ways than one of feeding fowls. To feed them, mind you; but there is feeding *and* feeding. What you are after is the most economical way, provided it results in the maximum of eggs. Of course, there is more than one end for which the birds can be fed, that is, while your object at first will be eggs you will want a bird or so for the table; and the feeding of layers and fowls for killing is not the same, provided, my boy, that you want the chicken to look well and prove a toothsome morsel when served roasted or boiled. Then again, the feeding must be varied according to the season, according to the manner in which the fowls are being kept (whether in confined earth runs or on a free range), and according to the object for which you are keeping them.”

“Evidently,” said I, “it *is* a big subject, so I am going to ‘make a note on’t.’”

“That is the best thing you can do,” commented my friend; “and if you always carry a notebook with you when you are among your fowls, my boy—and, mind you, use it—you will find it one of the easiest ways of adding

to your knowledge. I rarely go into the runs, when I have an occasional hour among the birds, without my notebook. I just jot down anything that strikes me; and I find it particularly useful in the chicken season when there are so many things to attract one's attention. It is just by doing this that I've gained many little tips that have been useful to me. However, we are on the food question, and so to it.

"I think that I mentioned to you about the keeping of poultry on highly scientific lines. Just so. It is in the matter of feeding where most folk with the scientific bent imagine that science must come in. If science in this case means the using of one's common-sense, very well then, we can talk of the science of feeding fowls. But really, my boy, it is all humbug, because it is no scientific undertaking to feed a lot of cocks and hens. It just wants to be done in a common-sense manner. I admit that scientists have given the poultry fraternity a cue or two by forming tables of analyses of the different foodstuffs given to cattle, and many of which are suitable for fowls. The only trouble in this direction is that the tables of the different authorities do not always agree; and you can imagine what that means to the poultry-keeper who is pinning his faith on them! Then again, in not one of the tables is it stated which varieties of the grain have been analysed. Nevertheless, as a guide of sorts the tables are handy enough for those who are anxious to test their skill at fractions.

"Much has been said of late about balanced rations. Yes, it does sound like an American term. As a matter of fact it *is* one, and we in England got the notion from the States. Out there they do things well in the poultry line, and the different experimental stations they 'run' have done a great amount of good for the industry in undertaking experiments that are generally too costly for a private individual to attempt. We have had one or two in this country, but there have not been enough of them. Maybe some day a generous government will awaken to the fact that the poultry industry here is a big

concern; but these things move slowly, and at present experiments on anything approaching a large scale have to be carried out by such a body as the National Utility Poultry Society. However, that is neither here nor there! I will leave the questions of scientific feeding and balanced rations alone, and tell you something of the foods I have given to my birds, and the effects they have had on them. How will that do?"

Candidly I thought it would "do" very well, since it would save me the trouble of hunting up some table or other and working the items out for myself! I said as much, but it did not astonish Mr. Tapley. Possibly he *thought* a lot of such a confession of idleness!

"Very well, then," said he. "Fowls may be truly said to be omnivorous; they will eat and enjoy grain, seeds, green food, animal matter, and a thousand things we wot not of, and get along very well on them, too. Of grains and seeds there are barley, buckwheat, dari, hempseed, maize, oats, pease and beans, rice, sunflower, and wheat.

"At one time barley was commonly considered to be the only food that fowls could possibly require; but it is of too heating a nature to be given to them in anything like large quantities. When of fair quality it ranks next to wheat in feeding value. The small kind contains, comparatively, very much more indigestible matter—husk, and the like—than does barley of medium quality. This should be kept in mind when you are purchasing it. As a rule, medium-sized grain of fair quality is the cheapest, and very suitable for feeding stock poultry. As I say, however, it is rather heating, hence it is a food better suited to winter than summer feeding.

"Buckwheat is a small dark grain, very much like hempseed, although the French variety is of a silver grey colour, and this latter kind is probably the better for fowls. I have heard poultry-keepers say that they cannot get their birds to eat it; that they have tried several times, both with old stock and chickens, but that it always ended in failure. It is true enough, isn't it, that there are none

so blind as those that won't see? It is so with fowls. If they can get other grain that they can readily pick up, and enough of it to satisfy their hunger, no doubt they will not see the buckwheat. But that is not the way to feed fowls, and I have never known my birds to leave a grain of it; in fact, they 'ask for more' when they get it as the sole hard food of the day. No doubt about it, French buckwheat is an excellent foodstuff and a valuable promoter of egg production. It is very stimulating and warming, and, consequently, tends to assist in maintaining a good supply of eggs in wintry weather. In selecting it see that the grain is clear and 'sweet,' and heavy in proportion to its bulk. I may say that in France the poultry-keepers use it almost exclusively as the grain ration.

"Dari is also a small grain, somewhat round and flat, very hard, smooth to the touch, and of a dirty white colour. It is known also as dhari and dourri, and sometimes as white Indian millet. In analysis it comes nearer to wheat than any other grain, although it contains rather more starchy matter than the larger grain. I find it good for adult stock, and particularly during summer. Hempseed is valuable for laying hens and pullets in wintry weather, because of the large proportion of oil or fat it contains. A very small quantity of it is not a bad thing in the early part of the season to start the hens laying. It is not a cheap food to buy, but the increased yield of eggs will repay the extra outlay. Only a small quantity must be used, because if given in excess it is too forcing, and will cause the birds to lay eggs without shells. If given freely during the moulting season, it is said to cause the new feathers to come of a darker colour; but as to this I cannot speak from experience, because I do not use above a stone of it in a whole year.

"Maize, or Indian corn as it is called in England, is a large yellow grain, of which birds are particularly fond, probably for no other reason than that it is large. Fowls, as you will find before you have kept them for any great length of time, are very greedy creatures, and they in-

variably select the largest of anything that is put down for them. Thus it is that in a mixture of grain ninety-nine out of a hundred fowls will eat the maize first. Some, of course, will not, since even they vary in their tastes; which reminds me of a little incident that will illustrate it. I once possessed a golden-spangled Hamburgh cock, a most aristocratic fellow, with the best blood in the country in his veins, who would not eat maize. I tried starving him to it, but it was a hopeless task; he would sooner die than take it! I didn't want him to do anything so foolish, so I put him on his favourite diet—wheat. But to return to maize for fowls. There are two sorts, one larger than the other, and the other is the more expensive. It is a very rich food as regards its heat-producing and fat-forming properties, and for that reason it should be given rather sparingly to breeding stock. Light-framed breeds such as La Bresse, Hamburghs, and Campines, for example, may have it in moderation if at large, and even bigger fowls may get it as an occasional change; but the heavy breeds, especially if kept in confinement, should not be regularly fed on it, because fat instead of eggs will be the inevitable result.

“It is generally thought that maize is not a good egg producer or flesh former, and that the eggs and flesh of fowls fed freely on it have not a very delicate nor enjoyable flavour, hence in some quarters it is said to be one of the worst foods for growing or laying stock. Now I cannot altogether agree with that opinion. Used with common sense—and if one cannot bring a little of that quality into the keeping of poultry he had better give up the idea of getting profit from the undertaking—it is a valuable food. It produces a darker coloured and better quality yolk than most other grains, and in cold weather it can certainly be given to fowls as the sole grain food at least once a week. I may just tell you that in America, where it is called ‘corn,’ it forms the important staple, and that other foods are considered as necessary only as changes from the regular diet. However, by reason of climatic conditions, it does not



WHITE WYANDOTTE COCKEREL

THE PROPERTY OF MR. C. N. GOODE, PECKFIELD LODGE, SOUTH MILFORD, R.S.O., YORKS.
Winner of 1st, Skipton ; 1st and Special, Royal Lancs. ; 1st and Special, Hayward's Heath ;
1st and Special (Best White), Dairy Show ; 1st, Crystal Palace ; 1st, York.

assimilate here as well as in America. In England it is best given broken or kibbled.

“Then as to oats, no doubt about it, poultry-keepers in this country do not know the valuable properties of the grain, otherwise I feel sure it would be more largely used than is the case at present. Owing to the rather large percentage of shell-forming material in the husk, oats may be given to fowls much more freely than any other grain. Of course, there are oats *and* oats! By which I mean there are some kinds that fowls cannot or will not eat. The grain must be short and plump, and have a thin husk. Strange, perhaps, but I have never been able to get my birds to relish the best English oats, which is, after all, a blessing in disguise, since that kind is generally the dearest! Clipped New Zealand oats are doubtless the very finest for fowls, as the process of clipping removes the points, and thereby greatly improves the grain; but here again price will prove the stumbling-block with most poultry-keepers who have to study economy, since the clipping ‘improves’ the price as well as the feeding value. The most suitable oats to get are white, short and full, and with a particularly thin husk.

“White, grey, or maple pease and tick beans are not generally used for fowls, but I can strongly recommend them. White Canadian pease are probably the cheapest, but they and beans are better put through a kibbling machine. They are rich in nitrogenous matter, and form a capital occasional food for laying stock, while they will bring the birds into splendid feather. They must not be given in excess, nor to chickens which are intended for the table, as they make the flesh hard and tough; but since stock cocks and hens are very much that way already, no harm can be done them. Those pease that are freshly harvested are preferable to others. I might mention tares under this head. Some poultry authorities say that they are very poor feeding, and are likely to cause diarrhoea in fowls; but the seeds of all leguminous (pod-bearing) plants are valuable as food because of the nitrogenous matter they contain, although, as with all

other foods, common sense must be exercised in the use of them.

“Rice is not a great favourite with poultry-keepers, and some declare that, although it is apparently cheap, it will be found dear in the end, as there is no ‘heart’ in it. I must say that I do not give it in a raw state to my fowls, although it is one of the best grains for bantams when mixed with canary seed. But when it is cooked it makes a good dish, and in that state is a capital food for chickens. It must be properly cooked. No doubt the ‘missus’ will show you how to do it; but if you want to be independent here is my way. Put some water in a saucepan on a stove, and when the water comes to boiling point throw into it as much rice as you wish to serve the chickens for a day. Let it boil for ten minutes, stirring it occasionally to prevent it burning, and immediately it is ready—that is, when it has absorbed the water—pour on some milk and allow it to come to the boil again. It will then be fit for a king!

“Sunflower seed is similar in its effects to hempseed, but it has one decided advantage when compared with the latter—it can be grown on the premises and at very little expense. There are few gardens in which a few ‘heads’ cannot be cultivated each year. The seed is of a very fattening nature, hence it is not a suitable food for use in warm weather; but given to laying hens once a week in winter, it will not do any harm; a pint for a dozen adults is about the limit. If you intend to grow your own sunflowers, allow them to stand until the seed is ripe, then behead them, shake the seeds on to flat trays, and leave them in the sun for a few days to dry.

“Wheat is unquestionably the very best cereal for poultry, since it contains only a small proportion of water and indigestible matter; consequently, it is a rich and concentrated food. When judiciously given to poultry it is very economical, since much less of it is required than of almost any other grain. There are, of course, several kinds of wheat; but as a food for birds which are kept

for stock purposes—that is, for egg production and in the breeding pen—the small sort, known as tail or offal wheat, is undoubtedly the best, because it contains a greater proportion of flesh-forming elements than does the large wheat, and the red contains more than the white. By the way, all grains must now be sold at the retail shops by weight. I know that some people do not approve of tail or offal wheat, contending that with all grain the refuse, though low priced, is by far the dearest in the end. They say it is all very well for the farmer to use such stuff, because it costs him nothing; but to buy it is a great mistake, since it is light and has no body in it. However, I would not buy the best large wheat if it were at the same figure as tail, unless I wanted it for the birds which were being fattened. When buying wheat you should select grain that is hard and dry, because it contains from three to five per cent. less moisture than that which is comparatively soft.

“Well, my boy, I have gone through the grains. There is just one other I must mention—that is, ‘poultry mixture.’ It is generally supposed that under such a heading the corn merchant can get rid of all screenings that are not suitable as food for cattle, and that these mixtures are composed of the rubbish. It may be so in some districts, but if you pay a reasonable price for a mixture you can generally rely on it. Just a moment, and I will fetch a sample of the mixture I am at present getting from the local dealer.”

We examined the sample, and among the grains in it were maize, wheat, dari, oats, barley, and buckwheat. There were one or two other kinds, which Mr. Tapley did not name; but with the exception of the barley, which appeared as if it had been malted and dried again, the quality was very good and there was no dust in it.

“I use a lot of that mixture in a year,” continued my friend; “in fact, at this establishment it is the staple grain food. I buy other grains as well—chiefly oats and wheat—and, in the hatching season, maize. But I rely

largely on the poultry mixture because the fowls do well on it, and it is the cheapest hard food I can get. Before leaving the grains I might as well tell you to be careful with maize if you keep white-plumaged fowls, and want them to look white and not yellow. Anything like a large quantity of it given to such fowls will most certainly turn their feathers yellow. Some people may laugh at this idea, but they have only to see what cayenne pepper will do for canaries to be at once convinced.

“Grain ground into meal and worked into a fairly stiff crowd—soft food or mash, as it is called—should be given to the birds at least once a day, as, although it is a little troublesome to manage, it will be very advantageous to fowls. In cold weather it should be mixed with boiling water into a crumbly mass, and if given warm on a winter’s evening it will greatly promote laying. It is in the soft food, however, where the poultry-keeper can practise the greatest economy, since he can use up in it all the odds and ends that are so often discarded as kitchen waste or house scraps. The chief soft foods used are barley meal, middlings, bran, and Sussex ground oats. Barley meal is sometimes an unknown quality! Ground barley does enter into it, but often enough it is not the only ingredient. There are others! However, it is perhaps just as well that it is adulterated, because the other items tone down the very heating properties of barley, and save the poultry-keeper worrying his head about balanced rations.

“Middlings is a term applied to a very coarse grade of flour, and the stuff is supposed to come from wheat. It may do; it may be the name of the substance that comes between the centre of the grain (the bakers’ flour) and the outside husk; but I think middlings are as much adulterated as any other poultry food. They vary much in quality, according to the district and milling methods, and according to the wheat or other grain from which they are obtained. Middlings on the Mark Lane market are often vastly different from those milled in the country. The stuff is known by different names in various parts,

and a few of them are pollard, thirds, sharps, boxings, parings, blues, and toppings. Round about here it is called 'toppings.' However, what's in a name? Middlings form the bulk of most soft foods given to fowls, and they enter largely into poultry meals bearing other names. Bran is also a form of middlings, but there is no fake about it. It's a one-name food, and it is bran all over the country.

"Sussex ground oats (so called because the oats are ground by the old stone process and largely used among the famous Sussex fatters) are generally considered to be the best staple food; and where the meal can be obtained in the neighbourhood of those who mill it, there can be little doubt that it forms a good food. The only difficulty about it is the trouble of getting a supply in any part of the country at what may be termed a paying price. The shops do not stock it here, and it is not milled in the district; so when I want it I have to send into Sussex for a supply, and as I have to pay carriage it comes out rather dear. It must be borne in mind, however, that these ground oats are not the same as crushed oats, rolled oats, or oatmeal, but the whole grain ground up—husk and all. The meal looks rather like coarse flour, and when mixed with water it should not show much husk. It is very difficult to obtain pure, since, as a rule, one sack of barley is ground with every eight of oats.

"There is yet another meal that has come largely into vogue of recent years as a poultry food, and that is biscuit meal, resembling, as indeed it often is, dog biscuits broken into pieces about the size of peas. It is rather expensive to buy, and cannot be reckoned among the most economical of foods. However, I do use it, and particularly for chickens in winter, allowing it to form about a quarter of a meal of soft food. Of course, there are several prepared foods on the market nowadays, and no doubt they all have their uses. They make excellent changes from the ordinary diet, and also when the eggs are 'coming small'; but they cannot be allowed as the sole soft food if the object is profit from table eggs.

“Then there is animal matter. Some authorities assert that it is not essential, and that fowls will lay quite as well without it as with it. Well, doctors differ! Animal matter may not be essential, but I have yet to meet with a breed of fowls that will leave it alone when it can be had for the seeking. Give fowls a free range, and they will demolish all the animal matter that comes within their reach. I do not go so far as to say that fowls know how to cater for themselves when it comes to doing so for the express purpose of laying eggs fit to eat; but when meat or fish enters judiciously into the diet of poultry it proves highly beneficial. There is no question as to it being a good egg producer when not overdone. It is best given in a cooked state, finely minced, and thoroughly mixed through the soft food—that is, of course, where the fowls cannot get a natural supply from their runs.

