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THE POULTRY KEEPER

A JOURNAL FOR EVERY ONE INTERESTED
IN MAKING POULTRY PAY · DEVOTED PARTIC-
ULARLY TO PRACTICAL POULTRY KEEPING.

VOL. XX

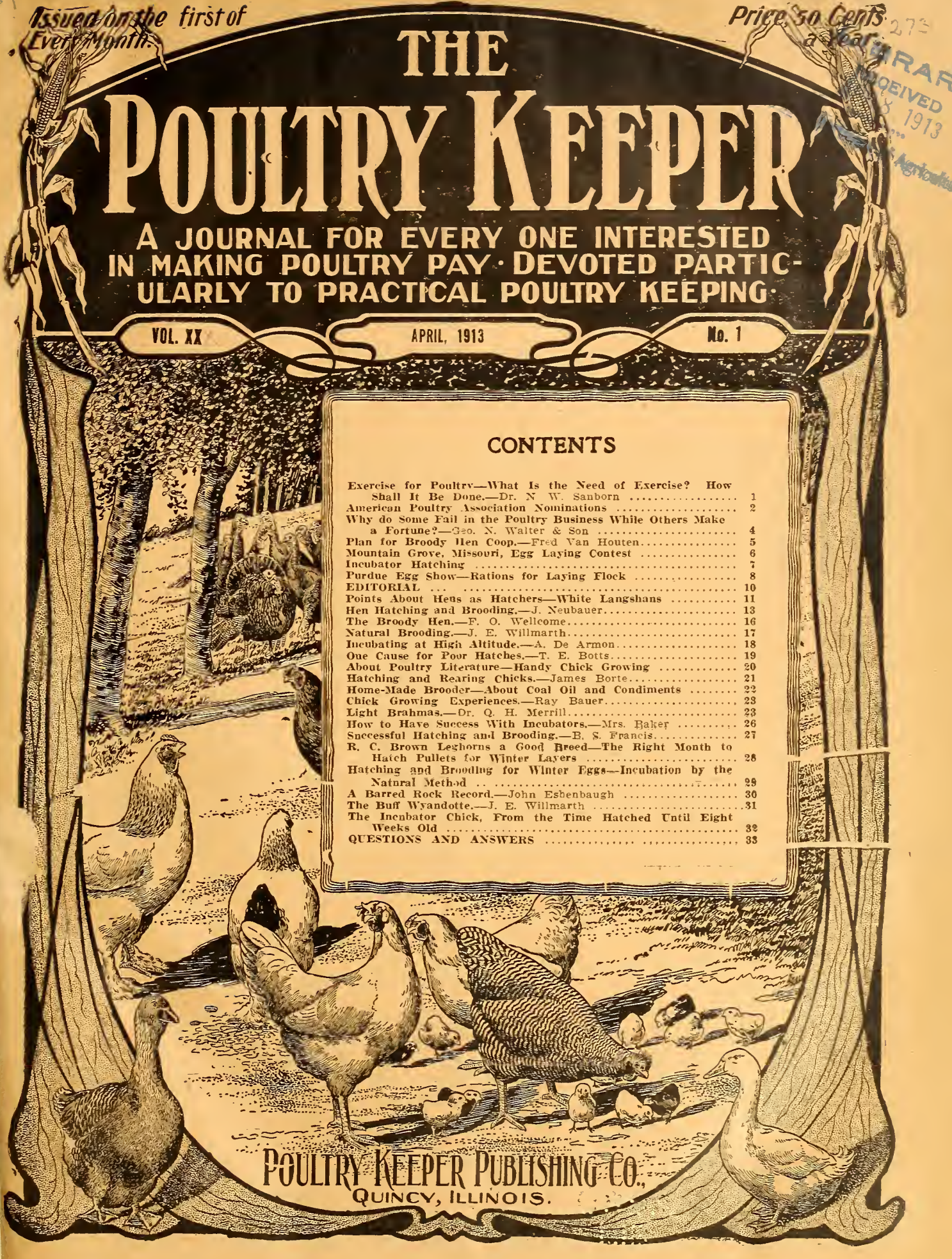
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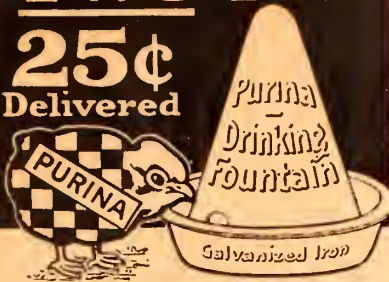
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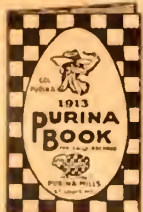
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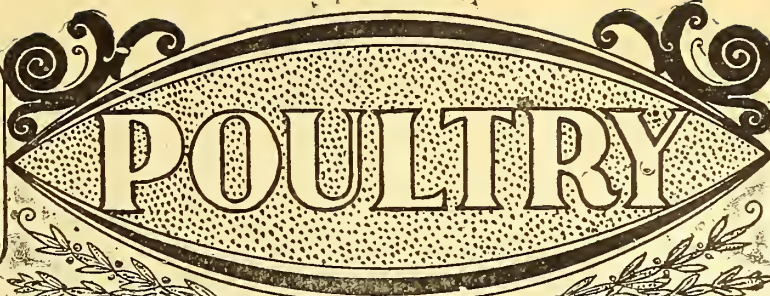
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VOL. XXX.

APRIL, 1913.

No. 1.

**EXERCISE FOR POULTRY—WHAT IS THE NEED OF EXERCISE?
HOW SHALL IT BE DONE?**

Dr. N. W. Sanborn, Holden, Mass.

THE busy hen is the one that lays and pays. The little chick that digs away merrily in the litter of the brooder is the one that grows up strong and profitable. In all our handling of poultry we have been told, over and over again, that we must induce exercise if we would succeed with the flock.

Just what does exercise do? Can we not get as good results when we stop at feeding out full measures of grain and have full hoppers always at hand? There has been so much said in papers and by lecturers, about the benefits of exercise that I want to talk this matter over with my readers and see if we cannot work out some sort of understanding between us.

What Exercise Does.

Chicks get most of their exercise through the motions of the legs and toes. Older birds get this form of exercise as well as that through the use of the wings. The pent up feeling of the confined pullets is let off when they get out of the house and "wing it" way down to the end of the small yard. Not only do they scratch in the soil but they do more or less running about the fields. The confined hen will dig down into the soil or litter of the house, seeking for grit or grain, getting much labor but finding small returns of food or grinding matter.

This morning the weather is cool, the sky clouded, the air loaded with fog. The hens are slow in getting off the roost as daylight comes on. The first adventurous hen to come off the perch is probably the one that last went to roost. She should have had so full a crop of food that she would not need an early breakfast—but she is the first off. Down she sails onto the litter, takes a look around, gets a drink from the fountain and then begins to make the litter fly. Need she do this when the wide open hopper of dry mash is before her? Surely not if she did realize that she was "made that way." As a matter of record the hen that is worth owning is the one that begins a long day of exercise. She does not hold back, she needs no urging, but

just sets in and works. What follows because of her activity? She shakes off the sleepiness of the night, she starts the movements of the blood, her appetite increases for more food, the bowels lose their torper, and the egg organs respond to plenty of food and good health. A zero day has no bad effect on the hen that digs for food. She does not know whether it is snowing or not. Intent on her busy life in the house she does not long for the freedom of the yard or range.

Another hen comes off the roost. She takes a drink at the fountain, fills up from the dry mash hopper, shivers a bit, takes another drink, shivers still more and returns to the roost or huddles in the corner of the pen. Does she get an appetite? Does she warm up in the damp chill of a March morning? Not at all. She is stupid, sleepy, with poor digestion, with every muscle relaxed and non-producer of eggs. You can divide your flock into these two classes—the busy and dull—the profit makers and the drones. I know men who have flocks that are largely of one or the other of these two classes—owning a profitable flock or one that is unsatisfactory. As a whole we must feed and care for the flock as best we can. In every flock there is likely to be a bird or two that will not fit into our plan of care and feeding. But if we get a flock of birds where most of them are the non-paying sort, the quicker we weed them out and get better birds the less likely we are to cease to be poultry owners.

How is it in mid-summer when we open up the roosting coops out in the field? You will notice a few of the half grown chicks that come out at the first opening of the door. No need to thump on the roof to tempt them to get up. They are watching for the button to be turned, the door opened and slip through the opening and are away before we realize they have disappeared. Where are these busy ones? Not all have gone to the same place. Some you will see away off in the edge of the corn eating the small weeds that are hardly through the soil. Oth-

er pullets have gone, pell-mell, to the remains of the brush fire of the day before and are getting something in it that they like. This may be charcoal, hard grit, or possibly the remains of a half burned egg that came from the incubator. A few birds are at the water fountains or feed hoppers, making the beginnings of a new day of growth. If all the pullets did as did these that I have mentioned, it would be a handsome looking flock. But there are likely to be a few birds that come out of the roosting coops as if half of the mind to stay on the roost all day. No hurry in their actions, no desire for food or drink, just no call to the strenuous life. This is a good time of the year to put on legbands. Mark the pullets that range wide out over the grass fields, that are first to come out in the morning, and last to go into the small coop at night. Selection of breeding stock by the amount of exercise taken is not at all a bad plan. I know it works well in summer, in the middle fall, in the zero days of January.

The Brooder Chicks.

Going back in the age of the birds let us look at the actions of the chick in the brooder. Do you see any difference in the way they hunt for grain? Do all little chicks lead off in the race to see which one will finally keep and swallow the worm? See the active ones in the front of the race! See the lagging ones that cut corners, and hang back, sure to lose the bug or worm! Did you ever watch the bunch of forty chicks at work in the litter in the brooder? What a difference in the way they go about it! Some are watching for more active chicks to uncover some piece of grain, that they may get it without the working, while the more busy chicks are half out of sight in the two or three inches of litter on the floor. If the chicks are unlike in points so you can know one from another, you will see the busy

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ones double in size over the less active ones. Yes, it is the busy chick, the one that digs, the one that exercises, that becomes the business pullet that gives the fall and winter eggs.

The Incubator Chick.

Not only is the busy winter hen, the busy growing pullet, the busy brooder chick, but the busy chick in the machine is the one worth owning. There is a decided difference in the activity of the chicks as they hatch out of the eggs in the incubator. The good wife has long known this to be true of the hen hatched chicks, but the busy poultryman has less often noticed it in the machine hatched chicks. Think of this when your next hatch comes off and see how many of the one hundred chicks are more active than the rest. You can pick them out from the start—as soon as they are dry—sitting up, taking notice, getting quickly acquainted with the inside of the machine. The active chick is the one that tips over the thermometer, climbs up on the regulator and upsets the temperature of the incubator. The busy chicks are the ones that persist in getting to the front and tumbling out when you open the door. In every batch are chicks so doubtful, so sluggish in action, that they are doubtful value even at the beginning of their life.

Sorting Out.

If you intend to do good work with healthy birds you should always be sorting out your stock according to the health. Nothing indicates this better than the amount of exercise they take. No matter what the time of year, no matter whether you are watching chick, or growing pullets, or winter laying birds, then is the time to divide the best from the common ones. Do not keep them growing up just as they were hatched and started. If you have not the courage to kill or otherwise dispose of the weak ones by all means do not run the two classes in the same flock. Give the best chicks, the best pullets, the best layers, the best chance at your disposal. Then it will be easier to see the point of my teachings and you will surely come to my point of view and not be so slow in holding on to business birds. If you will begin sorting out and killing before moving a chick to the brooder you will have made a start that will help all along. There will be fewer poor looking pullets and cockerels, fewer mature birds of doubtful value, decidedly less inactive chicks the following year. It is the first step that comes hard and when you have once begun to work along the line I suggest—the result will come quickly. Handling birds with this point in mind you will be getting rid of bacillary white diarrhoea, getting rid of catarrhs and roup, getting rid of hens low in power of digesting food and producing of eggs.

Two years of selection of this sort will give you flocks that are talked about among your neighbors, that will be noticed in the show room, and best of all you will own a flock that is a business one.

Inducing Exercise.

Shall we make our hens and chicks

work? Shall we make it a case of dig or starve? I think so. The half sluggish bird is improved by exercise. It warms him up, makes him take in larger quantities of food and digest it all. He puts on strength, gains in size and vigor and becomes the head of a breeding pen that gives the strong fertility, the big chick, and the live-bred layer.