“Some green food is absolutely necessary; and if not to be obtained in their yards, the fowls should have it given to them daily; in fact, even when on a grass run it will be found a wise plan to let them have a supply, since it prevents the birds demolishing the grass to the extent they will do if they are kept short of it. Green food is valuable chiefly on account of the mineral salts it contains, and in that direction it is to fowls what fruit is to human beings, toning and correcting the internal organs. It can be supplied in two forms, either raw or cooked. When raw, it must be young and fresh, and almost any variety suitable for us will do for the birds, although the question how to supply the best kind most cheaply is one that each individual must solve largely for himself. In a general way, however, it may be said that cabbage is particularly valuable, because it contains a large proportion of nitrogen and balances the carbon of a grain ration. Kale and beet leaves are equally as good and are readily eaten. Lettuce, and particularly when it has gone to seed and is stalky, will be found very beneficial. Onions, endive, nettles, and dandelion leaves all come under the head of vegetable food for fowls. Also there

are various roots that can be included, such as turnips (and especially the swedes), mangel-wurzel ("mangles" or "wurts" according to locality), carrots, beets and the like.

"You will see that in the matter of food for fowls there is a wide range, and plenty of chance to give them variety. Now I suppose I had better tell you the best ways of giving the different items, eh?"

I thought it would be just as well, as it would save me trying any experiments, and so lose time at arriving at the profitable part of the business! I felt that I was encroaching somewhat on Mr. Tapley's goodness, and taking up a lot of his time. I said as much, but I might as well have saved my breath.

"Bless you, my boy," said he, "you are here to learn, and as long as you don't mind my chatter I'll go ahead. But, mind you, pull me up if I am wearying you." I promised that I would, so he proceeded.

"My own fowls, the adult birds which are laying and those which are in the breeding pens, are fed twice a day—early in the morning and about an hour or more before they are ready for their beds. I say 'early in the morning.' The term is perhaps vague, since early to one person, say one who has not to be up in time to catch a workman's train, may be late to another! Well, I fix the fowls' breakfast, spring, summer, autumn, and winter, at between eight and nine o'clock. I daresay such an hour is late to the six-o'clock-train poultry enthusiast; but you can take my word for it that it is quite soon enough to let fowls break their fast. In the height of summer my fowls are seldom out of their houses before six o'clock, although they can get out just as soon as they like. Perhaps you will think they have followed their master's lead in this direction! That may be; but there is no advantage in giving them food before they are awake, and very early morning feeding generally means extra food during the day (with a great risk of over-feeding, into the bargain) or too big a gap between the first and the last meals. No, they have their break-

fast between eight and nine o'clock; that starts them on laying soon enough, and I have never had a shortage of eggs on account of this late (?) feeding. Their 'tea' is put down for them between four and eight o'clock, according to the season.

"As a rule the breakfast consists of soft food, and the 'tea' of grain. Sometimes I reverse the order of things, and especially in winter, with fowls kept strictly on the intensive system. When giving the birds mash for breakfast I prepare it over-night, because it nearly always has bran in it, and bran is the better for being scalded and allowed to soak for some hours prior to the fowls partaking of it. With me the crowdie or mash is the cheap meal, and that is where economy in feeding is studied. I work into it any scraps that would otherwise be wasted. But I will give you a list of ingredients and you can then judge for yourself as to its cost.

"Bran, toppings, and table scraps (or kitchen waste, as it is sometimes called) with the addition of meat in winter, form the staple soft food here, and it is seldom varied. The only variation, in fact, is at such times as I see that something more substantial will be of service, in which case I add biscuit meal, Sussex ground oats, or one or other of the advertised poultry foods. When the hens and pullets are in full lay you want to watch the eggs, so that the foods may be varied a little according to the size of the 'hen fruit.' I have heard many poultry-keepers, and good men, too, say that if fowls do not get constant variety in their diet they will not lay, which means, of course, that they will not pay. With all due deference I submit that there is far too much humbug about this question of variety. Those who are so keen on it instance the case of the human being kept for any length of time on the same food, how it soon leads to loss of appetite, and a few more things. 'It is preferable to give the various kinds of food separately and alternately rather than mixed, for the same reason that we human beings prefer beef one day and mutton the next, rather than have a slice of each on our plate at

one and the same meal,' wrote one, and there's no doubt about it, he meant it! But I have yet to learn that fowls are human beings, or that their tastes and ours are the same. It is no good running poultry on the lines we run ourselves. I keep my laying fowls to produce eggs, and when I find a food that suits them, they get it day after day; and the fact that they are always ready for their meals is good enough proof to me that the diet is all right.

"But I started to tell you about the soft food I give to my birds, and how I prepare it. I put three handfuls of good broad bran (it must be good and 'sweet') into an iron pail and pour on sufficient boiling water to damp it. In winter I also put in with the bran a handful of cooked fresh meat, meat meal, fish meal, or greaves (the refuse from tallow chandlers' factories, known also as tallow scrap); then I cover the pail with a sack and allow the stuff to soak for an hour or so, sometimes from night to morning. I keep a stock-pot going constantly on the stove, and in it I put all the household refuse in the edible line that I can get. I have said that the soft food is a little troublesome to manage; and so it is. The scraps have to be cut into small pieces before they are put into the pot—and it takes me about an hour each day to cut up enough scraps for fifty fowls—or they have to be turned, when cooked, into a colander, drained, and put through a mincer.

"These scraps consist of the peel of potatoes, turnips, carrots, swedes, onions, and the like; the green tops of celery, and any sticks that are not suitable to go to table; the outside leaves and bottoms of sprouts and cabbages; in fact, any waste of this kind, together with the scrapings of plates and meat dishes, crusts and waste pieces of bread (yes, my 'kiddies' do shirk the crusts sometimes), and any odds and ends of puddings. I tell you, in my household there is no throwing to the sparrows, or burning of anything in the food line that will come in for the fowls. I don't want you to go away with the idea that I get sufficient scraps from my own house to keep

the pot a-boiling.' I do not; but I have neighbours who go in for vegetables instead of poultry, and they keep me well supplied with refuse, free of charge.

"However, I really must finish telling you about the fowls' breakfast! I add the contents of the stock-pot to the bran in the morning, and having mixed them together I put into the pail four or five handfuls of toppings. These I stir well with a wooden spoon until they are nicely blended, and neither sloppy nor choking dry. The ideal soft food is that mixed to a state known as 'crumbly moist.' It is easily done when the food is biscuit meal, with sharps, but otherwise it is not. The great thing with soft food is to make it light and bulky, and that is how mine is when I put it down to the birds. I am a great believer in green food for fowls, and particularly for the laying hens; hence, as soon as I have given them their breakfast, I let them have their lunch! This consists of a few leaves of cabbage, or a head of lettuce that has gone to seed and is not fit for salad. I fix the greens about a foot and a half from the ground, so that the fowls can reach it with ease. It keeps them amused, as well as supplying them with a good tonic.

"When crowdy is given for breakfast, their 'tea' is grain; five days a week the poultry mixture I have mentioned, and the other two oats. The soft food I supply in long wooden troughs, long enough to allow about a dozen fowls to eat therefrom without crowding or fighting for a place. The grain, when given outside, is scattered in a long thin line. I used to throw it broadcast; I found, however, that not only did it get mixed with the dirt of the run (and the runs do get dirty at times, despite a flick over with the besom once a day), but some of it got trampled and was either lost or meant that the birds had to scratch the turf too much to get it. In wet weather I always give the fowls their grain inside, and this I throw on and fork into the litter in the scratching-shed, which means extra work, of course. I may just say that such soft foods as barley meal and Sussex ground oats, if used by themselves, are too sticky and clam to the

birds' beaks, but they will not do if mixed with bran and chopped vegetables as mentioned.

"Well, my boy, that's about all I need tell you of foods to set you going. Ah, I have not mentioned water, grit, and shell. The fowls must have a drink, and in the laying season they will require a good supply. However, little need be said on the score of drinking water, save that it should be changed every day. It is best kept in iron vessels as they are not easily broken, and, if a little rusty, will give a chalybeate flavour which will be beneficial. For a number of fowls an iron pig-trough will answer very well, while what are sold as dog-dishes will do for a few. If the trough must be in an earth run, where the birds are likely to scratch litter into it, I put the vessel on three or four bricks; in any case, however, it is best to have the trough out of the sun. Mind, when you can get milk cheaply (and sometimes you can buy skim-milk at the farms round here for next to nothing), you could give it to the fowls as the first drink of the day in winter, removing it as soon as they have satisfied their thirst; or you could mix their soft food with it. As to grit, it is thought that it acts as the fowls' teeth, and assists the food to pass through the system. I am afraid my birds must be in a bad way in that direction, because I have not given them a particle of grit since I have had them. The same with shell-forming material. My fowls get what they want out of their runs and from their food, and such items as grit and shell never figure in my poultry account, so that is one saving."

I thanked Mr. Tapley for the long chat, but there were one or two other points that had struck me while I was listening; and so, as I had been told not to hesitate about asking questions, I did not fail to do so. "You said that table fowls were not to be fed the same as layers. Can you tell me something about them?" I queried.

"Certainly," he answered. "Table fowls, when they are large enough to be eaten (and that is when they are five or six months old), should be fed with soft food only for three weeks to a month prior to being killed.

The food should be of a fattening nature, so barley meal or Sussex ground oats, mixed with boiled potatoes and toppings, will do. Soak the meal with boiling water, and when it has stood for half an hour or so, work in the potatoes and some melted dripping or other fat, and dry off by adding toppings, stirring it well together so that the meal is fairly damp. Of course, you must put the birds into a coop, where they cannot get much exercise; but I will tell you more of this some other time. It is quite a separate branch."

"How about quantity?" I asked. "How much food should the birds get at each of the two daily meals?"

"Yes, I might have thought of that," replied Mr. Tapley. "It is a bit of a problem, I admit. I have told you of the soft food I give to my birds. I have a bucket for each two dozen or thereabouts, because I mix the food in the pails in which I take it to the fowls. My limit is about fifty stock birds; in fact, fifty all told, when I have thinned out the chickens I do not want to keep. For this flock the stock-pot holds a gallon, and I divide the contents between two pails. I think I told you how much bran, meat, and meal I put into each pail. The pailful is sufficient for half the flock. Of grain I give them a good handful a head of the mixture, rather more of oats, and a bit less of wheat or maize, just a handful of grain each bird for 'tea.'

"A handful is scarcely government measure, although it's the easiest one when I am out feeding poultry. However, measuring the different foods in a half-pint cup, I find that a handful (one of mine) is as follows:—Toppings and barley meal mixed, or Sussex ground oats, within half an inch of the top of the cup; biscuit meal (the large kind), two-thirds; broad bran, a topped-up cup; mixed grain or oats, half a cup; maize or wheat, one-third. Such measures as these are good enough for most laying hens. In winter, or during very cold and cheerless weather, I sometimes give them about an extra handful for each half-dozen birds; but it depends on how they are behaving themselves! I feel more generous when the

birds are laying well in winter, although it does not pay to be too generous—to overfeed the hens, and so make them too fat to lay!

“What a hen should eat to keep her in good laying form and what she *can* eat if allowed to help herself are two vastly different quantities. Take a hen after she has been six or seven weeks in a coop rearing chickens, or fresh from the pheasant ground, and there will be no satisfying her for a week or two. Give such a bird the run of the corn bin or the mash tub, and she will eat until her crop stands out almost half as big as her body. The point you have to study is not what fowls can eat, but what they should have to keep them in good laying condition. Fowls in a small earth run could have only half-rations as the actual breakfast, and the balance of it at midday. This would be grain each time, and buried in some good heavy scratching litter, they would have to search for it and thereby keep themselves busy for the greater part of the day. My fowls in the new house, under the ‘intensive’ system, are so fed, and, especially in winter, with plenty of bulky mash for ‘tea’—as much as they can eat in a quarter of an hour—and green food and water, of course.

“One thing leads to another. I mentioned quantities, and it reminds me that I have not said anything of purchasing the food. One word as to this, and then we can say ‘Good night.’ If it is hoped ever to make fowls pay, the grain and meal must not be bought in ‘pen’orths.’ Small quantities always cost more than bulk. Purchase them by the hundred-weight if the flock is anything like a big one, even for such places as ours. You will say, What about storing them? Just so; it is perhaps a difficulty. Fortunately there is a large pantry in this house and I have claimed the ground floor, though not without opposition at first! However, if you cannot store by the hundredweight, purchase by the stone; even that is cheaper than by the pound. You can get suitable barrels and boxes for next to nothing, if indeed you cannot get them free. I have a tea chest that I purchased many

years since for the extravagant sum of threepence; it is tin-lined, and holds about two hundredweights of dry chick food. Two barrels (originally used for butter, I believe) I 'borrowed' out of six-pennyworth of rough wood that came to the house as firewood; each holds about a couple of bushels of meal. And I have others that did not cost me as much. They get a good scalding and drying ere they come into the poultry department, and the outsides are coated with creosote or Stockholm tar to make them serviceable. If you are after profit you must get as much as you can for nothing; and it is surprising what can be done in this direction with a little diplomacy!

"Well, I have kept you a long time to-night. But you can start right off with the birds as soon as you like. Don't forget to plan out your runs and get the houses ready before you purchase the fowls; and, while you are at it, come along again, and I will tell you something of the breeds. And as regards feeding, it will be well to bear in mind that 'the eye of the master makes the horse fat.'"

CHAPTER V

A FEW NOTES ON BREEDS

I HAD planned out one run, and, on Mr. Tapley's advice, I had sent for a house. I had an idea that the house could be made by a local man at a cheaper rate than I could purchase it elsewhere; but evidently wood and labour were not cheap in the neighbourhood, because the quotations I received in answer to inquiries were out of the question. Had I been anything of a hand at carpentry it might have been a saving, but I must admit that I did not fancy the building of such a simple thing as a poultry-house; I am no great hand at it. Moreover, it would mean my buying the wood, nails, hinges, and other little things; and in the end I felt sure that the ready-made house would be as cheap, and save me the labour. Having some time on hand, therefore, and being anxious to enlarge my knowledge of poultry-keeping, I did not fail to put it to good use by paying another visit to my "guide, philosopher, and friend."

As usual, I received a hearty welcome; and with our pipes going it was not long before we were once more in the thick of a fowl chat.

"To-night I am going to tell you something about the breeds of fowl, and particularly about those which are likely to be of service to you. I will not undertake to tell you of them all, because there are over forty different kinds, running into something like one hundred and fifty different varieties and sub-varieties of exhibition fowls alone shown in this country at the present time. Of course, some of them, although really not more than a dozen—if, indeed, as many—are purely fancy kinds, bred solely to show standards, and with no

claim to so-called 'utility' qualities. But those I will leave out.

"As a start I may as well tell you the difference between breed and variety. The former is a race; 'variety' is a branch of it—in fowls the varieties of a breed are supposed to possess the same general characteristics, but differ in colour or marking of the plumage; a sub-variety differs from the variety in some slight characteristic—generally the comb. Maybe this sounds somewhat complicated to a novice, so I will illustrate it in another way. The Minorca, for instance, is a *breed*, the black and white are *varieties*, while the rose-combed black is a *sub-variety*. I may as well also tell you that a hen is a female bird over a year old, while a pullet is one under that age; but that when I talk of hens I include pullets. Again, a sitter is a fowl which is supposed to sit on eggs and afterwards brood the chickens, while a non-sitter is one in which the natural instinct does not exist, having been bred out by careful selection. You will pardon my putting these matters to you in such a simple manner, but it will help you the better to understand me when I mention them."

I assured Mr. Tapley that I would rather he treated me as a raw recruit than as a professional, since my knowledge of poultry was confined to calling any breed by the one word—fowl!

"Very good," said he. "I will have to bear this in mind, so if I drop into professional terms, you just pull me up. The breeds can be classified under different headings, according to their claims to utility, to their popularity, to their supposed country of origin, and so forth. However, I will mention them in alphabetical order, and then no one can say that I am puffing one breed in preference to another. The several specialist breeders are just a bit inclined to be 'touchy,' and if an old hand does not happen to say that each breed—in fact, each variety—is a 'top notcher,' he is apt to get nasty things said about him! Not that I care a jot for that," he added smilingly; "but if one *can* prevent snarling—well, 'tis better

to do so. I have kept and bred most sorts at different times, and I keep well posted up in the new ones as they come along; in fact, I have two of the latest varieties in my pens at the present time. But I have no 'axe to grind,' so what I am about to tell you is what I have found out by actual experience, or what I have proof is true, and not with any idea of booming any breed or variety.

"To get along, then. The Ancona comes first. It is a black and white fowl, the white being in the form of small spots; it is very active and hardy, and about the size of the usual 'barndoor' fowl. It is one of the best layers there are, better at egg production in the natural season than in winter, although quite a good kind for intensive work in winter. The birds are small eaters, and the hens are non-sitters, while the eggs are white-shelled and of a good size. The only drawback in a small place is that they are apt to trouble a neighbour's flower-bed, since they can clear a six-foot fence as easily as a rocket! I once had some that would take over an eight-foot wire-netting fence as soon as they heard the rattle of the food pail, and to keep them within bounds I had to approach their run as a Red Indian stalks his prey! But they did lay, *and* pay.