Wide range helps exercise. The use of scratching material helps, too, largely in solving this problem. Access to garden or sod ground will do much. If in the litter is some food that the chick or hen wants, or in the ground are worms or bugs that attract, on out on range are the insects that every live bird delights to chase, then it will help the inclination to dig and dig again. Most of us can get large yards or range in summer and plenty of scratching material in winter. All sorts of litter can be had. Hay, straw, cut corn fodder, or even pine shavings, can be put into the houses for the cold months. For the small coops and brooders we can find nothing better than the waste that is in baled hay or that can be found in the barn mow or swept up on the floor where the horses and cows are fed. I make good use of every peck of barn waste, trying not to have a pound thrown down in the cellar and wasted. All the barn waste that collects in the months when there is little use for it is saved for future use.

Through the winter and in the breeding season, I never allow the pens that hold my yearling hens to become bare of litter. Hens of this age take on fat easily and need to be restricted in the fat forming foods and obliged to take more exercise than the pullets. Using, as I do, hens to produce most of my eggs for hatching, I want them in fine breeding condition. Deep litter, four to eight inches is none too much, causes them to dig for food or go without. Seldom do I give large grain in the litter, preferring cracked corn to whole and using most freely of oats and wheat. It is a busy bunch of hens that you will find in my houses. They seldom seem to care to go on the roost through the day-light hours. When they come off the roost in the morning there is enough left over grain in the litter to set them to work. It is a pretty sight to see the flocks at work, happy, busy and laying. If I had been a thorough convert to the teachings of this article in the April Poultry Keeper and had been converted fifteen years ago, I should have had more healthy stock and larger profits from my hens years ago. The more I have carried out this idea of holding on to the busy birds the larger have been my returns and the less illness on the farm.

Whether you own a dozen or a thousand hens the need of getting the birds of all ages to exercise applies the same. It was useful the two years I wintered only twenty-two females, it was profitable when I had the hundred on the small village orchard lot, and it is proving correct at the end of five years on a farm.

AMERICAN POULTRY ASSOCIATION.

Annual Election, 1913.—Nominations.

Statement showing the five candidates for each office, receiving the highest number of votes; and the number of votes cast for each nominee for all offices of the association.

President—E. E. Richards, Cedar Rapids, Ia., 554; Reese V. Hicks, Topeka, Kan., 131; E. B. Thompson, Amenia, N. Y., 213; Henry Steinmensch, St. Louis, Mo., 64; C. D. Cleveland, Eatontown, N. J., 45.

First Vice President—Jos. Russell, Toronto, Ont., 304; S. J. Hopper, Dallas, Tex., 271; W. C. Cleckley, Augusta, Ga., 62; C. D. Cleveland, Eatontown, N. J., 35; U. R. Fishel, Hope, Ind., 26.

Second Vice President—W. C. Cleckley, Augusta, Ga., 372; John A. Murkin, Nashville, Tenn., 37; S. J. Hopper, Dallas, Tex., 36; L. L. Haggin, Lexington, Ky., 33; L. B. Audigier, Knoxville, Tenn., 20.

Secretary—S. T. Campbell, Mansfield, Ohio, 1238; John A. Murkin, Nashville, Tenn., 195; Theo. S. McCoy, Springfield, Ill., 11; H. B. Hark, Glendale, Ohio, 2; S. A. Merkle, Buffalo, N. Y., 2.

Executive Board—W. C. Denny, Buffalo, N. Y., 821; C. D. Cleveland, Eatontown, N. J., 663; U. R. Fishel, Hope, Ind., 608; T. E. Quissenberry, Mt. Grove, Mo., 482; S. A. Merkle, Buffalo, N. Y., 193; A. A. Peters, Denver, Colo., 132; S. J. Hopper, Dallas, Tex., 111; Robt. Seaman, Jericho, N. Y., 111; G. M. Curtis, Buffalo, N. Y., 83; Richard Oke, London, Ont., 77; F. A. Kummer, Butler, Pa., 59; A. E. Martz, Arcadia, Ind., 37; Lewis G. Heller, Bridgeton, N. Y., 34; J. M. Parker, Creston, Mont., 21; L. P. Ludden, Lincoln, Neb., 18.

Place of 38th Annual Meeting—Atlantic City, N. J., 537; Detroit, Mich., 376; Chicago, Ill., 118; Boston, Mass., 17; Buffalo, N. Y., 16.

Time of holding 38th Annual Meeting—Second week of August, 565; third week of August, 89; first week of August, 71; first week of September, 42; fourth week of August, 35.

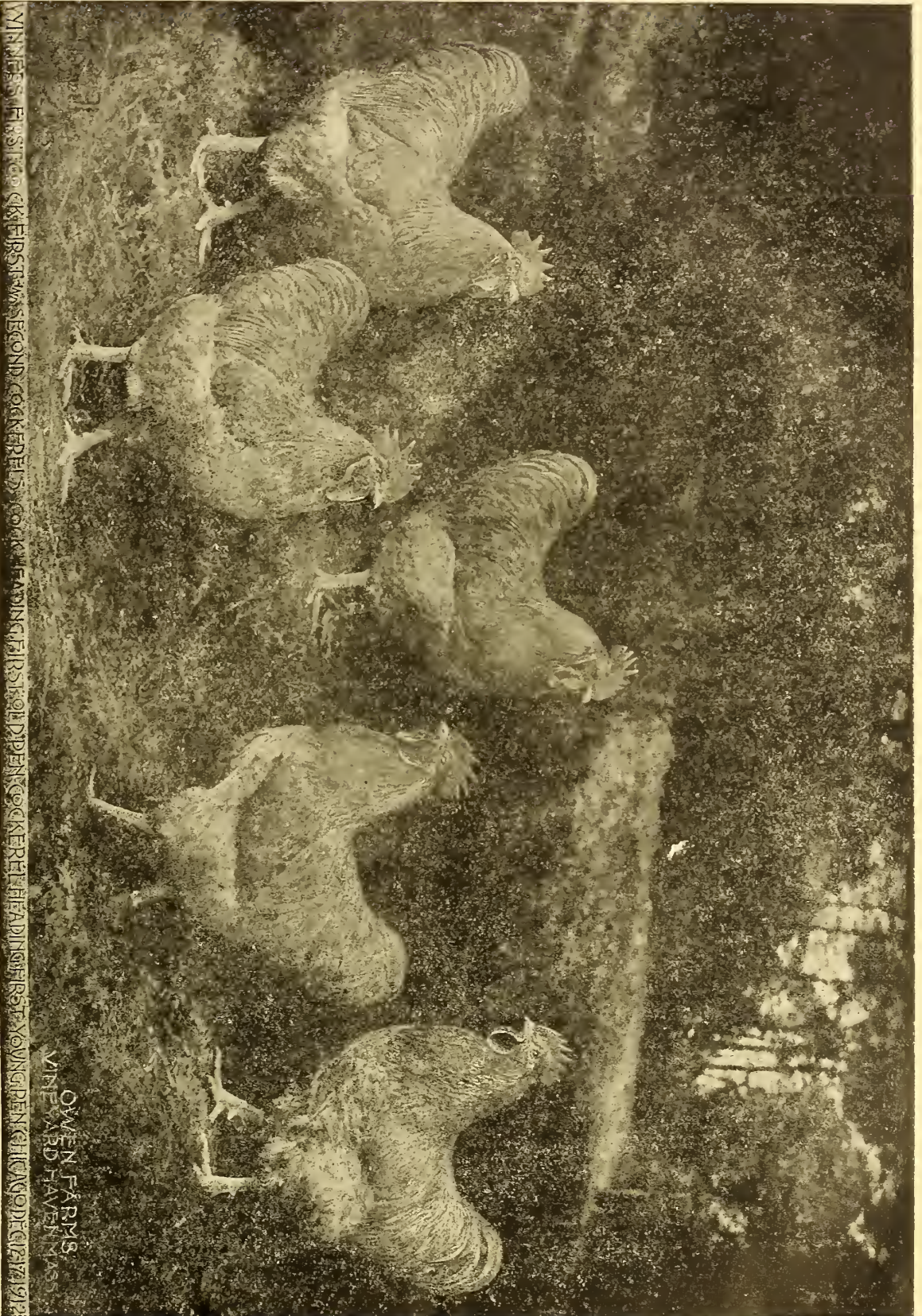
O. L. McCORD, Election Com.
Danville, Illinois.

BUFF LEGHORNS GOOD WINTER LAYERS.

During the month of January, 1913, 29 of my Rose Comb Buff Leghorn pullets laid 435 eggs. There are a lot of people who claim Leghorns will not lay during the winter, but I have found from actual experience that they will lay as many, if not more eggs, on less feed than the heavier breeds, but no one can get good results if he goes at it in a haphazard manner. It takes lots of care with the use of a little brain. I am a firm believer in the dry mash feeding of poultry as it requires less labor and brings better results in my opinion. I will also state that in this flock I have several pullets that weigh nearly five pounds each.

E. B. Stacy,

Michigan.



OWEN FARMS
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Five winning Buff Orpington males at the great Chicago Show, December, 1912. It is very rare indeed to see five male birds in one variety of such marvelous and uniform quality shown by one exhibitor, and yet this was but one of a half dozen similar exhibits made by Owen Farms this past season, with practically a different string of birds in each instance. Their record in Buff Orpingtons the past five years has been nothing less than phenomenal. At their last Madison Square Garden exhibit, December, 1911, they were awarded all five firsts on Buffs, to say nothing of three firsts on White Orpingtons, one first on Blacks, four on White Wyandottes, three on White Rocks and three on Single Comb Reds. Such consistent winning in the fiercest competition cannot fail to

attract the attention of all who are interested in the very highest class of stock. They will be very glad to mail illustrated catalogue and mailing list to any of our readers free on request.

WHY DO SOME FAIL IN THE POULTRY BUSINESS WHILE OTHERS MAKE A FORTUNE?

We have known men who started in this business expecting to get rich in a few months, yet we have never heard of any one retiring from business in a few short months.

We will just give you an idea of why one man says there is nothing in poultry. He started in in a great rush, bought an incubator, built houses and it looked as though he meant business. He purchased market eggs at a cheap price, started his incubator with these eggs, and for a wonder had a good hatch, but my, they were all sizes, colors and shapes. In a few days the chicks commenced to look droopy and, of course, died off one at a time, sometimes many at a time, till it was a sickly looking bunch, but he repeated the market eggs in next hatch, bought a lot of market poultry and in the fall had three hundred fowls, all colors, shapes and sizes. Do you expect much from these? Neither did we. Well a merchant in town told us he bought 10¢ worth of corn at one time to feed these 300 hens and pullets

Of course he was not getting eggs, but later they commenced to lay, and he placed these eggs in a window for sale. Dirty, small, all colors, and they did not sell very readily. The spring came around, of course, and he started his incubators again, but they did not hatch so well and he was paying out money for feed and there was not enough coming in to pay for same.

People who went to look at his stock did not want it even to eat, for (though we cannot swear to this, for we were never in his yards) people who saw the houses said there were dead chickens lying around on the floor and the other chicks were eating them. Would you care to eat any of that stock?

It went on till summer and he commenced selling off his stock and tried to sell his incubators at half price. He says "there is nothing in the poultry business." Quite true, when run on those principles and many such men tell the same story, but let us say those who say so are men who run their business on those principles.

We are on our fourth year and we have only just started. We did not start with market eggs, however. We have had bad luck and lots of it, some due to following the advice of some whom we supposed knew what they were talking about. But let us say experience and observation have been our best teachers. When we take off a hatch we cull and all sickly looking birds, and as they grow up we still keep culling and we have been making our birds better each year and expect to continue in that same way. We have actually refused to sell birds (and the man was standing looking at the bird) for breeding that we thought would not give satisfaction. We have never sold a bird or eggs that we would not be willing to buy. You may say we were foolish. Well suppose so, if you wish, but if we have a dissatisfied customer we do not know it,

and we do not expect to have. We sold a sitting of eggs to a local man and he said they did not hatch, but had dead chicks in shells. This shows it was not the fault of the eggs, but we gave him another sitting free, (for he did not seem to be satisfied), and as he had no hen wanting to sit, and as it was getting late in the season, we gave him a hen to set them under. We never received such treatment, and to be frank, we have bought from people who would not make good when it was deserved. We did not buy from those people again, and so it goes, if you want to please you will have to make some concessions.

Last winter we decided that our



Oscar Wells Farina, III. One of the pioneer fanciers of the west, spending twenty years as a fancier, the last 16 years with R. C. B. Leghorns and Pekin ducks. He has won many silver cups and firsts at state shows, etc. His years of experience as a fancier at shows and county fairs make him in demand as a poultry judge.

birds were good enough to send to the shows and we won first prize on every entry on Buttercups and Reds, and one of the association members tried to buy our Red cock, but we thought if it was worth the price to him it was to us and he is doing good work. We did not force for winter eggs and our eggs tested 75 per cent fertility in January. There has been but one day since we started in the business that we did not get any eggs. That reminds us we read Mrs. Melville's request in February Poultry Keeper as to when to hatch for winter eggs. She says she will never make a fortune from poultry. Why not? She has the staying qualities and that counts a great deal.