"Brahmas are not thought much of, as a rule, for utility purposes; but they have their good points, and on a large range they are not to be despised. There are two varieties—the Dark and the Light—both of black and white colour, although with markings somewhat difficult to describe. However, I am not telling you of their show points, so I need not trouble you with them. They are active enough for their size, since they are among the biggest fowls now kept. Some people object to them as sitters on account of their feathered legs and feet and declare that they break the eggs entrusted to them. The hens lay brown-shelled eggs and are winter layers. Of course, the breed is not one I would recommend for a small yard, because to do well in such a place their feeding must be well understood; but given a free range,

where they will have to hunt for the greater part of their food, they will answer well enough.

“Buttercups—Sicilian Buttercups, to give them their full title, and nothing to do with daisies—are pretty little birds, and their cup-shaped comb is quite unique. In most respects they resemble the Campine. The cock is red, except for his black tail; but the hen is of a golden-buff, spotted with black on the back, and of a pale shade of buff on the breast.

“Campines follow the Ancona in many respects: they are very active and hardy, great producers, great flyers, small eaters, non-sitters, and layers of white-shelled eggs. They are of lighter weight than the Ancona, and having long wings they can scale almost any fence; but they shell out their eggs at a rapid rate and seldom take much of a rest between the batches. There are two varieties, the Silver and the Gold, but the latter is rarely met with in this country.

“The Cochin is very similar to the Brahma in utility points; in fact, in this respect there is no difference between them. There are five varieties: the Black, the Buff, the Cuckoo, the Partridge, and the White. Like the Brahma, the Cochin is a general-purpose breed, rather slow growing, and not the one to produce early chickens for the markets. As table fowls they are yellow-skinned and feather-legged, two points against them in that respect for the top trade, although, mind you, the colour of the skin and the state of the legs have nothing whatever to do with the quality or quantity of the flesh.

“Dorkings, the grand old English breed! For years the only fowls fit to be placed on the festive board! The table fowl of fowls! I dare not pass them without mention. But, my boy, if you are looking for profit from a few fowls you will have to overlook this breed. It has fallen from its high estate and no longer does it rank as a utility fowl, although in the south-eastern counties Dorkings of sorts are still kept at some of the farmyards. There is no doubting its table properties, but as a rule

it is better when crossed with the Old English or Indian Game.

“The Faverolles—it is the name of the singular as well as the plural—is in some respects like the Dorking: a large fowl, with a deep and long body, and having five toes on each foot. It is a quaint-looking bird, with a full set of whiskers, leggings, and boots! There is no mistaking it for any other breed. However, it is in every way a utility fowl, big, hardy, and quick-growing, a grand table sort, and a good layer of tinted eggs. It was ‘made’ in France, and since it was bred from Brahmas, Cochins, Dorkings, Houdans, Langshans, Malines and Plymouth Rocks, and perhaps a few others—well, is there any need for me to say anything more about it? It is white-skinned and fattens well for the very best markets.

“There are two distinct kinds of Game fowls: the one known as the Modern, and the other as the Old English; the former is purely a fancy breed, but the latter possesses many good utility points. With the Modern I need not deal. Of the Old English there are really two classes, the exhibition type and the pit Game. Oh, yes, cock-fighting is still carried on in the world, and some of the very best fighting game are bred in this country to-day. However, ‘cocking’ cannot be said to be utility, so I will not tell you of it. The Old English Game is a first-class table fowl, and in this respect it has been called the ‘gentleman’s fowl.’ It is plump and small-boned, hence it is all flesh. The hens are not particularly good layers, but they are excellent sitters and mothers, and can defend their young against any enemy. I always like to keep a Game fowl or two.

“The Hamburgh shines solely as a layer, and as such it has scarcely an equal, certainly not a superior, for number of eggs. The only disadvantage, beyond its flying propensities—and it equals or even excels the Campine in that direction—is the size of its eggs; they are not big, and the best are only of medium size. Nevertheless, I once kept Hamburghs in a town back garden and found no difficulty in selling their eggs to a private

customer at full price in the scarce season. You see it is not everyone who can fancy a large egg, although for the ordinary housewife the larger the better! There are several varieties of Hamburgh, but, for laying, the Black is the best. The birds are about the size of the Campine and resemble that breed in most points.

"One would scarcely keep Indian Game for paying purposes outside the Fancy, but they have had a vogue during recent times as a good fowl to cross with the Dorking for the table. They are too slow-growing to suit me and I cannot recommend them, although they are kept in fairly good numbers at the farms in the West of England, where they are said to 'do' well. That may be, and there may be something about the west that suits them; but they do not pay in this district, and I know of very few in which they do—as utility fowls.

"The Bresse—La Bresse, as it is called—are good layers, producing large white-shelled eggs; but in the land of their birth (France) they are spoken of as first-class table fowls. That may be, when considered as *petits poussins*, asparagus chickens or milk chickens, little bits of things about equal to a good fat pigeon; but there is not much call for such table birds in this country—at least, not sufficient to warrant anyone going in for them. Hence it is as layers only that we must consider La Bresse, and that is where they excel. I have had eggs from them running to seven to the pound, although, in justice to other breeds, I must tell you that the weight of the egg is largely governed by the way the birds are fed. They are small birds, and as chickens they never appear in the raw stage, feathering up from the shell. They are certainly very quick growers and mature early. I have had cockerels crowing at nine weeks, and at such an age being well-sprung in headgear—a sure sign of the laying qualities of the breed. There are two varieties, the Black and the White.

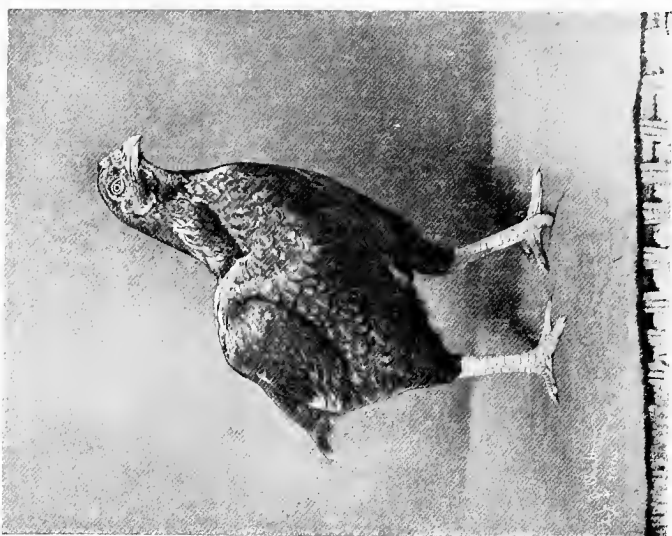
"Like Game fowls, there are two types of Langshan, but in this case the one is called the Croad and the other the Modern—at least, this latter is known simply as the



INDIAN GAME COCK

THE PROPERTY OF MESSRS. FIRTH BROTHERS, WHARTON FARMS, ACTON, W.

(Both well-known prize birds.)



INDIAN GAME HEN

THE PROPERTY OF MESSRS. FIRTH BROTHERS, WHARTON FARMS, ACTON, W.

(Both well-known prize birds.)

Langshan. There is only one variety of the Croad, viz., the Black, while of the other there are the Black, the Blue, and the White. The difference between the two types is practically in the length of their legs, those of the so-called Modern being almost as long as the legs of the Modern Game. Some people prefer fowls resembling storks, and others do not. That's why we get the difference, I suppose. However, that need not trouble us. I'd 'plump solid' for the Croads for utility purposes if for no other reason than that they are not so likely to be troubled with leg weakness in the days of their youth. The Langshan is a good-sized fowl, about half-way between the Brahma and the Campine, and it is of hardy constitution. The hens belong to the sitting class, but they are good layers of brown-shelled eggs, and forage well. They can stand the cold, and I have had them laying well throughout the winter.

"Leghorns are of the non-sitting class, and as layers of big, white-shelled eggs they want some beating. What I have told you of La Bresse in this respect applies as truly to the Leghorn. It is a rather small breed, hard feathered, sturdy, and the acme of activity. I have kept Leghorns off and on for many years now, and I have never had better fowls. They will lay well in winter, if hatched at the right time and given a reasonable amount of shelter. There is a wide range of varieties and sub-varieties—about a score—since most of the original single-combed kinds are now bred with rose combs as well. Yes, they are profitable fowls are the Leghorns, and they are one of the few breeds which have been pushed along for the 'great' egg strains.

"And so it is with the Minorca. This is another breed with a great reputation as a layer and as one that produces big, white-shelled eggs. It has not a superior as a townsman's fowl, and, with the exception of the Black Leghorn, I question if there is another breed which has been so widely cultivated as the paying fowl of the backyard. I have seen hundreds of these birds kept, and well kept, too, almost within sound of Bow Bells; and you can

rest assured that they would not be on the premises if they did not pay. There are two varieties, the Black and the White, but it is seldom one sees the latter. The Minorca, like other breeds of the non-sitting class, does not claim to be a table fowl, although I have carved more than one cockerel which I have fed up for killing, and the flesh was good enough for most folks.

“Taken as a whole, the Orpington is about ‘top notch’ for all-round utility purposes—that is, there is not a better breed to produce the combination of layer and table fowl. It is one of the biggest, too, and, for its size, it is active. The hens are good layers of brown-shelled eggs, and they fill the bill as sitters and mothers. There are something like a dozen varieties and sub-varieties of the breed, but they differ somewhat in their utility properties. For instance, I have found the Buff about the best for the ordinary poultry-keeper, although the White comes in as a close second, where its plumage is not likely to be soiled by the smoke. I think there is no more dejected-looking fowl than a white one when running where it cannot keep its feathering spotlessly clean. Such birds never figure well in a town backyard, although out in the country, on a grass run, they look beautiful. The Jubilee—yes, it is a peculiar name for a variety of fowl, and the mention of it generally makes a raw recruit raise his eyebrows!—is also a good all-round sort, although not bred to any great extent. The Spangled is better as a layer than a table fowl; but the Black is nothing like as good as it used to be, some fanciers breeding it too near the Cochin for my liking. However, taking the Orpington as a whole, it is still an excellent breed for utility purposes.

“The Plymouth Rock is another good specimen of the all-round or sitting class. It differs from the preceding one in the colour of its skin, which is yellow, while that of the Orpington is white. But that does not interfere with the utility properties of the fowl. Its yellow skin, in fact, proves that it is a very hardy race; and so it is, doing well in any part of the country. There are four

varieties of it, viz. : the Barred, the Black, the Buff, and the White. There are, too, some new-fashioned kinds, such as the Golden Barred and the Partridge, this latter being none other than a sport from the Partridge Wyandotte. I have not tried either of these 'latest out,' but I have had some of the others, including the rose-combed Barred. The Black is about the best layer, and, with its close feathering, it is a handsome fowl. The other sorts are all suitable for utility, and any of them can be kept at a profit.

"What I have said of the Plymouth Rock applies equally to the Rhode Island Red, an old-established American breed which has been taken up in this country, and which, in my opinion, has a big future before it, if the prejudice against yellow-skinned fowls can be overcome. For myself, I never allow that point to worry me when I have a well-cooked and nicely-served bird in front of me. The great thing in a table fowl for such as you and me, my boy, is to have one at which you can 'cut and come again.' That is the Red to a turn, when he has been well grown, because the breed is a good one to feed for the table, doing itself well when it gets the chance. There is a rose-combed Rhode Island Red as well as a single-combed branch, but both are good, and, being hardy, the hens will lay well in the coldest weather.

"The Sussex is about equal to the Orpington for all-round utility properties. The hens excel as layers, and the eggs are of good size and brown-shelled. The birds belong to the sitting breeds, and both hens and pullets are careful mothers. You have doubtless heard of the Sussex fowl on the markets as being one of the best for the table. But you must not imagine that all poultry sold as 'Sussex' are actually of the Sussex breed. The market term refers to style and not to breed, and thus it happens that, for instance, fowls reared in Ireland and Wales are often sent to Sussex, to be fattened and finished in the style once peculiar to the county, and forwarded to London as 'Sussex' or even 'Surrey' birds! Nevertheless, the

Sussex is a very good breed for utility purposes. There are four varieties, viz. : the Brown, the Light, the Red, and the Speckled. Some people say that the Brown is not a Sussex, but it is as much a branch of the breed as are the others and it is every bit as hardy. It certainly looks like a rather coarse-boned Old English Game fowl, but there are many breeds in the poultry fancy nowadays that are very much like each other, so that need not worry anyone !

“Last, but by no means least, is the Wyandotte, and, like the Plymouth Rock and the Rhode Island Red, it was brought out in America. The two breeds are not unlike each other in many points, but the Wyandotte is purely a rose-combed one. When birds of the other kind do come—those with single combs, and they are by no means rare—they get another name ! The breed is a yellow-skinned one, although some strains of it have white skin. It is of the sitting class, and the hens are good layers of brown-shelled eggs, although the eggs are not so large as those of some other breeds. However, there is no difficulty in disposing of them, so you need have no fear of it being a profitable breed to take up. The family is the largest in the poultry line, and it has no fewer than sixteen varieties, these being the Black, the White-Laced Black, the Blue, the Blue Laced, the Buff, the Buff Laced, the Columbian, the Buff Columbian, the Cuckoo, the Gold, the Partridge, the Red, the Silver Laced, the Silver Pencilled, the Spangled, and the White.

“Well, my boy, that is a long enough list from which to make a selection, and if you can't find a couple to suit you, you will be hard to please ! There are other kinds kept in this country, such breeds as Andalusians, Aseel, Crève Cœur, Houdans, La Flèche, Malays, Malines, Polish, Redcaps, Scotch Greys, Silkies, Spanish, Sumatra Game, Yokohamas, and a few others ; but although they doubtless have their good points they cannot be considered as breeds from which one is likely to get a profit in the utility line.”

Yes, the list was indeed long enough, so long, in fact,

that the difficulty to me appeared to be which two to choose! Naturally enough, being a raw recruit, I wanted guiding on this point as much as on others—perhaps more so, and that was why I asked Mr. Tapley which he would select if he were in my place. But he was not to be drawn on that subject. As he said, and I must admit that I saw the force of it, if he told me to select two varieties, it would not be fair to breeders of other kinds. What he did tell me, however, was the names of the varieties kept in the neighbourhood, and these were: Black, Brown, Buff and White Leghorns, Black Minorcas, Buff and White Orpingtons, Barred, Black and White Plymouth Rocks, Black and White Wyandottes, and mongrels—the mongrels being mostly at the farms.

“And talking of mongrels,” said he, “it sometimes happens that a good bird or so can be picked up among the ordinary stock kept at the farms. Farmers, as a rule, do not go in for pure breeds, because, as one or two of them told me, the pure breeds are all very well for people who like to show their birds, but they are not much good for laying! Of course, that is nonsense; and it has been proved time and time again that if one wants to form a good strain of layers there is no plan to equal breeding from a carefully selected pure race. What many of them do, however, is to get a change of blood each season, by mating a pure-bred cock with the best of their hens. Mind you, that is not a bad plan, and if the farmers were to keep to one variety they would eventually breed some really reliable fowls.

“As I say, there is often a chance of picking up some capital birds at the farms, if one knows what one is about. I generally buy five or six broody hens each season in January and February to bring off my early chickens, because it pays me better to do so than to get my birds broody. I aim at winter eggs, so my own fowls are laying then, and I seldom have a sitting hen among them until summer. But of the hens I have obtained as ‘cluckers,’ I may mention two very good Black Plymouth Rocks, direct sports from the Barred variety; a rose-

combed Black Orpington, Wyandotte bred perhaps, but with every point, even to leg colour, as it should be; a couple of White Wyandottes; a White Bresse, by no means a bad specimen; a Columbian Wyandotte, no doubt bred from Light Brahmas; and a Cuckoo Old English Game, spurred and all!

"Most of the 'cluckers' I run on for laying after they have reared their chickens, and when they have completed their batch of eggs, I generally fatten them for the table. But when I get a likely bird, I don't mind admitting that I ring it, let it moult through, and breed from it the next season. And I am not the only one who breeds from these chance-bred birds. I well recollect not so many years ago hearing of a certain bird which won more than one first prize in strong competitions, and which eventually sold for a good figure, that was chance-bred and picked up at a farm 'for a mere song.' However, I am getting away from the point. I was telling you of farmyard stock.