In regard to greasing baby chicks, she does not say if they were hatched by incubator or hen. If by incubator they do not need greasing, if the incubator is clean and they should be thoroughly cleaned after each hatch. If

hatched by hens, dust your hen with powder before putting eggs under her and again when you take her off the nest, but use a powder that will kill lice. We have placed some lice on back of hand and covered with powder and the lice would crawl all around in it. Then others we have tried killed them almost instantly. We will not name any powders for we do not wish to "knock."

As to greasing chicks just a little snuff and lard under wing and on head will not hurt them, but do not rub it all over them for it is not necessary. One man says, "Chicks hatched in incubators with lice on them." We cannot agree with him, at least ours do not.

When our hatch comes off we remove them from incubator in about 24 or 36 hours, depending on how warm the weather is. We give them at first grit and fresh milk, brought to a boiling point, but do not let it boil. This we place in a Cyphers vessel for the purpose and they cannot get in the milk. Then we feed chick feed and oat meal, or rolled oats. We had a hatch come out last month and have not lost any, except a few weak looking ones we killed, for we keep only the best, even for market fowls for runts do not pay.

If you want winter eggs do not hatch them in January or February, for these will molt at molting time as per your experience, but we find the best month April, or sometimes March for the heavier breeds. If you do not force them (and we do not the ones we want for egg production), they will commence laying in November. Our January and February hatches we ship for early market. Last spring chicks were 46¢ per lb. in Baltimore. You can find a ready sale for your pullets in the fall in Boston, Mass. Park & Pollard pay 25¢ to 30¢ per lb. for pullets of quality. Winter eggs are not all the profit in the poultry business, if you have the stock. We have often thought it would be a good idea and help to poultry raisers if the poultry journals would print a list of the different markets so as to enable the raisers to get in touch with them. Some sell all their stock to local markets at a reduced price and in that way the other man makes the profit.

Why not keep only thorough-bred stock. It does not cost any more to keep them and there is always a ready sale for such. We had orders for more than we could possibly supply, but will try to meet the demand this season. If we have one dissatisfied customer we do not know it and we shall try harder than ever this year to please, and we have better stock. When we say eggs from first prize stock we mean it and can prove it. The Blue Ribbon hangs in our houses of the pens that won. If you do not believe it step in and see for yourself, and if you will produce a person who will say we ever refused to make right any dealings unsatisfactory you can have your choice of any bird in our flock.

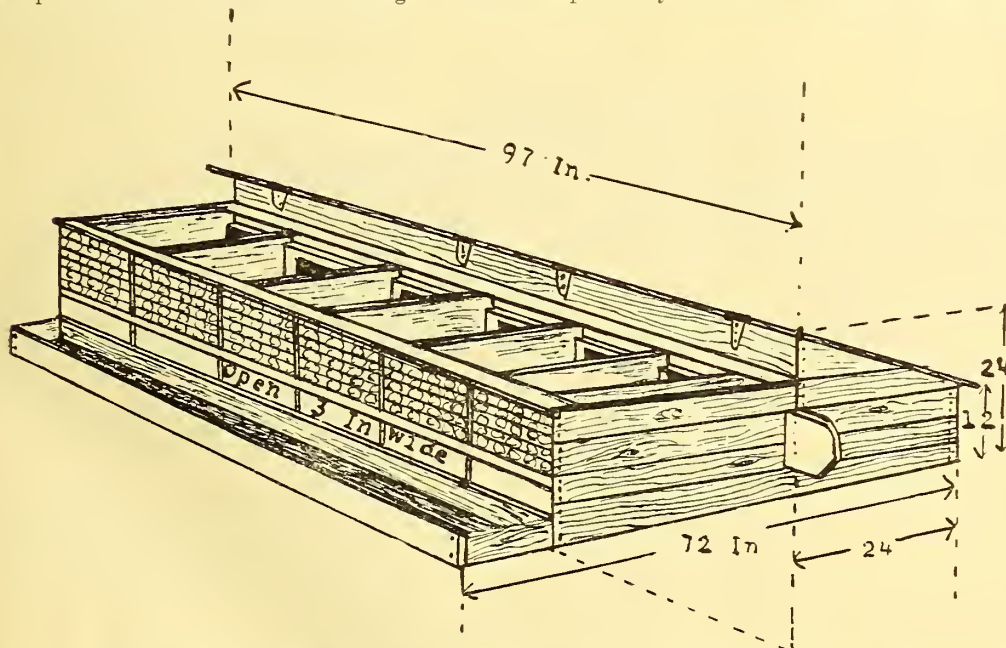
Geo. N. Walter & Son,
West Virginia.

BROODY HEN COOP.

As the time is at hand for hatching chicks which we trust will make winners at the coming fall fairs and profit payers by shelling out eggs next winter an article on my method of hatching chicks will, perhaps, not be out of order.

I am enclosing a sketch of a small building which I use for sitting hens. The portion which has a roof on it is 97 inches long, 24 inches wide, tight board floor, built shed roof style, 24 inches high in front and 12 inches in rear. The roof is in the form of two doors, hinged, giving easy access to nests. The nests are 15 inches square. This gives ample room for the hens. This part is enclosed in front by a continuous board sliding into place from one end, openings of six inches square being cut into this board in front of each nest and covered by piece of wire screening to give ventilation. This portion of the building is divided by solid board partitions, thus making each nest private. No hens can get on the wrong nests. The roof or doors are solid boards, covered with a good grade of tarred felt or battened.

The yard is the same length as the building, three feet wide and 18 inches high. A box is attached for feeding and watering space. The front of yard has 6 inch board at bottom and a three inch space, allowing fowls to put their heads through and obtain their food and water. The balance of the front is two inch poultry netting. In the diagram I do not show the top of yard covered with netting, but of course this should be covered with netting or tarred felt. I use tarred felt as this keeps out snow. I use these buildings



very early. This yard is also divided into yards 15 inches wide, making when complete a nest and yard for each hen from which she cannot roam, although allowing her access to fresh grass, feed and water, with very little work for her owner. I make these buildings in sets of six nests. The number is of course optional.

a short bunch five or six inches long and shove one down into each corner of the nest material which has already been placed in the nest. Lastly shape the nest by hand and when through it will make a nest that will hold its shape indefinitely. As stated before I use these nests very early in the spring while there is still snow on the ground.

Our Trade Mark Guarantees Quality

It assures absolute satisfaction to the customer. That is why we sell half our stock in advance to old customers—those who have been well pleased with the vigor and quality of our

White Leghorn Chicks and Breeding Stock

We have a mammoth incubating capacity of 60,000 eggs at one time. Our cellars, brooders, ranges and houses are faultless in construction and efficiency. They are built right and managed properly.

Our stock is vigorous, heavy laying and possess the stamina that comes from years of intelligent breeding. Our birds are clean, trim—they show **QUALITY**, always!

Write for our catalog. It will save you money. It contains full description and prices. Free on request.

MICHIGAN POULTRY FARM
LANSING, MICH.



Detroit, Mich.
Dec. 29, 1912.

Chicks received in June, 1911, began laying at 5 months of age. In severe winter 1911-12, pullets from these produced 40% yield. They averaged 170 eggs in that time, 10 months.

Chicks received in March, 1912 began laying at 18 weeks old and at 5 months 85% of pullets were laying. They laid during their fall pullet moult.

Chicks received in June, 1912, were not let lay until 5 1/2 months old. In Dec. they averaged a 50% yield. Never had pullets lay such fine eggs.

PAUL ELLIS,
339 Lyncaste Ave.

Perhaps you may smile when I tell you how I make a hen's nest, but nevertheless here goes. First, I dig a good fresh sod and fill the bottom of each nest two inches deep. Second, put in a quantity of hay or straw, twisting it around until it shows a circular nest place on the sod. Third, take a wisp of hay and fold it into

The nests are placed on the south side of a high stone wall, bordering the barn yard and facing south. I line the inside with newspapers before I put in the material. Under this method I have had fine hatches and the care is reduced to a minimum. Supply the feed and water in basins, pull the continuous door and the hens will take care of themselves. It is well to see that all hens go back on their nests and close the door to keep out rats or weasels. Unless the weather is very cold I turn luke warm water around the nest material of each nest three or four times during a hatch and the 18th or 19th day sprinkle a little on the eggs.

Now for a few words of caution: On days when hens are hatching take a vacation. Go anywhere to be away from them. If left to themselves a much better hatch will be obtained. Leave the chicks with the hens until 24 to 36 hours old before you move them or try to feed them. Fine grit and luke warm water are the first things to give them. As I have far over-stepped my allotted space, I will say in conclusion, that nature's way is the best way to obtain those nice chicks.

Fred Van Houten,
Pennsylvania.

Don't make the mistake of crowding too many eggs in a hen's nest and expect a good hatch.

FEBRUARY'S RECORD IN NATIONAL EGG LAYING CONTEST.

The Pen of S. C. White Leghorns From England Are Still in First Place and Are 115 Eggs in the Lead of Their Nearest Competitor—A Pen of White Orpingtons From Kentucky Made the Best Record for February—Hints on Feeding Baby Chicks—Maine Method of Feeding Laying Hens.

The hens in the egg contest at the Missouri State Poultry Experiment Station at Mountain Grove, are still doing considerably better than they did in the first contest. They laid 2,224 more eggs this month than during February of last year. The grand total for the first three and a half months has now reached 21,636 eggs, 8,666 of these being laid in February. Pen No. 2, S. C. White Leghorns, from England, are 115 eggs in the lead of their nearest competitor. The contest is on in earnest now, and some hens which had not laid much up to this time are now laying regularly and are climbing up towards first place. Every month from this on there is certain to be many changes. Pen No. 56, White Orpingtons, from Kentucky, won the silver cup for the best record for February by laying 195 eggs in the 28 days.

The standing of the ten leading pens for the first three and a half months, including the last 15 days of November, and all of December, January and February, is as follows:

Pen No.	Eggs.
2 S. C. White Leghorns, England..	656
23 Silver Wyandottes, Illinois	541
57 Black Langshans, Missouri	488
33 Barred Plymouth Rocks, Illinois..	477
20 White Wyandottes, Arkansas.....	474
59 Black Orpingtons, Canada	469
30 Buff Wyandottes, Vermont	443
24 White Wyandottes, New Jersey..	433
58 Buff Orpingtons, Missouri	433

A pen of S. C. Rhode Island Reds from Florida is only one egg behind the last mentioned pen.

The ten best pen records for the month of February are as follows:

Pen No.	Eggs.
56 White Orpingtons, Kentucky....	195
2 S. C. White Leghorns, England..	180
49 Black Langshans, Missouri	180
19 Silver Wyandottes, Iowa	178
57 Black Langshans, Missouri	175
27 Silver Wyandottes, Missouri	165
33 Barred Plymouth Rocks, Ill.	163
20 White Wyandottes, Arkansas ..	161
37 S. C. Reds, Missouri	161
30 Buff Wyandottes, Vermont	159

Black Orpington, No. 2052, in pen No. 59, laid 27 eggs in 28 days. Seventy-eight hens out of the seven hundred have not laid an egg. A few contestants have made the mistake of sending old hens. Others did not have their stock mature enough. To make a good record in a contest like this the stock should be hatched early and fully matured by the time the contest begins. The best individual records to Hen No.

Hen No.	Eggs.
66 S. C. White Leghorn, England..	84

2076 Buff Orpington, Missouri	81
600 Buff Wyandotte, Missouri	79
65 S. C. White Leghorn, England..	79
860 Buff Wyandotte, Vermont.....	79
709 Buff Plymouth Rock, Mo.	78
735 Black Langshan, Missouri.....	78
656 White Wyandotte, Arkansas....	77
601 Silver Wyandotte, Iowa	77
2158 Buff Orpington, Missouri	77

Results From Feeding Tests.

In this feeding experiment, the positions of the ten pens remain the same with the exception that the pen fed according to the New York method of feeding laying hens has advanced from ninth to seventh place. Where feed of



First prize Single Comb Red Pullet, Paulding, Ohio, 1913, show. Also special for best S. C. Red in show, 87 birds competing. Bred, owned and exhibited by Ed Palm, Ridgeville Corners, Ohio.

all kinds is kept before the hens they seem to be doing best and laying the greatest number of eggs. The pen in which the hens feed themselves from hoppers and in which feed of various kinds are kept before them are 42 eggs in the lead of their next competitor, the pen fed according to the Canadian method of feeding. So far, this experiment indicates that hens will lay more eggs in the winter months where they are hopper fed, or fed from an automatic feeder than where they are hand fed. The results for the summer months may prove the opposite to be true for hot weather.