"There are some first crosses, the result of mating two pure breeds, which often pay well to rear; and by so mating two breeds, which do not excel as layers, the progeny are often quite good birds for the purpose. I have in mind the Brahma and the Dorking, using a cock of the latter with hens of the former; the pullets, Dorking—Brahmas, will excel either of their parent stock. Then, again, such crosses as White Leghorn—Wyandotte, White Leghorn—White Orpington, Minorca—Langshan, Minorca—Buff Orpington, Houdan—Buff Orpington, Andalusian—Plymouth Rock, to mention only a few, are good to run on for laying. Personally, I prefer to keep pure breeds, for the simple reason that there is the chance in the breeding season of selling a few 'sittings' of eggs at an increased price. Nevertheless, many poultry keepers, and particularly 'back-yarders,' like these first crosses."

I thought I had done well for the evening, but there was one other point on which I wanted information, and I did not fail to ask a question.

"Are there any special breeds you would recommend for winter laying?"

"No," said Mr. Tapley. "Winter laying, as I believe I have already told you, is a matter of hatching, chiefly. Granted good fowls with which to commence, I should hatch sitters in March and non-sitters in April. Pullets out then can generally be relied on to do their duty in the winter. But more of this next time, when I will tell you of the chickens."

CHAPTER VI

THE CHICKENS

"THE keeping of fowls for the production of eggs, and the keeping of breeding stock for the production of chickens, are two distinct branches," said Mr. Tapley, when I asked him for a chat on chickens. I will admit that I was somewhat of a greenhorn at the business of poultry-keeping; but I was not so raw as to imagine that chickens were produced except via the egg! Consequently, I failed to see the point of that remark, and I did not hesitate to say so to my friend. He smiled.

"That's my way of putting it," said he. "What I mean to impress on you is the fact that if you want the maximum of eggs during the winter, you must manage your fowls to that end; but if you require early chickens, or even to hatch them in the natural season, you must not force the stock to lay at top speed in winter and then expect them to be ready to produce fertile eggs when other birds are just commencing. A great layer rarely makes a good breeder the same season, and I want you to bear that in mind. It is trying to get too much out of hens that has led to so much weakness among the flocks. The extreme utility man will probably tell you, if you put the matter of weakness before him, that the fancier has ruined the breeds by in-breeding. 'The shoe is on the other foot,' however, and in ninety-nine cases out of a hundred it has been due solely to the utility poultry-keeper trying to get his fowls to do too much. Just you treat your layers and breeders as two distinct branches, and you will find that the results will be much more satisfactory.

"The plan I have found to be the best, and one which

I have followed for years now, is to run the pullets on for laying and not to breed from them until they are hens—that is, when they are in their second laying season. I am never in a hurry to get my pullets to begin laying ere they are out of their chicken stage. It seems to be a weakness with some folk to have their young stock laying when the birds should still be growing; and if those people can get their pullets in lay at four months of age they imagine they have done a great thing. Nothing of the sort! If they kept the birds back for another couple of months it would be the wiser plan by far. I admit that it is not always an easy thing to prevent the January and February hatched chickens laying in the early summer, and particularly if the birds are being forced on for the spring markets or for summer shows. But it can be done, and simply by growing them slowly, and making them build up a good frame first.”

“But would not that rather depend on the feeding than on anything else?” I asked.

“Not exactly,” replied Mr. Tapley. “It’s a question of management as well, probably more so than feeding. Of course, the pullets must not be given a forcing diet. These winter-hatched birds, which commence to lay at a very early age, rarely, if ever, produce other than small eggs in their first season—too small, in honesty, to be marketed, though, mark you, my boy, the consumer cannot always pick and choose in these days! Admittedly, the thing he is after is the genuine new-laid egg; but, not to put too fine a point on it, it is cheek to foist on the public 1½ oz. eggs at 4d. or 6d. each. The price is a good one, and so the eggs should be—at least 2 oz. each.

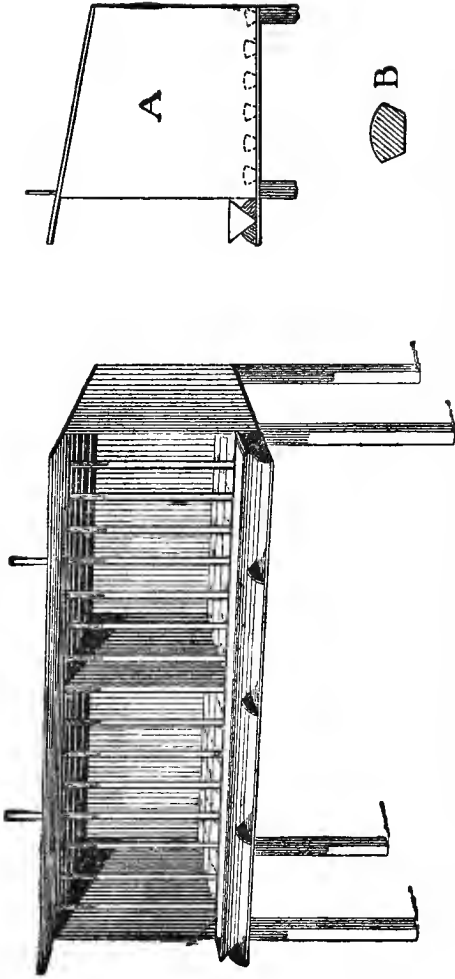
“In my opinion it is no advantage, when layers are being dealt with, to hatch the pullets sooner than March; and it is better to let them come along slowly. It should be remembered that the more matured the pullet before she commences to lay, the bigger her eggs. I do not wish you to imagine that the bigger the hen or the heavier the bird the larger her eggs. That is not so; and if proof were wanted of it, one has only to compare the eggs of

the Black Leghorn, for instance, with those of the Black Orpington. Here we have one of the smallest and the largest of layers; but when it comes to size the Leghorn easily gets first. However, I am wandering from the subject, and rather putting the cart before the horse.

“What you want to know about just now is the best way to get chickens, or rather, the way to get the best chickens. Very well, then; I will tell you something of the hatching and rearing. These can be done in two ways—naturally and artificially, by the hen or by ‘machinery’! I will deal with natural methods first, since they are by far the easier. When a hen wants to sit there is no mistaking her intention. She will squat on the nest in a fluffed-up manner, and if she is approached she will either show fight or give voice to a most indescribable scream. If she is induced to leave her nest she will probably go about the run with her feathers well ruffled and begin to cluck. She is then ready to sit, and, provided she means business and you want her to do it, the sooner she has eggs the better. This state of the hen is generally referred to as the broody ‘fever,’ but, as a matter of fact, it is not a fever at all!

“Mind, you must not imagine that every hen which remains on the nest for a longer time than usual is broody, because the bird may be egg-bound; but in this case she will leave the nest hurriedly when approached. As a rule a hen on becoming broody gets dull about the head and her comb shrinks. Not always, because I once had a hen—the only one, I must admit—which was as rosy while she was sitting and brooding her chickens as she was on the day that she laid her first egg. I would not go as far as to say that it is a sign of good laying, because I have not tested it; but that hen was fully broody on the following day to that on which she finished her first batch of eggs, and she laid again exactly six weeks after I put her down on a dozen eggs.

“It is considered best not to allow a pullet to sit when she first shows signs of broodiness, since a young bird generally does not make a reliable sitter, often for-



A TWO-COMPARTMENT FATTENING COOP: USEFUL FOR BREAKING " BROODY HENS
 a) End view showing trough and sparred bottom. b) Section of spar or perch.

saking her nest after a week or so. This has certainly been my experience, and I have found it better to break her than to give her a batch of eggs. It is nearly always advisable, even with hens which are known to be reliable sitters, to give them a few dummy eggs for a night, to see that they are in earnest, especially if the 'cluckers' have been obtained for the purpose from a strange yard."

The mention of "breaking" a bird made me curious, so I asked Mr. Tapley how it could be accomplished, and he, ever willing to oblige, did not mind my interruption.

"To break a pullet of her broodiness is a simple matter," he said, "and in the height of the winter laying season it is often the better plan, if the bird has given promise of good laying. How I manage it is to put the fowl into a coop with a barred floor, such a coop as is used for fattening purposes. This coop I put into a light place, and where the other birds can 'talk' to the inmate; and I take care to feed the fowls at liberty in front of it. The prisoner is fed as usual, and I give her plenty of drinking water and fresh green food. And at the end of a week, or ten days at the outside, she has forgotten all about her broodiness and is ready to begin laying again. I might here say that providing fowls with nests in the light and not in stuffy places, keeping out of their diet any fat-forming or over-heating food, putting a pinch of salt occasionally in their mash, and making them take a good amount of scratching exercise, go a long way towards preventing broodiness.

"But to return to the broody hen. The most suitable birds for the purpose are those which are big, soft-feathered, of a quiet disposition, and have rather short legs—such breeds, for instance, as the Orpington, Plymouth Rock, Rhode Island Red, Sussex, and Wyandotte. Of course, it is not necessary to have a pure-bred hen to do the incubation. Many, nay, most, 'barndoors' are well suited to sit and brood; in fact, this is about all some of them can do in a profitable manner! There are other sitting breeds of the pure races, and among them may be mentioned Brahmas, Cochins, Dorkings, Fave-

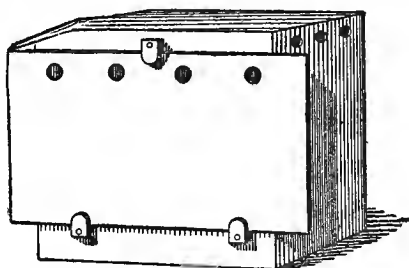
rolles, Indian Game, Langshans, and Old English Game. The feather-footed kinds are apt to be clumsy with eggs, and to smother the chickens while they are coming out of their shells; but I cannot say that the 'boots' are so very much against the birds if the hens are properly treated. That is the chief point, and there is more in it than many poultry-keepers seem to think. Then, again, some people object to the Dorking on account of the five toes on each foot, and declare that the extra toes are handy for killing the chickens. I have set many a Dorking-footed broody hen, but I have never had occasion to blame the extra toes for any deaths. One of the very best cluckers I ever had, and an excellent mother, too, was not only a ten-toed hen, but she had a spur on each leg over an inch long! However, these feather-footed and ten-toed hens want very careful handling, so you had better select the other kind.

"Another point that may be mentioned, because it is very often overlooked by the novice, is to choose clean-legged hens. I don't mean that their legs must of necessity be free of feathers, but the scales must be smooth and free from any roughness or scurf. I have on two occasions set hens suffering from what is known as 'scaly leg,' but in each case the result was the same, namely, three or four chickens in each batch developed the disease to such an extent that I had to put them out of their misery. It's a small item, no doubt, but it is well worth noting.

"Now, although a hen which is allowed to choose her own nest and 'sit away' generally brings off a good brood, it is not a wise plan to give the bird the choice in the matter. I have seen a hen at a farm bring off a brood of chickens on a haystack, and I admit I would have been inclined to add the usual grain of salt to the account had I not witnessed it; but I helped the poultry man to get the chickens out of their lofty nest! I have had my own fowls steal their nests in hedge bottoms, in a wood shed, and in all out-of-the-way places, and bring off good broods. But they don't get the chance of doing

anything so foolish now, and I set them where I can find them! It saves a lot of work looking after them. In winter and early spring the hens sit in a shed, and at other times, unless it is a particularly wet season, I have them in the open.

"I must admit to being somewhat 'faddy' at this part of the business, and I always put the hens in proper nest-boxes. These are not less than 15 inches each way, and they are home-made. I knock them up out of boxes I get from the stores, and the maximum price for the



BOX FOR SITTING HEN

boxes is sixpence. I don't contract for a regular supply of them, but I use any that come to hand. That is why they vary in size; but a regular order would mean an increased price. It's a little way the tradespeople have! When these nest-boxes are in the sheds they are bottomless, but no matter at what season I put them outside I always give them a wooden floor. They are then all wood; a 3-inch piece is nailed along the front at the bottom to keep the nest in place, but the remainder of the front is movable, while the top also is made to take off. Ventilation is provided by three or four 1-inch holes along each side at the top and also in front, and that is all the fresh air the hen gets while she is sitting.

"The actual nest must be properly made. I put a shovelful or so of dry earth into the box, and, if the hen has been used to lay on some other material, I mix a

handful of chaff dust or 'chop' with it, but never as a layer on top. The earth is pressed concave shape, but not too deep in the centre. It is so made that the eggs will rest on it without pressing against each other; but I take care to see that the corners of the box are filled, so that, should an egg get displaced, it will not be out of the nest. When all is ready I put the eggs in and place the hen where she can see them; and if she is thoroughly broody she will not hesitate to walk in and settle down to business.

"The best time to set a hen is at night. She has been sitting on the dummy eggs on the nest where she fell broody, and she can generally be moved much better when she has 'gone to bed.' The number of eggs to form a nest depends on one or two things. It is an old notion, and very much followed even to-day in some parts of the country, to set a hen on an odd rather than an even number of eggs, superstitious people declaring that no good comes of even numbers! It is all nonsense. In the early months—that is, in November and up to February, my nests consist of not more than eight eggs; but later on they are made up to sixteen or so, just as many as the hen can cover. My reason for the low numbers in winter is so that a hen can brood her chickens thoroughly until they are at least two months old, since they require 'mothering' until then when the winds are bitter and the frosts are about.

"Having set the hen, all you have to do is to see that for the next twenty days she comes off the nest once per diem to feed, drink, and stretch her wings. Her food during this time should be grain only, and she should have at least a good handful of it. The best grain is that of a heating nature, and there is none better than maize, with 'mixture' once a week. Some poultry-keepers let their hens have green food as well, but it is not necessary if the birds keep fit. I always give them a drink of water, although I prevent them having their fill of it. It is a capital scheme, if fertility is not high, to set several hens at the same time, and then put the broods together

for one or two hens. In this case it will be best to peg the birds when they are taken off to feed.

"It is not a good plan to let the hens leave the nests of their own accord, since they will often forget all about the eggs and let them get cold. Yes, I know. You are thinking of the hens which steal their nests and bring off good broods. But you never find a hen doing that except in the natural season. I always take mine off, and that is why I have the top of their nest-box made as a lid. It is an easy matter to put a hand at each side of the bird and lift her gently off; and you can then have her securely in one hand to peg her. I never like to drag a hen out of her nest, and I have known it to result in broken eggs. Of course, if the bird is a bit foolish and makes a fuss, just grab her by the feathers between her shoulders, as you would pick up a kitten, and she can be lifted off quite easily and without a struggle."

Mr. Tapley had spoken of "pegging" the hens when he took them off to feed. The term appeared to be a professional one, so I asked for information respecting it.

"That's right, my boy," said he, "pull me up when you want a point explained. By 'pegging' the hens I mean fastening them to a peg so that they cannot wander. To do this I drive a 12-inch stick firmly into the ground, and to it I fasten a piece of stout cord about a foot long, and with a loop at the other end. The loop is put on the bird's leg as a slip-knot, and she is thereby allowed to eat and exercise her wings without wandering where she feels inclined. Some birds resent the cord at first, but they generally get used to it. You must be careful to see that the pegs are far enough apart to prevent the hens fighting, which they assuredly will do if they get the chance.

"But to return. Feed the hen at the same time each day and treat her gently, and she will drop into the new order of things. Some poultry-keepers test the eggs at the tenth day—that is, they examine them by means of a strong light and remove from the nest all eggs that are not fertile, or those in which the germ has advanced to a certain stage and has died. The idea is to keep an even

temperature in the eggs. It is well known among those who make a point of studying such things, that the temperature of the fertile egg is two or three degrees higher than that of an infertile egg; consequently, it is said that the presence of infertile eggs in a nest so reduces the temperature of the others that the result will be a poor one if those eggs are not tested out. The theory is no doubt good enough; but I have never once tested the eggs from under a hen for the purpose of removing the infertiles. And when I set the hen the only eggs taken from her in the three weeks are those that may get accidentally broken. I really cannot spare the time to do it, because at this establishment I am my own poultry man (food-mixer, cleaner-out of houses, collector of eggs, slave to the broody hens and chickens at all stages, slayer of the innocent, plucker and trusser, and salesman), gardener and gossip!

"No; I cannot find time to take on the extra task of testing the eggs, so I leave them to take their chance. As a matter of fact, there is no utility in 'testing out,' and I have yet to learn that the presence of infertile eggs does materially interfere with the others. I do not say that I never get 'dead in shell,' because even from the best pens some eggs contain germs that advance to a certain stage and then give up the ghost! But ten strong chickens and two clear eggs from a dozen is not an uncommon result, and I have had three good chicks from ten eggs, the remainder being perfectly clear. That seems to knock the theory somewhat out of court; so I do not recommend you to test the eggs. It is at best a risky operation in the hands of a novice.

"If all has gone well with the eggs there should be signs of 'chipping' on the twentieth day—that is, one or two eggs will have their shells broken near the large end, the break being in the form of a star, and showing that the damage has been done from within. It is the first sign of life, and if you could watch the egg you would see the shell being broken all round until the 'lid' is away from the body of the egg. But it will not pay you

to do so, hence we will pass on. If, when I take the hen off to feed her on the twentieth day, I see signs of chipping, I visit the nest at night, gently remove the hen, and if any chicks have liberated themselves I promptly transfer them to my pocket and bring them into the house. They are then put into a basket and covered with flannel and go in front of the fire; in winter a hot-water bottle is put in also, the bottle being wrapped in flannel. And any chickens hatched during the next day are brought in to keep them company. I find it best not to interfere with the hen more than is necessary, hence I merely look for chicks at feeding time next day and again at night. When I am satisfied that the hatch is over (and that will be at the end of the twenty-second day), I remove the hen to the rearing coop and put the chickens with her.

"It is not everyone who tends to the chicks in this way, and simply because some of the text-books tell readers to let the hen see to her brood. That is all very well if she were capable of doing so; but is she? It is not good enough for me! One season I happened to be away from home when my first brood was due, and one of the biggest Black La Bresse chicks I have ever seen was crushed because it was left too long in the nest while the others were getting out of their shells. It happened only once, take my word for it! Another thing the text-books say is that the hen should be allowed to have a dust bath before she is given her brood and put in fresh quarters. I have never seen a hen which would think of a bath when she has been robbed of her chicks. She's just too fussy for that sort of thing; and if she does not get her brood in a very short time there's going to be trouble.

"I've told you that I have fads when it comes to chicken rearing. Here is number two—the first-stage coop must be a double compartment one to please me. Here again I rely on the stores, and I am my own carpenter; and there is nothing I enjoy more than making small appliances of this kind. They are necessary, so if they cannot be home-made they have to be purchased. However, I think I am correct in saying that few of the



THE DOUBLE-COMPARTMENT (OR FIRST STAGE) COOP
(A Columbian Wyandotte Hen and Barred Plymouth Rock Chickens.)



THE "SECOND STAGE" COOP
(Some early-hatched La Bresse and Plymouth Rock Chickens.)

big appliance makers in our line 'list' such a coop as I use. It is not entirely my own idea, and I don't want to say it is; but it is an improvement on one which came out about thirty years ago. Its advantages are such as to make me use it in preference to any other."

That being so, thought I, it would be a good thing to get particulars! Mr. Tapley readily gave me dimensions when I asked for them, and, moreover, he took the trouble to bring one in for inspection. The measurements were as follows: breadth, 2 feet; depth, 1 foot 6 inches; height in front, 2 feet, and at back, 1 foot 8 inches. In front 1 foot 2 inches wide was solid wood, and the remaining 10 inches had two upright bars, while at the bottom there was a piece of wood 2 inches high to prevent the litter from being scratched out. There were four 1-inch holes at the top of the end next the bars which acted as ventilators when the front was in. This front consisted of three broad bars fixed at the top and bottom, and acted well as a door through which fresh air could pass to the holes above. This door was in one piece, of course, and it was kept in place by a bar of wood, one end of which was screwed into one of the coop bars, while the other end was caught in a bent nail. The lid was movable but not hinged, and it was secured by a piece of cord nailed on one side of the coop and fastened on a nail at the corresponding side. The roof was covered with tarred felt, and the sides were tarred and painted; the floor (it had a fixed wooden floor) was thickly tarred underneath.

"That is an ideal coop for chickens up to two or three months of age," said Mr. Tapley, "the time they are kept in it varying according to the breed. It is large enough for a dozen youngsters, which is about as many as a hen will brood comfortably in winter and spring, although in summer a big hen will easily manage about twenty. I don't use hinges when I can do without them, not only because I cannot get them free (and even their small cost adds to the other side of the account), but they are apt to get rusty, and if put on under the roofing felt they will soon wear a hole in the stuff. I never try to

save with tar, and I use it wherever I can. It is cheap in this district, and, purchased at the gas works in the drum (your own drum) it costs about 3d. the gallon. It 'works' easily enough in warm weather; in winter, if brought to the boiling point (be very careful when you are 'cooking' it), and *when taken off the fire* it has a dash of paraffin oil stirred into it, you will find that it can be applied as easily as paint, and it will dry hard and not be softened by the sun. All the roofs of my poultry houses and chicken 'huts' get a coat of it at least once a year, and I often apply it to the sides as well. It is a grand preservative, and is proof against wind, wet and sun.

"But I am afraid you will have lost the thread of my chicken chat. I was saying that when the chickens are all out they should be cooped with their mother. Now begins the question of feeding them. Don't be in a hurry to start them in that direction, because they will not require any food until they are at least two days old; and it is very little they will need to eat during the first week. They just want to be kept warm and dry until they have got used to their surroundings. Offer them food on the third day, but do not despair if they appear not to be eager for it. Even the old hen does not always understand this, and the fuss she makes in her endeavours to attract them to the food is surely proof of it. Feed her well, and then she will be able to look after the warmth. So much, then, for natural hatching.

"Artificial incubation is another thing, and, let me say, a somewhat difficult undertaking in comparison with 'the old hen.' It is said that a child can run an incubator. I suppose there *are* infant prodigies in all professions, but I want to meet that kiddie who can operate a 'hen-machine' and get any chicks out of it! It cannot be done, and to get cent. per cent. out of it is what most men with the average amount of intelligence cannot do. I am not wanting to scare you about artificial methods, my boy, but you will find that even the best incubator is not equal to the best broody hen."

"Now, if that is so," said I, "why is there such a

demand for incubators? There must be something of a trade in them, seeing how many different makes there are on the market, and how largely they are advertised."

"Yes, I quite agree with you," said Mr. Tapley. "And don't imagine for a moment that I want you to believe the incubator is useless. I am just telling you that the machine wants knowing to get the best out of it, and you must not think that all you have to do with an incubator is to kind of drop a penny in the slot and the figure works! On the other hand, you don't want to be tinkering about with the thing when once you have got it going; the task is to get it right at the start, and that is where so many fail—men as well as machines.

"But there is no question as to the advantage of artificial methods over natural ones when poultry-keeping is being carried out on anything like extensive lines. When you have eggs to go down there is no waiting about for the hens to fall broody, no scouring the countryside in search of cluck hens, and then feeling that you have been filched into paying just twice the market value of the old birds!

"With an incubator you can start hatching operations when you like, once you have mastered the machine. It is the mastering that worries most people. It wants patience to get the heat going at the right temperature; and if you haven't patience, give up the attempt to get the machine in working order, otherwise you will probably bring in the aid of the coke hammer, and that is going to reduce the incubator to scrap-heap price in two shakes. However, that is perhaps taking the extreme view of the matter, so I will give you a few hints on how I work my machine; and when you go in for artificial methods you will know how to set about it.

"There are two distinct types of incubator on the market, hot air and hot water, and both are good. Mine is of the latter kind, and just because I was able to pick it up at a low price when a poultry-keeper was giving up the business. In my opinion there is no best machine, and all of those made by firms with a reputation to uphold

will give satisfaction if they are properly worked. As a rule a book of instructions accompanies each machine, but it sometimes happens that the instructions are not explicit enough for the raw recruit—too much is left to one's imagination. Of course, the makers expect the buyer to possess an ordinary amount of common sense, and to use it! But they are too apt to take it for granted that the beginner is well up in incubation.

“When you have decided on the machine you are going to work, and have received it from the maker, see that all the parts are with it. This can easily be done by checking them with the list in the pamphlet; and you can see how to adjust them by glancing at the sketch which should be in each set of instructions. Place the machine on a firm table in a well-ventilated, but not draughty, room. If you have a clean and dry cellar it will be as good a place as any; but if you are going into the business on a large scale, even if you are going to run five or six machines, you will find it better to have a special shed built for them. Such a shed must have double walls and door, packed with sawdust; and there should be a top ventilator, and a couple of windows made to open outwards from the bottom. The floor, too, must be a solid one.

“One of the most important points at the beginning is to take care that the table is a firm one. Some poultry-keepers sling their incubators on a platform from the roof, but I have found a heavy bench as good as anything for the purpose. The machine must be quite level and firm, and well away from the wall, so that the air can get all round it. There must be no severe draught on it, but there must be fresh air in the room; and there must be no slamming of the door while the incubator is working. The room in which the machine is placed must be kept at a fairly even temperature, and one with a temperature of 60°, with little variation either way, is perhaps best for the purpose.

“I like to run a fresh incubator (one I have not previously used) for at least a day before I entrust eggs to it.

I put the thermometers in the drawer, and having closed it I fill the tank two-thirds or so with warm water and light the lamp. Only the best paraffin oil must be burnt, otherwise the burner will become dirty, the wick get choked, and the flame will give a smoky light, all of which will interfere with the temperature of the egg drawer. When in this trial run the temperature reaches between 97° and 100° , it is at its height as far as the flame is concerned, and it is then necessary to increase the temperature by means of the regulating bar. Hence, when the incubator has been working steadily at such a temperature for an hour or so, the lead weight must be moved along the lever towards the damper, a little at a time, until the desired heat is registered on the centre thermometer in the egg drawer, the drawer, of course, being kept closed the whole time.

"The temperature for successful hatching is between 102° and 105° Fahr., but the best will be between 103° and 104° . For the first ten days, when the machine is in full working order, I keep the atmosphere of the drawer as close and moist as possible, and aim at a temperature of 103° , while during the remainder of the three weeks I keep the drawer well ventilated and fairly moist, and aim at a temperature of 104° . The only difficulty about the temperature of the egg drawer is that in some machines it is not level in all parts of the drawer; and there may be as much difference as four or five degrees between the centre and the corners. Therefore, during the trial run I put two thermometers in the drawer, one hanging from a string or wire across the middle of the drawer and over the exact centre of the egg tray, and the other in a corner.

"Like almost everything in the appliance line, the advertised sizes are often misleading. Thus in houses, $\frac{3}{4}$ -inch wood planed is actually $\frac{5}{8}$ -inch; a house said to be large enough for fifty fowls is suitable for about thirty, unless the idea is to pack the fowls like sardines! And, coming to incubators, I wonder how many of the so-called 100-egg machines are large enough to hold that number

of eggs, unless they are bantams' or Egyptian? However, you need not worry about that. The chief thing is to see that the temperature of the egg drawer is as near level as possible. If it varies only one or two degrees, you can with safety fill it in spring and put in about two-thirds in winter, while if the variation is more, do not exceed half the number at any time, and keep the eggs in the centre of the tray.

"Immediately before putting the eggs in I let them lie in front of a fire at a temperature of 60° to 70° , and with a thermometer on them. I choose absolutely new-laid eggs, and rarely if ever those more than a week old. With hens as the hatchers I do not trouble so much, and in this direction I have had good results from month-old eggs; it is just here where the artificial incubator falls short of 'the old hen.'

"When the eggs are ready for the tray place them in rows on their sides. Some authorities advise the operator to place the eggs at an angle of 45° , and with the thick end up; but there is nothing advantageous in it, because it is hardly possible to keep the eggs in such a position when the drawer has to be taken out to move the eggs. Then again, some workers put the smallest eggs at the ends of the rows and the largest ones as near the middle of the drawer as possible. I never put small eggs into an incubator unless I am hatching bantams, because I have found that the larger the eggs, within reason and excluding double-yoked ones, the bigger the chicks from them.

"That completes the setting of the eggs. Dear me, it does not, and I nearly forgot one little item—put a cross on one side of each egg and a ring on the opposite side, with black-lead pencil, and see that the crosses or the circles are up at the same time, so that you will know that they will get a thorough turning. Well, my boy, we have set the eggs, and I suppose you will agree that it takes just a little longer than putting a hen on a dozen! Just so; but few poultry-keepers would think of running an incubator with a dozen eggs as the full complement,

unless they were hatching from a special mating, in which case, however, a 'pedigree tray' machine would be much better all round.

"So far so good. The eggs and the lamp require attention during the whole period of incubation. The eggs must be turned and aired each day, but they must not be disturbed in any way before the end of the third day of incubation. Take out the egg drawer once daily, and turn the eggs slightly, so that by the end of three days they have gone from the cross to the ring. During the first ten days do not keep the tray out longer than is necessary; but after that time the drawer may be left out for ten minutes or longer each day. If the room in which the incubator is situated be cold, as it will be in winter, no extra airing of the eggs need be given; but during warm summer days it is an advantage to leave the drawer out for even fifteen minutes once a day. Some incubator workers exceed that time, and declare that cooling the eggs for a couple of hours after the eighteenth day is beneficial. Maybe, but I am not risking any eggs in that direction! I never turn the eggs after the nineteenth day, but simply remove the drawer to cool them; and with a large incubator I keep the door shut when the eggs are out for cooling purposes. It would be a tedious matter if each egg had to be turned separately; I get over it by damping my finger and running it over each row, which generally turns the eggs in that row at one go.

"Then as to the lamp, see to it once a day; and if you are after a regular temperature, trim the wick in the evening, since it is during the night that the air is likely to get cool. Attend to the lamp after you have seen to the turning of the eggs. It is an advantage to have two lamps to each incubator, since the one not in use can be prepared in one's spare time. Be careful that the hatch is begun with a new wick, and get wicks that are specially made for use in incubator lamps. It is as well to see that the reservoir does not 'sweat,' and to dry the outside each time before re-lighting the lamp. And don't forget to

burn only the best paraffin oil. There is no need to have a big flame at any time during the hatch, and a small one, scarcely discernible when the lamp is in position, will generally be found sufficient; in fact, after the middle of the hatch, it is an advantage to keep the flame low, although not as low as to cause the lamp to give off an odour.

"I told you, I believe, when dealing with the sitting hen, that it was not necessary to test the eggs at any time. With artificial incubation, however, it is a good plan to test the eggs after the tenth day, and to remove the infertiles. You have heard, no doubt, that some people can tell a fertile egg from an infertile one before incubation has taken place, as soon as the eggs are laid, in fact; and I dare say you have also heard that it is possible to distinguish between the eggs that are likely to produce cockerels and those that contain the embryo pullet?"

I assured Mr. Tapley that I had, since these were "old wives' tales." He smiled. "There are a lot of very clever people in this world," said he, "and quite a few of them think they know all about poultry. But it is impossible to tell a fertile new-laid egg from an infertile one from a breeding-pen, and it's just as impossible to tell the cock egg from the pullet egg. As to the other business, someone did bring out a little instrument which went by the name of the sexophone; but the result of its first public test proved that the instrument was by no means reliable.

"No; eggs have to be incubated for some days ere the infertiles can be thrown out; and there are very few novices who can test them for fertility until the eggs have been submitted to incubation for at least a week. The best time to do it is on the tenth day, and in the evening when the eggs are due to be turned, so that the testing and turning can be done at once. You can get a proper egg-testing lamp for a few pence, but I use my left hand as the shade and test by the use of the incubator lamp. Take the egg up as it lies in the drawer, and hold it with

your forefinger and thumb, lengthwise, and between the light and your eye. If it is fertile and the germ is going on all right, you will be able to see a dark spot at the top of the egg, and if you give the egg a slight turn over you will see the germ make a similar movement in the opposite direction. Return it to the drawer. If the egg is perfectly clear, it is useless for hatching, and should be brought into the house for culinary purposes. I will anticipate your question—the egg is quite sound to be eaten, and I have eaten many such, although they are generally used in puddings and cakes here.

“Some poultry-keepers when they have tested out the infertile eggs put in others, new laid, to take their place; but it really does not answer to do so, because there is a risk of their chilling the warm eggs with which they come in contact; and it is a bother to have chickens hatching at all times, since it means rearing them in small batches, which does not answer with artificial methods. By far the better plan is to run the incubator for one hatch only. The question of moisture is one that troubles many workers; some machines are fitted with a water tray and others are without one. Mine has such a tray, and I keep it going after the first week and replenish the water about twice during the hatch; but, to ensure that the germs do not lack moisture when they most need it, I spray the eggs after the seventeenth day. I put some tepid water into a scent spray bottle and spray the eggs lightly on the eighteenth day, directly they have been turned. The spraying is done only on the eighteenth, nineteenth, and twentieth mornings—no more.

“Taken for granted that all has gone well with the eggs, there should be signs of ‘chipping’ on the twentieth day, as I mentioned in the case of hen-hatched eggs. All that are starred (which will be observed when you have the eggs out for their airing) should be returned to the drawer with the chip upwards. The star should be at the large end; chicks which chip the shell at the small end generally require to be helped out of their ‘prison.’ About twelve hours after the eggs are observed to be chipped the

drawer may be opened, when it will be found that some of the chicks have left their shells. The drawer must be opened only a little way at a time, and the chickens, as they come to the front, must be taken out and transferred to the drying-box. This needs to be done with great care and as speedily as possible; and the empty shells must be taken out at the same time. The drawer at last should be pulled right out, because it sometimes happens that a chicken or two will run backwards to the heat and fall over the edge of the drawer into the space below. When all the chicks are removed the unhatched eggs should be put in the middle of the egg-tray and the drawer replaced at once.