Pen No. 63, Maine Method of Feeding Laying Hens.

Dry grain fed in litter.
Early morning feed—cracked corn.
10:30 a. m., feed equal parts of wheat and oats.

Feed about two quarts to fifty fowls.

Dry Mash—First Month.

300 lbs. wheat bran.
100 lbs. corn meal.
100 lbs. cheap flour.
100 lbs. beef scraps.

Dry Mash—Second Month.

200 lbs. wheat bran.
100 lbs. corn meal.
100 lbs. cheap flour.

100 lbs. gluten feed.
100 lbs. meat scraps.
Third month, same as second only add 50 pounds linseed meal.
Fourth month, same as second.
Fifth month, same as third.
After this, feed same as second month and add 50 pounds linseed meal every alternate month.

Green food, sprouted oats, cabbage, mangels, etc. Grit, shell and charcoal.

Hints on Feeding Baby Chicks.

The hatching season is on and it might be well to give a few suggestions as to how to feed or start baby chickens.

The first two or three weeks of a chicken's life is perhaps the most critical time in its history. If you can get the chicks safely over this period then your problem is nearly solved. Then any feed which will give best results, which will tend to decrease the mortality, is not expensive even if you have to buy it and pay a good price. You cannot afford to let anything stand in the way of providing the best feed obtainable to feed your chicks for at least the first three weeks after hatching. We have found that practically every farmer and poultry raiser has a little different method of feeding. If you are getting good results, I should not advise you to change it. While the method mentioned here is perhaps not the best, yet it has proven to be simple and safe in most cases.

Provide a hover for the hen and chickens, or a comfortable brooder for their incubator hatched chicks. Cover the floor with clover chaff or finely cut straw or other litter free from mold or mustiness. Sprinkle a little fine grit over the floor and provide a fountain of pure water. Place the chicks in the brooder but do not feed them for about forty-eight to seventy-two hours after they are hatched. The first food we give them is a little good grade commercial chick feed which is sprinkled in a clean place on the floor. This is fed at morning, noon and night. As soon as they have learned to eat we sprinkle this feed in the litter and let them have the fun of scratching for it. Between meals, about ten o'clock in the morning and about 2:30 in the afternoon, we sprinkle a little rolled oats or pinhead or steel cut oats on the floor. We provide all the sour milk or buttermilk we can get the chicks to drink from the first day until the stock is fully matured. We prefer this to feeding them beef scraps. We also cut up an onion occasionally and give to the youngsters. This furnishes them with green food and also seems to aid in keeping them healthy. After the chicks are about ten days old we begin to feed a dry mash mixture made as follows:

2 parts bran.
1 part corn meal.
1 part shorts or middlings.

We mix in a little bone meal and a little fine charcoal and also include one-half pound of fine salt with every one hundred pounds of this dry mash.

68 S. C. White Leghorn, England.. 82
This is kept in a hopper or box where the chickens can eat it any time they become hungry. The same dry mash

is used until the chickens have fully matured. If you cannot get sour milk or buttermilk, it will be necessary to add one-half part of dry beef scraps to the dry mash mixture. After the chicks are from two to three weeks old we gradually change their grain food from the commercial chick food to a mixture of two parts wheat and one part cracked corn or kaffir corn. After the chicks are a month old, their grain food is all fed from hoppers. Try this method of feeding if you wish, but don't give up your own if you are already succeeding with it.

T. E. Quisenberry, Director,
Mountain Grove, Mo.

INCUBATOR HATCHING.

As hatching time is close at hand I will give you my method for hatching, which may help some one.

I get out my incubator, which is an Old Trusty, and inspect it all over and fill with water and run for two days to see that everything is in good working order before I put in my eggs. With everything working well I put in the eggs, which I have been very careful with while saving, never setting an egg over two weeks old.

The heat being at 102 degrees when eggs are put in the machine, of course

the temperature goes down and I watch very closely when coming up again so the eggs will not get too hot on the start. About the third day I raise the temperature to 102½ degrees and turn the eggs once, but every day after the third day I turn twice, morning and evening, about the same hour each time, till the nineteenth day.

On the seventh day I test out all eggs that are infertile and on the seventeenth day I test again and take out all that I could not tell were bad in the first test.

The second week I keep the temperature at 103 degrees and the third week 103½ to 104 degrees.

When about a dozen little chicks hatch if there is no steam gathered on the glass door I pull out the trays and sprinkle the eggs well with warm water (not too hot) then close the machine and if there is still steam on the glass in 4 or 5 hours I do not sprinkle any more. This moisture makes the shell easier to break and they will hatch faster. I keep the door shut and keep the heat up to 103 to 104 degrees.

I leave the chicks in the incubator for a day after they are hatched before I take them out. I never help a chick out of the shell for I find that if they

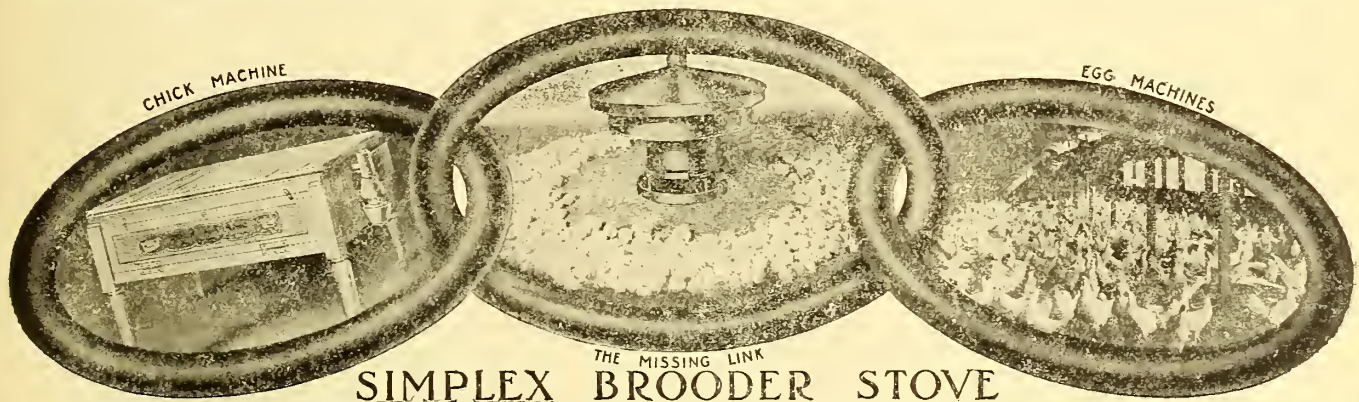
are not strong enough to kick out themselves they will not live if helped to get out.