“If any of the eggs due to hatch do not chip on the morning of the twenty-first day they may be opened at the large end, and that part of the shell covering the air space may be removed. It must be very carefully done, and I find it best to bore a small hole with the point of a pen-knife at the very top of the egg, being careful not to let the point go beyond the shell; I then extend the opening with the blade. If the chick is alive, a drop of warm water on the membrane surrounding it will render that ‘skin’ transparent; and if there be blood circulating through the veins in it, nothing further must be done for some hours. If, however, there be no blood visible, the entire upper part of the shell may be removed, the membrane may be torn off, and the head of the chicken released. The egg should be then replaced in the drawer and the chick be allowed to get rid of the lower portion of the shell itself. Should any blood flow from the ruptured membrane the process of releasing the chick must be postponed.

“The chickens should be allowed to remain in the drying-box until they are dry, that is to say, for eighteen or even twenty-four hours after they are hatched; and they should then be transferred to the artificial mother, which has been started an hour or more and made ready for the newly-hatched birds.

“Well,” said Mr. Tapley, “I think we have had a

long chat to-night, and I don't mind admitting that I feel just a little dry! So, what do you say to my postponing the remainder of this chicken talk until to-morrow or when you can call round again? To be concluded in our next, eh?"

Of course, I was quite agreeable to this suggestion—in fact, if I had been speaker I would have been forced to give in long before!

CHAPTER VII

THE CHICKENS : REARING AND FEEDING

NEED I say that I went along to my friend's house the next night? I made it my business to do so, and we had another long sitting. Mr. Tapley had promised to tell me about the rearing and feeding, and I was anxious to gain all the information I could on the subject.

"As with hatching so with rearing—you can get the hen to do it, or you can dispense with her services and do it yourself," began Mr. Tapley. "I might have told you that some poultry-keepers hatch their eggs under the hen for the first fortnight, and finish them off in the incubator; and this is often the case when the eggs are more than a week old before they are put down. It is a well-known fact that the hen has the power of starting the germs in eggs as old as a month; but I have never known of an incubator being able to do it. Although many people appear to question it, I firmly believe that there is such a substance as 'hen-oil,' and it is that which enables the hen to hatch eggs that would be too stale for the incubator. And yet I have always found that the hen can dry the newly-hatched chickens much quicker than is the case when the chicks are dried in the incubator. However, that is away from the point.

"If you are going to follow natural methods, put the hen with her brood in the first-stage coop I mentioned last night, and keep her there until the chickens are able to do without her warmth. Just when the hen should be taken away and put back into the stock run will depend on the time of the year. In the early season, when the frosts and cold winds are about, I let the hen hover the chickens until they are at least eight weeks old, sometimes longer than

that. In late spring or during summer I remove her when they are three or four weeks old, because by such a time the hen will probably begin laying again, or, at any rate, she will become tired of her charges and will not attend to them as she should do.

"I seldom liberate the hen during the whole time that she is with the chickens, and that is my reason for giving her a spacious coop. No, I can assure you that it is not cruel to keep the hen so confined, provided you see she has food and water regularly each day, and that the coop is kept clean. In winter I sometimes attach a small covered run to the coop so that the chickens will have a dry place on which to exercise; but I avoid pegging out small runs whenever possible, since I believe there is no quicker way of fouling land than by so doing. Certainly it is so with grass land, and by far the better plan is to give the chickens free range, yes, even in a garden. Newly-hatched chicks derive great benefit if they are allowed into the kitchen garden, and by feeding on the worms and insects that do harm to the growing crops, they are indeed the gardener's friend; but since they can scratch very well at a month they should be removed from the garden quarters at that age!

"So much for the natural way. The artificial is more intricate. You have to provide the heat, and see that it is regulated; and what with seeing to the lamps and other little items, well, it is not the easy matter that so many people seem to imagine. The most important points to observe with artificially-reared chickens are warmth, cleanliness, fresh air, and judicious feeding. The best type of foster-mothers is that in which the outer air is freely admitted; a rearer that gets filled with a hot and foul atmosphere is most injurious, as it renders the chicks liable to a chill. As with incubators so with rearers, there are various makes on the market, and it is not for me to say which is the best. The vast majority of them are heated by air, and that is just where they fail, many of them. I have tested a few in my time, but I have never found one of them to be entirely free of oil fumes;

and although I have reared chickens in them, I cannot believe that the fumes do the little birds any good. However, thousands of artificial rearers are in use at the present time, so, rest assured, there is some benefit derived from them. Their great advantage is that chickens can be brought up in large flocks, and when many have to be reared you can imagine what a saving of labour it means.

"The temperature of the heated compartment should be such that a thermometer left in the hottest part for some time will register from 75° to 85°. Some authorities advise that for the first two or three days after the chickens are transferred to the artificial mother a temperature of 100° Fahr. should be maintained night and day, and that a thermometer should not be used, since it is desirable that the attendant should learn to know the heat of the apartment by applying his hand to the inside. That is all very fine for an expert; but if you take my advice you will not try to bake the chickens, and when you want to ascertain the temperature you will use a thermometer.

"I don't believe in working a rearer at a high temperature, for the simple reason that any great variation of the atmospheric heat to which the chicks are exposed will cause trouble. They have to get used to the fresh air, and it is better to accustom the chicks to the ordinary temperature at once rather than bring them up, at least attempt to do so, as hot-house plants. There must be no coddling. Let them get out and take exercise, but see that they have a dry floor on which to sleep and retire when they feel so inclined. I don't want you to imagine that I am advocating rough treatment. In rearing chickens, as in everything else, it is the man who exercises common sense who is likely to get the best results.

"A two-compartment rearer will generally allow enough room for the chicks to get exercise even in the coldest or roughest weather; but if not, then it will not be a difficult task to rig up a shelter for them that can be



CROAD LANGSHANS

THE PROPERTY OF MR. R. O. RIDLEY, DOCKING HALL, KING'S LYNN

(Most of the birds depicted above are prize-winners.)

used as an extension run. However, from the very first, advantage should be taken of the sunshine, and the brood exposed to its genial warmth. It is no good my attempting to give you minute directions as to when to vary the heat, because each worker must use his own discretion as to when to increase or diminish it. You must watch the chickens themselves, and their behaviour will be the best criterion. It is a bad sign when the little birds remain in the heated compartment most of the day; it generally means that the heat is not high enough for them, or that their diet is wrong. If they are going strong, you will find that they will not retire to the inner room except after meal-times, and then only for the usual 'forty winks.' Chicks do that when they are being hen-reared, so, you see, it is natural.

"Too much heat is injurious. The most common mistake is to set the heat high at night, 'to keep the poor little things warm'! All nonsense. They will see to that part of the business for themselves. It is said that if the temperature is low the chicks will crowd together and the weaker ones will be suffocated. Exactly; but what is the use of rearing weak chickens? I am not a hard-hearted fellow, and that is just why, if any of the chicks are hatched weakly, I do not hesitate to put them out of their misery at once. It is a great deal kinder than allowing them to live to be killed by their 'brothers and sisters.' If it answered to rear single chickens, well and good; as pets these weakly birds are just the thing; they become very tame by being constantly attended by the children; and they will generally eat just about twice as much as they should do! But if you are after profit, my boy, you must not indulge the soft side of your nature when the weak chickens are hatched. Of course you are not going to hatch other than strong chickens? Wait and see!

"There is another phase of artificial rearing that was once boomed here, but it proved a miserable failure in this country for commercial purposes. It hailed from the land of the Stars and Stripes, and over there great

things were claimed for it. It was called the 'fireless' brooder, but as a matter of fact it was a heatless brooder. The fireless brooder is 'as old as the hills,' and so there is nothing new about that method. But the heatless kind was a novelty to most poultry-keepers in this country.

"The idea was to rear chicks without any artificial warmth. I gave it a trial in summer, and it proved successful, but it was a failure in winter. My experience is that it cannot be recommended on a large scale, because the labour involved is far too great to make it pay. However, for a brood it might be good enough to be adopted in summer.

"I got the idea from some transatlantic papers, and you can have a look at the brooder I made and get all particulars from it. I kept it in an open-front house, and the chickens used it from the middle of April to the middle of June—at least, I had it in their house for that time, but some of the birds had deserted it before then and had taken to sleeping on the floor of the house. The great thing is to keep it clean and in a good house. It must be in a house, and in one that will permit of the chickens getting plenty of fresh air. They want protection from wind and rain, but they want sun and fresh air. Either of the houses you have seen here will do for the brooder."

Mr. Tapley handed the paper to me; and his brooder, which he brought in, differed slightly from the one described and illustrated.

"As to feeding the chickens," resumed Mr. Tapley, "this should be the same no matter whether they be reared by hens or in heated or non-heated brooders. Do not attempt to feed them until they have been brooded for at least one day. Then put down for them their first meal. Place it in a trough so that they can have it clean if they like; they generally prefer to trample on the food or drag it out of the trough to eat. I never worry to check them, since they thrive on their food, and not on the way it is given to them! As to what this first meal should be, opinions differ. In my own case it consists

of bread and milk; and that is the first meal of the day for all chickens throughout winter and spring. I have long since given up the egg and breadcrumb meal of the old days, because the chick gets enough egg just before it kicks out of its shell, since it then absorbs the yolk.

"The first meal, then, is bread and milk. I break up a slice or so of two-day old white bread, and soak it for half an hour in boiling water, keeping the basin covered with a plate; the water is then squeezed out and cold milk is added, the bread being broken fairly small with a fork, and enough milk added to wet it, but not to make it sloppy. This is put into the small wooden trough, and the chickens are allowed to have their fill of it. Some will eat more than others, since there will probably be a difference in their ages, even though of the same hatch.

"They get bread and milk at intervals, and this is almost their sole food for the first week. They eat it with the utmost greediness and drink the milk as readily as kittens. It is a grand growing food, and one that I have never found chickens to refuse when it is properly prepared. I let them eat as much of it as their little crops will hold; and as it is prepared fresh for each meal, I have never found them fall sick on it.

"Oh, yes, it means a bit of trouble to get it ready; and I suppose that is why the method of feeding chickens on grains and seeds only has come so much into vogue of late years. This consists of a mixture of crushed grains and various seeds, and is known as 'dry chick feed.' Sounds American? It came from the United States and appears to have come in to keep pace with the mammoth brooder houses the poultry people 'run' over there. But if you want size in your chickens, you will find that you cannot get it on the 'dry feed' system. It is good enough for the rearing of bantams and game fowls, but it is not a good flesh-maker. I use the mixture as the grain ration, but not as the sole food.

"After the first week I begin to give the chickens a last feed in the evening of groats or broken wheat, usually

the latter; these digest slowly and give warmth through the night. There is certainly this to be said in favour of the 'dry chick feed,' it contains many small seeds which, if thrown on some loose litter, cause the chickens to get good exercise in searching for them. There are other meals and grain that can be given with advantage, and among the former may be mentioned fine biscuit-meal, sifted barley-meal, oatmeal, Sussex ground oats, toppings, bran, and house scraps, while of grain there are oats, kibbled maize, French buckwheat, dari, and canary seed.

"The growing birds want variety, if for no other reason than to keep up their appetites; and I ring the changes as often as necessary. There must be no stinting during the chicken stage. It is at such a time that many poultry-keepers try to effect a saving in the food bill. It is the period of all pay and no return. But if the chickens are to 'do' well, they must be well fed. That does not mean that they must be overfed. There is a happy medium, and you will be able to get some idea of the correct quantity after you have been feeding chickens for a few weeks. Let them have as much exercise as possible, and if they can take that exercise on a piece of lawn or well-clipped grass land, with a heap of clean earth for digging and dusting, so much the better.

"Green food they must have, and such as lettuce, endive, chicory, or witloof are all suitable. The dandelion is an excellent herb, and when in 'season' I use none other. I chop the leaves in a raw state, and add a handful of them to about a quart of meal. Most chickens will not eat dandelion when hung for them; but if well minced and mixed with their mash, they will relish it. The common nettle, too, is a good green food for chickens; it must be gathered young, chopped, and boiled ere adding it to the meal. Nettle 'tea' is also good to give to the birds as an occasional drink. Another item of green food I must not overlook is the onion. Chopped onion put into the mash cannot be excelled as a digestive, and there is none better to ward off chicken troubles such as gapes, colds, and lice.

"Meat must not be forgotten, and a little animal food is especially useful in winter; but when it is supplied do not omit green food, dandelion or some other kind. Then there is the drink question. Chickens want liquid of some sort, and they want it from birth. If they get bread and milk for breakfast, they will not need other drink until mid-day; and if you can then give them milk, do so, but remove it as soon as they have satisfied their thirst, and do not leave it within reach until it becomes sour and filthy. But good water never comes amiss; and if the vessels are put where they cannot get fouled, out of the sun and the rain, it will suffice to keep them well replenished."

I thanked my friend for so kindly giving me such a lot of information on the subject of chicken rearing; but there were one or two questions that I thought I should like to put: "How many times a day must chickens be fed?" I asked.

"That depends on many things," said he. "Throughout winter and early spring, when the ground is likely to be covered with snow or hard from frost, there is not a great chance of the youngsters getting much in their range. Hence when they have found their appetites I give them five or six meals a day, bread and milk for the first week, then that food twice a day all through until they are out of their chicken stage, varying the other meal, and giving them first one meal a day of grain and increasing it to two, but always grain as the night food. After the month they get five meals, then four, three, and two. Up to three months all the young birds, whether intended for table, layers, stock, or exhibition, get regularly fed four times a day. Henceforth three good meals will suffice until, in the case of pullets, the birds begin to lay, when two will generally be enough to keep them in good condition. It is better for chickens to hunt for some of their provender, since constant exercise prevents them outgrowing the strength of their legs."

Then there was the question of housing. The mention of the first-stage coop led me to think that there was

another that would be used before the birds were ready to go with the adults.

"Yes," said Mr. Tapley, "there is a second coop. This is in the nature of a cock-box. Mine are home-made, and they are made out of match cases. To their cost must be added that of five pairs of hinges for the doors, the roof, and the front shutter; and the cost of a piece of roofing felt. The felt is quite a small item, because I buy it by the roll, as it is a useful thing to have on the place. The dimensions of this coop are: Length, 3 feet 3 inches; depth, 2 feet 2 inches; height in centre, 2 feet 8 inches, and at each side, 2 feet 2 inches. It is divided into two compartments, the one having a wooden floor and a solid front (which is a door), and the other having a wire-netting front, the bottom half being fitted with a wooden flap, hinged at the top and made to open upwards and outwards, while the top has a good weather board to keep out the rain. The roof is a span one, the front half being hinged, so that the birds can be handled from above. There is a small door at the end of the outside compartment, while the partition between this and the other is a slat door, hinged at the back, and opening into the outer compartment.

"This is large enough for half a dozen chickens until they are six months old, when they are fit to be drafted into the houses and runs they will occupy as stock birds. The wooden floors throughout are covered with peat-moss litter, dry earth, or sand, the droppings being removed once a week or more frequently if you can spare the time. I let my young birds perch at nights while they are in the second-stage coops. Of course they will perch during the day as soon as they can fly or jump; and they will select an open door if there is no better place for them. I put up outside perches for them, and they resort to them at mid-day. Perching at night is better than allowing young fowls to crowd together on the floor. It lets the air get round them and keeps them fit.

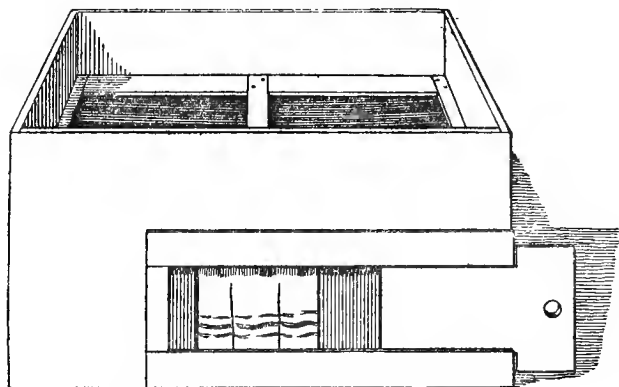
"There is just this to be said as a conclusion to our chat on chickens—if you want big birds, see that the

cockerels are separated from the pullets as soon as you can tell 't'other from which,' at any rate by the time they are three months old. The waster cockerels (those not fit for stock) can then be put up for fattening, and be killed when they are from twelve to sixteen weeks old, before they lose any of their youth. The pullets should not be brought on to lay until they are fully grown, and the best way to do this is to keep them on the move to fresh runs, and out of the society of male birds. Feed the chickens regularly, and pay scrupulous attention to cleanliness. Keep the runs flicked over with a besom; and, when necessary, renew such portions of the bedding litter as are at all foul. I might have told you that when you put the chickens into the brooder—at least, when you first let them out of it—pay rather close attention to them to see that they do not remain out too long and perish from cold. They will soon get accustomed to run in and out from the mother, and then will be so far independent; but until they do they must be driven in when they cry from cold, and if necessary kept shut in for an hour or so several times a day."

The description and illustrations of the fireless brooder to which Mr. Tapley referred appeared in several papers, but my friend's brooder was his own design. The lid was loose, as on his first-stage chicken coop, and the little door was made to slide to one side instead of being hinged. The ventilation holes, too, consisted of two rows on each side, one set near the bottom and the other just over the top of the hover. The box was made of $\frac{3}{4}$ -inch planed wood, and the dimensions were 2 feet square and 1 foot high, the door being 6 inches wide and 4 inches high. And the following particulars will suffice to enable those who are anxious to give this type of brooder a trial to make one themselves:

A strip of wood is nailed on each side of the box, 4 inches from the bottom, for the hover to rest on. Three sides of the box are padded with hay or straw. A piece of burlap (coarse hemp) 8 inches wide and long enough to reach around the box is secured by three pieces of lath,

the edge of the burlap being placed under the laths, which are then nailed to the bottom of the box. The padding material is put in and the loose end of the burlap drawn up and tacked to the side of the box, even with the pieces of wood on which the hover rests. The frame of the hover is made of five pieces of lath, two the length of the box inside (and cut to rest easily on the side pieces), and three $\frac{1}{2}$ inch shorter than the width of the box. These are nailed on the long pieces, one at each end and one

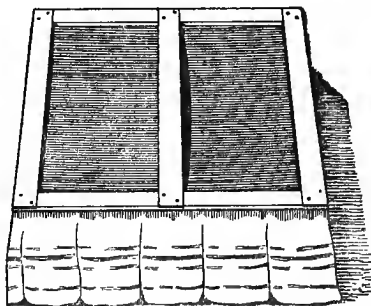


A FIRELESS BROODER. WITH SLIDING DOOR
(Lid removed to show the hover)

in the middle, thus forming a frame. The hover blanket is tacked to this frame so that it will sag in the centre about $2\frac{1}{2}$ inches, leaving the centre piece on top for a handle by which to lift the hover. A curtain $3\frac{1}{2}$ inches wide is tacked to the front edge of the frame and covers the opening in the box when the door is open. This curtain is slit up every 3 or 4 inches. The frame being narrower than the box leaves a $\frac{1}{2}$ -inch space for air to pass under the hover, when it is on the side pieces of the box. In cold weather the opening is covered and a cushion placed on the hover to retain heat. This is made of a layer of cotton waste, feathers, or other suitable

material, between two layers of muslin. After the chicks are four weeks old, or during mild weather in May and June, no cushion is needed. The best material for making the hover is cotton bed blankets. The bottom of the brooder is covered with a newspaper, so that it will not become soiled; and over it is placed a thick layer of chaff or cut straw. As the chicks grow this material is taken out until there is only a slight covering to take up the droppings. The brooders are cleaned daily.

Fifty chicks can be placed in one brooder, but Mr. Tapley told me that he reared two dozen in the one he



HOVER OF FIRELESS BROODER

made, and he found such a number quite large enough. The same care that is necessary to teach the chickens in the ordinary brooder to take to cover for warmth is necessary here; but, as in the other, they soon learn where to go when they feel cold. My friend emphasised the point of "running" such a brooder in a poultry house, and only in summer. He was very keen on the possibilities of the heatless brooder at one time; but he assured me that after several trials with it in winter he was forced to give it up as useless. "And such is the verdict of many prominent poultry-farmers," said he. "When it first came in it looked as if it would cause a decided slump in the artificial rearer business; and,

'pon my word, I very nearly got rid of my lamp brooders on the strength of the success with it in summer. But the climate of these isles doesn't suit it in winter, and the cushion could not be kept dry. As an all-the-year-round rearer it's no good for this country."

Those were his parting words as I left him at the end of the chicken chat. And he was decidedly emphatic on the point!



ROSE-COMBED RHODE ISLAND RED, "DUKE OF YORK"
THE PROPERTY OF REV. F. S. BANNER, B.A., SWETTENHAM RECTORY, CONGLETON

CHAPTER VIII

DUCKS, GEESE AND TURKEYS

FOR the ordinary poultry-keeper, who is, in the vast majority of cases, a keeper of fowls only, not much need be said of these other branches. If ducks are to be kept at a profit, they will have to be on a wide range, since in small quarters they foul the land and soon render it unfit for any kind of poultry. Such, at least, was Mr. Tapley's verdict when I applied to him for information on water-fowl and turkeys.

"There is plenty of money to be made out of ducks," said he, "and I can take you to one or two places quite near to us where the turnover in the early season from ducklings is not to be 'sneezed at.' But those men who are doing so well at it do not pay much for the keep of their stock; and the breeding birds practically get their own living for the greater part of the year. If the 'duckers' have not got the river for their birds to feed on, there is plenty of moor or common land on which they have the right to range the ducks. However, there are one or two very big concerns in this country, and out of the famous Vale of Aylesbury, too, where duck farms exist, and solely for the purpose of supplying the early markets.

"No doubt it is an important branch of the poultry industry; and in this country the bulk of it is in the hands of quite small rearers who find it a good trade to take up at one time of the year, and particularly for the so-called spring duckling markets. One thing about duck-keeping is that the birds are extremely hardy and seldom ail anything. Ducklings are of strong constitution from the shell, and rarely is it necessary to have them brooded for

more than a fortnight. Most of them are brought off by hens; in fact, when I once suggested to some 'duckers' around here that they should try artificial methods, they pitied my ignorance! Who had ever brought off ducklings other than by hens? I was asked. I did say; but—they would have none of 'them new-fangled notions'!

"Ducks generally agree very well among themselves, so, except in the breeding season, whole flocks of them can be allowed to range together. Duck-houses need not be 'swagger' affairs. The birds will want housing in the late autumn and during the winter if early eggs are required; but a 3-foot-high shed and a bed of straw will suffice to give them all the accommodation they want. In the laying season they should be confined to a yard until they have laid for the day, otherwise they are very liable to drop their eggs in the water, which generally means a loss.

"They can be kept on almost any soil, and rough land will suit them very well. They can be brought along without swimming water; but in the breeding season I have always found that exercise on a fast-running stream leads to a greater percentage of fertility. When choosing stock birds for the production of big and early ducklings the ordinary white ducks of the farmyard will do; but if you can get some of those which are reared about here on the moors and down by the waterside, it will pay you. Of the pure breeds, a mating of an Aylesbury drake with Pekin ducks will lead to the production of very suitable offspring.

"Ducks are now often kept as layers—that is, for the production of eggs for edible purposes; since, if the birds are well fed there is not a better flavoured egg, and the 'fishy taste' so often associated with duck eggs is unknown. The best breeds for number of eggs are the Indian Runner (birds of which breed actually run and do not waddle in the usual duck style) and the Orpington. For breeding purposes a drake will serve four or five ducks. As a rule the females are kept laying when they once commence, and it is seldom they are allowed to sit,

the hatching and brooding being undertaken by broody hens. The eggs require plenty of moisture while they are being sat on, and especially towards the end of the time, the period of incubation being twenty-seven to thirty days.

"Ducklings can be fed the same as chickens, but they thrive better on soft food than on 'dry chick feed.' They get along well if given boiled rice, oatmeal, toppings, and greaves; and they require a good supply of green food. They can have grain when they are three weeks old, and oats, barley, wheat, or maize never come amiss if the corn is first kebbled. When they are being reared for stock they should be allowed a wide range where they can get most of their living until autumn, when the females will want something substantial in the food line to enable them to come into lay.

"Ducks are ravenous feeders, so care should be observed that they are not allowed to indulge too freely of meal that is in the least inclined to fatten them, when they are being fed for stock. Ducklings are fattened for the table when they are five or six weeks old, and as they do not take a great time to plump up well, they are not long on hand.

"Geese also are very hardy stock, and for market purposes they generally sell well, although the demand for this class of table poultry at Michaelmas and Christmas is not now as large as it used to be. However, there is quite a nice call for young geese, 'green geese,' as they are called, off the stubbles; and you can take it from me that there is nothing objectionable about the flesh of a young goose which finishes his feeding career on a good stubble field. It is said that geese are bad birds to allow on pasture land because cattle will not graze after them. That is a fact, and—simply because they cannot! Put a flock of hungry geese on a good pasture and they will not leave much fodder for cattle; they will beat a mowing machine at getting the grass down.

"Geese are big birds, hence they will not do with cramped quarters. Their house must be a lofty one, 7 feet high if no more; and the floor must be of such a

nature that it can be easily washed down when it is necessary to clean it, which will be once or twice a week. As a rule, a brick floor is the best, with a good bed of straw. The birds must have a wide range, with plenty of grass, and if there is a clean pond, so much the better. Stock geese for the breeding pen must be large-framed; and one gander will serve three geese. Both the Italian and the Chinese breeds are the best layers; but it is seldom, if ever, that these waterfowl can be kept at a profit for egg production only, since very few people eat goose eggs. The best breeds for table are the Embden and the Toulouse, the first-named for the 'green' goose and Michaelmas trade, and the Toulouse for Christmas, since the latter does not mature as quickly as the Embden.

"It is not often that the females are allowed to sit, although they are reliable brooders and mothers; but in most places the goose eggs are given to large barndoor hens. They require thirty to thirty-one days to hatch out. Goslings, like ducklings, are very hardy, and they do not need much attention. They can be reared the same way as the other waterfowl, and they are better kept from swimming water and out of long grass until they are feathered. It must be recollected that geese cannot be kept at a profit if they are not allowed to have a good range. They 'do' well on any rough place, while there are no better birds for gleaning the stubble fields.

"So much for waterfowl," commented Mr. Tapley; and, after filling his pipe once more, he continued: "Now take turkeys. They grow like the proverbial mushroom when they have got a start; but the trouble with most people is to give them that start! Like geese, they must have a wide range, and a large house in which to sleep. They cannot thrive on a damp place, but land that suits fowls will do for them, provided it is not clay. A lightly planted grass orchard, in a dry and warm situation, is the ideal run. The stock birds must be large-framed, but it is a mistake to attempt breeding from the heaviest specimens. The Bronze is about the best kind to keep, since

it is big and hardy, and its poults can generally be relied on to attain to excellent weights for the Christmas trade.

“The turkey cock’s wives may be ‘as numerous as the sands on the seashore’! Well, not exactly; but there is no need to trouble about the number of hens to run with him, because if a hen is in season she need mate with the cock only once to produce fertile eggs. In some country places it is the custom to keep a stud ‘tom,’ or gobbler, at a farm in the same way that stud bulls are kept, since the cost of a turkey cock for breeding purposes is a considerable item.

“The hen makes an excellent sitter and mother; but to get the maximum of eggs it is the best plan to remove the first few she lays and to substitute dummies—you *must* fool her, otherwise she will desert the nest. Care must be taken, also, that the eggs are removed while the hen is well away from the nest.

“The turkey hen is very fond of concealing her laying place—that is, selecting an unlikely spot in some brushwood if it is in the range—so when it is thought that she is in lay she should be watched, and her nest marked down. Let her lay away by all means, if the place she makes is secure from intruders, as she will probably lay more eggs there than anywhere else. When she finally begins to incubate the eggs, be careful to see that she comes off daily to get food and water; and at the end of twenty-eight to thirty days she should reward you with a brood. Some people hatch and rear turkeys under ordinary hens; but the turkey hen is much better for the purpose, because she will the easier hover the chicks, which soon grow too big for the barndoor fowl.

“It is said that turkey chicks are the most delicate of all the domesticated poultry, and there is a lot of truth in the assertion. As I told you, the trouble is to give them a start. They are very listless little birds at first; and they give one the idea that they were hatched to die as quickly as they can! To bring them up for the first two months or so means that the attendant has to exercise plenty of patience. They must have soft food for the first week,

and they require to be more frequently fed during the day than other chickens, or the young of any kind of poultry. They are nervous little creatures at first, and the feeder must have a gentle way of approaching them until they become thoroughly accustomed to him. But after they have 'shot the red'—no, this isn't billiards, nothing to do with pocketing the red—a term applied to turkey chickens when the skin on their head and neck turns to a brilliant red colour (which it does on forward birds at the age of eight or nine weeks), they will generally go ahead well, and eat almost anything that is put before them.

"The chickens must have a good allowance of fresh vegetable food, while some 'green' bone—freshly broken raw bones—will not come amiss at a later stage. Otherwise you can bring them up as I have advised you to rear geese; but keep them dry, and see that they have in their range plenty of shelter. I warn you that you will feel inclined to give the chickens up as hopeless until they have shot the red and sprouted their tails; but if you can endure them until then you will find them hardy youngsters and well worth looking after. They realise good prices at Christmas, and when they are beyond a certain weight they fetch more per pound. It pays, therefore, to 'do' them well when they have discovered their appetite; but to make it worth your while they must have a wide range so that they can find an abundance of natural food.

"Well, my boy, I think I have told you all that you need know to set you going in the poultry line. You will find it better to begin with fowls rather than attempt ducks, geese, or turkeys. You want to get your hand in at feeding and rearing before you tackle larger stock; and you will do this the easier by keeping fowls than by going in for the other kind. Granted, ducks and geese are very hardy; but they want a bigger range than you have at present, and you will find that there is a better call in these parts for eggs than for table poultry. However, there might be a chance of your doing something in dead fowls; so if you care to have just one more chat I

shall be pleased to tell you how I dispose of the surplus eggs and birds, and how I send them out to private customers.

“It will not give you the highest return to trade in the usual way, by selling to the shops, or attempting to supply the markets, until you are in quite a large way; and even then you will find the private-house trade the best to get. But we can well leave this for another ‘sitting,’ and I will tell you something also of the profits that can be obtained. Mind, you have to call this a hobby, otherwise if the income-tax people get to hear that you are making a good thing out of it they may—but enough for to-night!”

CHAPTER IX

IN CONCLUSION

I ADMIT that Mr. Tapley had been very kind in devoting so much of his time to me on this subject of poultry-keeping; but since he had promised, when last I saw him, to give me some hints on the "marketing" of the produce, I felt that I was not imposing on his goodness in paying him still one more visit. I was anxious to make the thing pay—I could not afford to keep fowls if they did not return me some profit, because I had my salary, or rather the expending of it, fully planned out! However, I felt so convinced that poultry-keeping could be made to pay that I was "in it" and meant to give it a good trial.

"You will make it pay right enough," said my friend, "if you will go about the thing in a common-sense manner. I have already told you, I think, that it will not give you the highest return to trade through the usual channels—that is, you cannot make a great deal out of it by selling your eggs and table fowls to the shops or attempting to supply the markets. There are plenty of people doing that already, and, personally, I greatly question if they are making what they should do by keeping poultry. It must be admitted that the problem, What is the most rational method to be adopted by home producers to increase the demand among home consumers? is not an easy one to solve in all cases.

"I think it has been conclusively proved in the poultry press that some of the middlemen engaged in the poultry business—the salesmen at the big central markets, as well as some of those people who act as buyers to the big clubs, hotels, and the like—for years played into the hands of the foreign producer before the war came on and prac-

tically closed the foreign trade; and much of the mischief done to it can be traced to them and their modes of dealing. I don't want you to imagine that I have any grudge I am anxious to work off on the 'hard-working' salesmen or the much-abused middlemen. I know some who are honest in their dealings, and who live out of their legal commission. But—there are others! The present system of dealing in these commodities in which we, as producers, are chiefly interested, is not good enough even at the controlled prices, because the maximum in this case is *not* the minimum! So until a better check is put on the selling of poultry in the usual markets the salesman should be left out of our consideration whenever possible.

“The producer must make it a question of self-interest. If he commences by supplying his own household with eggs and dead birds he has taken the first step in reducing the nation's bill for such articles of food. When once you have eaten something in which you have had a big hand at producing, it will take you some time to get settled into eating the other stuff! It is the same with the produce of the garden; there are no cabbages to equal those grown at home, no fruit to compare with that which can be plucked from tree or bush and eaten with the bloom on it. And so it is with poultry-keeping; there are no eggs like those which are taken out of the nest at night and eaten next morning; no poultry like the fowls one feeds at home. That, then, is the first step.

“Next let him aim at supplying eggs and table poultry direct to the consumers in his immediate neighbourhood; that is the second step. To compete with the foreign importations he must sell at the lowest paying prices the best quality both of eggs and poultry. And it will enhance the value of the latter to prepare the birds, if needs be, as a poulterer often sends them to his customers, ready for the spit, and thus giving the buyer no trouble. It is quite a little thing to do, but it often means all the difference between getting an order and missing it. The great thing for the producer is to give his customers good value for their money, and act always in an honest and upright

manner towards them. This kind of trading will soon make the general public confident, and it will prove profitable to the raiser. There must be no mixing of stale or preserved eggs with the new-laid, and no putting the very small eggs at the bottom of the basket! The eggs, too, must be sent out in a clean state; and if any should be dirty when collected from the nest, which will sometimes happen, do not wash them, but get the dirt off with a damp sponge, as it is not so likely to remove the bloom.

"The third step—there is nothing like climbing the ladder step by step—will be for the poultry-keepers within a certain radius to combine. Thus food for the birds may be purchased in bulk and consequently at the cheapest rate, and, if markets at a distance are being catered for, the produce can be forwarded in large quantities, and not at the highest rate. This question of co-operation is one that deserves the careful consideration of all poultry-keepers who are so placed that they cannot get in touch with a private trade in their own district; but it is too big to be discussed now. We have a good house trade in this neighbourhood, and it just wants 'tapping.'

"The only difficulty is that of getting in touch with it. Those who keep poultry in a small way are generally shy at having their names set down among their friends and acquaintances as 'tradesmen.' That is all nonsense, my boy. There is no disgrace in trade; there's generally more money in it than in a profession, and, after all, 'it's money that makes the mare to go'! It's the one thing needed in this life to keep one out of 'the big house over the hill.' However, I do wander from the point, to be sure. If you intend working up a connection with poultry in your immediate neighbourhood, there is no need to hawk the goods in a basket from door to door, or to start with a donkey-cart and imitate the coster greengrocer! That's the way how not to do it.

"When you have too many eggs for your own use, or a few surplus cockerels that must be killed for table, it is an easy matter to dispose of them in the neighbourhood if you have let it be known that you are keeping poultry;

or you can make use of the business columns of the local paper. There are few districts nowadays which do not boast their own weekly; and it is often the case that a good connection can be secured through advertisement. If you are going to hide your light under a bushel, the sooner you give up the idea of making anything out of poultry the better. There is no need to bang a big drum; just put in a straightforward announcement, and see that you live up to it. I can always get rid of any surplus eggs and fowls at a profit, and there is no reason why you and others should not do so. Small though your concern may be, you will have to run it on business lines if you are 'out' to get a return from it."

Mr. Tapley had mentioned the preparation of the dead birds in the manner that a poulterer sends them to his customers, "ready for the spit," hence I asked him if he would be good enough to tell me something more about this subject. He would, with pleasure.

"This brings us to the question of table poultry," said he, "and, as it is the end of it, I may as well tell you something of the beginning. I think I've said that it will not pay you in this district to go in specially for that branch. Nevertheless, there is always a demand for ordinary table fowls, such as the farmers are in the habit of sending into the market.

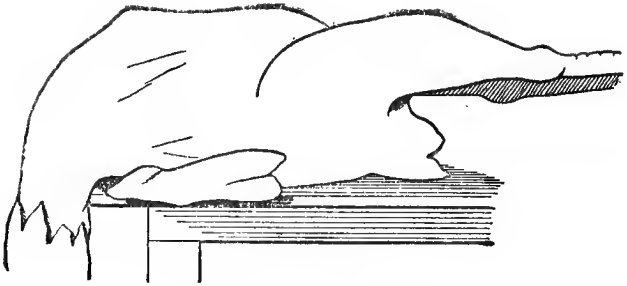
"The specially fatted fowl, the bird which is bred and reared solely for the table and crammed by machine for the last two or three weeks of its life, is not likely to create a demand, except in the very best markets; and such do not exist here. What is wanted is a fowl at which one can 'cut and come again,' a bird that will satisfy a family and leave enough over for broth the next day. Most cockerels of the sitting breeds will be suitable if killed when they are about six months old, provided their flesh has not been allowed to become hard. This can be prevented by separating the sexes as soon as you can tell cockerel from pullet, and by keeping them so parted. The males which are intended for the table should be given a clean run, not too big, and fed chiefly

on soft food. They will eat well enough to put on flesh if they are fed regularly three or four times a day.

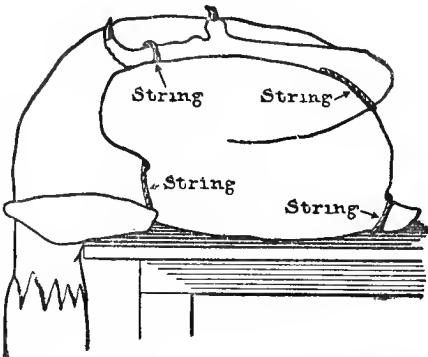
“When they are ready—you can ascertain this by taking them in hand and feeling if their breast is fleshy—put a couple, or as many as you intend to kill, in a coop or a house, and let them fast for a day. This fasting is necessary, as it enables one to truss the bird in a clean manner; and, moreover, a bird which has emptied its crop and intestines can be kept longer in a fresh state after death than can one that was killed directly after a meal, and particularly in summer. Immediately I kill a fowl, which I do by dislocating its neck, I begin to pluck it.

“This plucking is not the best part of the work; and I don't mind admitting that I would willingly give it to someone else! The fluff or down has such a habit of clinging to one's clothes and hair that—well, I don a long linen coat and a cap. I generally sit when I am plucking the bird, and I place it back down with its head and neck in front. The sooner the bird is plucked after death the easier will the feathers come out. I once heard a prominent lecturer tell his audience that the feathers can be rubbed off by starting at the stern and going once rapidly towards the head! That's all bunkum. You try it, and you will find that the skin will come away as well. Just do the plucking slowly; and when you come to the sides of the breast and the shoulders you will have to be very careful if you want to preserve the skin intact. You do not want to tear the skin in any way, because, although a dusting with flour may hide it, it never improves the appearance of the fowl.

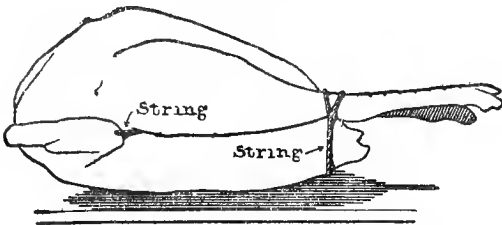
“Following the plucking of young birds there is the ‘stubbing,’ removing the small feathers with your thumb and the point of a pen-knife, and it considerably improves the appearance of the fowl. And then in professional circles the bird is shaped. This latter process, however, is not necessary with such fowls as I have mentioned—that is, the ‘runners’—and all I do is to tie them. It is a little matter, but it makes all the difference, and by tying



DEAD FOWL PLUCKED



FOWL "TIED," WITH ITS WINGS TUCKED



FOWL TRUSSED FOR ROASTING

a fowl you will still further improve its appearance, and to a surprising extent. I don't want you to imagine that thereby you can give a scraggy specimen all the appearance of a Surrey capon; but it brings out the good points. I will show you how to do it, and then I will give you a practical demonstration of trussing a fowl for roasting. I have a couple in the larder that will have to be done for to-morrow's dinner, so I might as well do them now, and you can smoke and watch. I'm going to smoke as well—it's a habit I have when trussing."

The fowls were brought forth, and we adjourned to the kitchen. One was tied; it was a simple "operation," but it certainly improved the appearance of the bird, and it fairly plumped the breast. Each shank was slightly cut to sever the sinews, and so that the toes would not turn up; and the bird was placed on its back. The legs were drawn over the stern, and the knees were tied together so that the keel was thrown well forward; and the string was fastened securely over the tail piece. That finished the back part. To bring the breast forward a piece of string was fastened to each foot, the three toes being secured. The wings were then folded over the back, the legs pressed against each side, and the strings tied very tightly on the back. The result was a plump-looking fowl in place of an ordinary one, such as I generally see at the shops. Yes, it was a good tip!

The other fowl was then drawn and trussed. It was a longer process, but I had it lengthened "by request," so that I could follow each stroke of the knife. I might say that the paraphernalia for the business was a special knife, such as butchers use, with a 5-inch pointed blade; an 8-inch or 12-inch "trussing" needle, with a good rounded end and a spear-head point; some strong twine; a clean cloth, such as one uses for dishes; and a baking board. The fowl is placed on its back and its legs are worked to relieve them of their stiffness. The pinions of the wings are then trimmed; that is, the outside edge of skin which shows the feather pits, and is quite loose, is cut off and the spur and point of the wing are removed. Then the

sinews of the leg are cut at the back of the shank (or bone part) and near the foot, so that the toes will not curl when the leg is bent.

The fowl is next turned over with its head away from the trusser, and the skin of the neck is cut in a direct line from the junction of the neck with the body for about two or three inches, towards the skull. This exposes the bone of the neck, which is loosened of the skin and flesh with the finger; the knife is put in, the neck is severed from the body just below the shoulders, and the skin of the neck is finally cut so that the head and neck may be removed, leaving a flap of skin some two or three inches long. The fowl is now placed on its stern, and its crop and windpipe are removed. Mr. Tapley here explained why it was best to starve the fowl for some hours prior to death; had the bird ended its life after a hearty meal its crop would have been full, and in such a state the skin of the crop would most probably have broken.

But we must proceed. Having removed the crop, the skin is rolled back from the merry-thought and the under skin of the cavity is broken down with the thumb. A finger is then passed into the bird, and all the internal organs that can be reached are loosened, working the finger as far as possible round the interior and taking care to loosen the lungs, which adhere to the backbone. That being finished, and with the skin of the breast still rolled back, scrape the flesh off the merry-thought (personally, I call this bone, resembling the letter V, the wish bone), and remove it—the bone—which comes away quite easily. Here there was another interruption.

“This enables the carver to cut a good long slice off the breast,” said my friend, “and prevents his taking the edge off his knife, and maybe his temper.”

That completed the front part of the fowl, and I may add it was finished quicker than it has taken me to record it!

The position of the fowl is then reversed; it is laid on its breast. The tail part (I believe most people term this

member the "parson's nose") is now held, and a fairly deep cut is made between it and the vent, and the latter part is cut around so that the lower end of the bowel, known technically as the "trail," is exposed; it must not be broken or cut in any way. A finger is then passed into the body (the fowl now being on its back with its stern to the right) and the intestines—gizzard, heart, liver, etc.—are gently but firmly loosened. Great care must be exercised here to prevent any part being broken, since to spill the gall-bladder will probably damage the flavour of the flesh. And now, if the front of the bird has been properly loosened, the whole of the interior can be drawn out at once.

So much for the actual drawing. Care must be taken always to cut downwards and outwards, away from you, to prevent damage being done to your person! Mr. Tapley took pains to emphasise this part of the business.

The fowl remains to be trussed, and this is done with string in place of skewers; and, I may add, it gives the bird a much neater appearance. The fowl is put on its back, and the legs, in one hand, are pressed over towards the breast; the needle, threaded with the twine (strong twine that is not likely to snap) is passed behind the thigh, through the body, and out at the corresponding place on the other side. Next the wings are folded so that their extreme ends are over the back of the bird and on the flap of the skin that was left when the head and neck were removed. The needle is then put into the elbow of the wing, which lies parallel with the side, and passed out at what for the want of a better word I will call the wrist; it is then carried through the skin, which is thereby caught to the body, and passed from the wrist to the elbow of the other wing. The twine is now pulled tightly, knotted, and cut. To sew the other end of the fowl the needle is put into the backbone near the tail part, carried over one leg, passed through the body under the end of the keel bone, and brought over the other leg, when the twine is again pulled tightly, knotted and cut; and the process is over,

the fowl is trussed for roasting. No; I omitted to say that the toes are removed at their first joints.

I was then shown how to truss a fowl for boiling; this was an extra turn! The method is rather more complicated; but I will endeavour to explain it as simply as I can. The bird is drawn as for roasting. Two fingers are then passed into the body at the stern, and when the thigh is felt the inner skin is broken through and the skin is loosened from the thigh to the hock (or "knee"), which must be done on both legs. Now make a cut through the outer skin, at the inside of the thigh and about an inch above the hock; and sever the sinews of the shank, this latter being done so that the foot may be twisted right round to come at the back of the carcass without in any way breaking the leg. Twist the shank under the thigh; insert a finger into the fowl, feel for the cut in the thigh, push the hock through it, and draw the skin over the leg so that the thigh will disappear from view. This must be done to both legs, of course. Cut off the feet and the parts of the shanks that are visible, and there remains a legless fowl, as it were.

To truss it, secure the wings as for roasting. To keep the legs in place, pass a second string through the body above the knee, which you can feel but cannot see, then under the keel bone to the knee on the opposite side, and bring the twine round the body; tuck the tail into the fowl, securely tie the twine and cut it, and there is the bird all ready for boiling.

"Well, my boy," said Mr. Tapley, as he finished the demonstration, "there is still another method of preparing a fowl for the spit, and that is, boning it. But I don't suppose you will be asked to bone a fowl once in your life, so I will just drop out of my rig and have a wash; and we can then get to the grand finale! You go back into the den, and I will be with you in two twos." Mr. Tapley having returned, we fell to and discussed the question of profit. The poultry account book was brought out, and it was quite a simple one. No double entry book-keeping here; a plain statement of payments for food, one

or two entries for fowls, and at the beginning the sum for appliances. On the other side a note of cash received for eggs and fowls.

"I don't believe in keeping elaborate accounts, my boy, since they are apt to get confusing. I just enter what it costs me to feed the fowls and chickens, and I never trouble to keep a separate account for the chickens. On the other side I put down what I receive—or should receive, because the 'house' sometimes has the eggs and fowls put on the slate and refuses to pay when settling time comes! You will have to watch that, or you may find the better half thoroughly merits her name! However, I put the eggs and fowls at the prices I am receiving for them by those who pay, and that is how I strike my balance.

"I don't trouble to get out a yearly balance-sheet, but I allow 5 per cent. a house per annum for depreciation, and that covers all; in fact, it enables me to have something in hand. Some fellows allow 10 per cent. for the houses, but it is a poor house that will not stand good for more than ten years. To get to figures, however. After keeping fowls for years I find that a hen can be kept at the present day at an average of sixpence a week, from the time it kicks out of its shell until it goes to its last resting-place. That is, of course, by working in the house scraps, which cost nothing, and feeding the fowls in a proper manner as I have shown you. Some of the great authorities will probably tell you that it cannot be done at that figure. On such a place as this, and keeping the number of fowls that I do, I say emphatically that it can. And, mark you, prices of foodstuffs are not what they were. They've gone up considerably. Still, it can be done—it is done by me!

"The price includes rearing as many chickens as I require to fill the runs, and to sell when young fowls fetch the best prices. It also includes the cost of keeping the pick of the breeders through their moult. That is where many poultry-keepers fail; they keep all their old hens until the birds have begun to moult, and sell them when

there is a glut and fetch the proverbial next-to-nothing. But my way is to feed them generously just as they are finishing their laying, and they never bring me in less than 7s. 6d. a head; in fact, that is the lowest sum I get for them.

"I seldom buy a fowl for change of blood. When I want to get fresh blood I swap a cock or I swap eggs. Otherwise I take a walk around the farms, and buy a likely male bird at killing price. You must remember that I am not telling you how to go in for exhibition fowls. That's another subject altogether. And, moreover, I do not charge my fowls any rent. I would have to live anyway, and I am not one to be shut up in a flat without a garden, because it costs as much, if not more. But, like the exhibition aspect, that's another story.

"I reckon to clear £20 a year out of forty fowls; as a matter of fact, I clear more, as you can see for yourself. But that's just as far as I am going with figures; and if you don't make as much when you get settled to the fowls, just tell me and I'll show you where you have failed to follow my advice. You can do it, and so can every man who cares to go into the thing as a little addition to his income. Don't run away with the idea that you can go a-poultry-farming and make profits in proportion. Some can, but some can make money out of anything. Pay attention to details, and they will pay you.

"Well, my boy, it has been a great pleasure for me to have had you here. Just start in with the determination of winning, and you will win. Come along at any time you think things are going wrong, and I will be here to put you right."

I promised.

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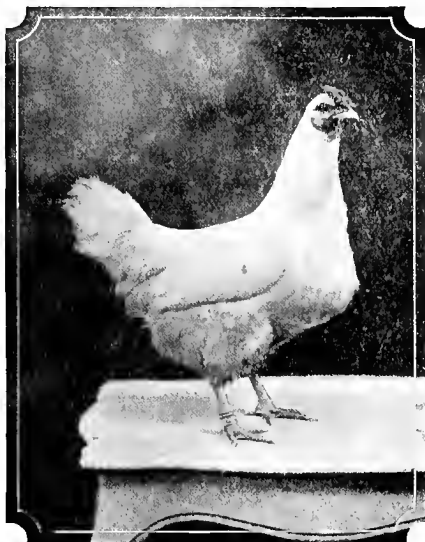
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