When I take the little fellows out of the machine I put in fireless brooders which I make myself and put them in coops according to the Philo System and when a week or ten days old if the weather is warm I turn them loose to run around the yard, which they seem to enjoy and they grow like weeds.

I feed fine oat meal the first few days and after that chick starter for a week and then coarsely ground corn meal, always keeping plenty of fresh water before them. I never put over 35 chicks in one bunch and clean out the brooders each morning. I have always had good success and am never bothered with White Diarrhoea. I much prefer the incubator and brooders to the old hens as I am not bothered with lice and when a storm is coming up all I need to do is just to go out and call and beat on a pan and they come in a hurry from every direction, while when with an old hen maybe she will get in before the storm and maybe not. My chickens are Rhode Island Reds and have free range of 30 acres. Illinois. Mrs. W.,

Stop the Mortality --- Stop Bowel Trouble.

If your chicks are not doing as well as you would like, if they are dying of this horrible scourge called White Diarrhoea, get a Simplex Brooder Stove and get them growing as you never before saw chicks grow. A Simplex will stop bowel trouble once and for all. The Simplex will turn your varying success and failure into one thing—success you never dreamed possible. It will put the profits into your pockets instead of dead chicks. It has saved hundreds of breeders from utter failure. It will save you. Just nature, fresh air, which can be provided only by the Simplex System, will not only stop that terrible scourge, but better still, will prevent it. Chicks around a Simplex are always happy, healthy and sturdy. They grow into dollars



The Reason Why

Because, with our system of ventilation, the air in the room is changed every fifteen minutes, and the carbon-dioxide which the chicks exhale in their breath is carried out of the room instantly. In the old fashioned brooding systems, which it is impossible to ventilate properly, the chicks are compelled to breath back into their systems the poison in the shape of carbon-dioxide which nature has thrown off through their lungs and bowels. This carbon-dioxide is the only cause of bowel trouble and chicks which are kept in properly ventilated rooms are seldom afflicted with bowel trouble, and never when fed and housed correctly. It is a well known fact that air is more essential to animal life than food. We breathe air in order to secure the oxygen contained therein. After passing through the lungs the oxygen is extracted, and expelled in the form of carbon-dioxide which is poison to any living animal. To the hover system it is easy to trace the reason for the slow growth of chickens and White Diarrhoea which sickens the heart of the poultryman and puts so many of them out of business.

We extend you an invitation to visit Simplex Farm and see the Simplex Brooder Stove working. We have stoves now in operation with 1500 chicks around them. Call at our offices in Grand Rapids at 10 a. m. or 2 p. m. and we will take you out to Simplex Farm free of charge.

The Simplex Brooder Stove Saves Nine-tenths the Work, Nearly Doubles what you Raise with One-Quarter the Expense and One-Fifth the Investment.

"SUCCESSFUL BROODING" is the title of a book written by N. P. Husted and is the one book on Brooding that tells you something. It tells how to raise chicks so as to get hens that will lay plenty of fertile eggs any month in the year. **50c** Sent postpaid for

Send for our free catalogue. It will show you how to make more money in the poultry business. It fully explains our system of ventilation and heating. We send it free. Write for it today, now, while you are thinking about it. It will surely be the beginning of the end of your brooder troubles. Address

Simplex Brooder Stove Co., 142 4th St., N.W., Grand Rapids, Mich

WHITE ORPINGTONS, COLOR, SIZE, ETC.

It is admitted by all breeders that the color problem has been a very hard problem to solve, that is, to breed White Orpington male birds absolutely white that would remain white and today many breeders are still striving along these lines, while others have succeeded in producing a good bunch of absolutely white males. I do not mean by this that the White Orpingtons have off-colored feathers, but they have a little brassiness on the surface of saddle, hackle and wing bow feathers, which by careful study and

or shape would ask the reader to notice the pictures of these birds on this page. Both of these pictures were taken when the birds were eight months old and are not retouched photos. Notice the deep breast, short, nicely arched neck and low set, well spread tails and short shanks. All of my birds have nice low combs and rich, red eyes.

One of my cockerels won special prize at Cleveland for second heaviest bird in the show. First went to a Buff Orpington cock bird. Remember, all breeds were competing, such as the Asiatics.

I have an up-to-date catalogue which describes my matings and gives pic-

versity. For farmers and commercial egg producers especially.

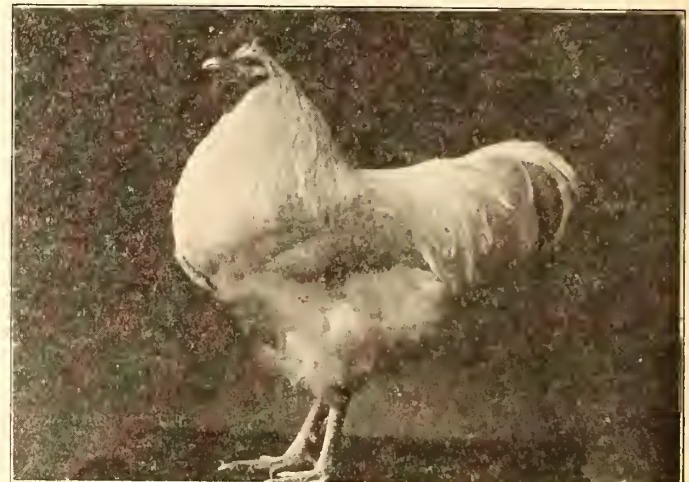
Awards under this class will be given for the highest scoring eggs for table use alone, irrespective of breed.

C—Student's Class. Open to the students of the University alone. (1) For those in Animal Husbandry, 16. (2) For those in any class or school of the University.

D—Faculty Class. Open to members of the University only.

Awards under C and D will be given on the same basis as those under A.

A number of the most prominent poultry and farm papers will publish



Cockerel and pullet owned and bred by McKee's White Orpington Yards, Watertown, Tennessee. Cockerel won 2nd at Columbia, S. C. in class of 32. Mr. McKee also won 4th cockerel in same class and 3rd pullet in class of 46.

mating will be entirely eliminated. I have studied this problem very carefully until I have some of the whitest Orpingtons in the world. These results were not obtained by mating just any way, but were obtained by line mating, careful mating and study.

The chick must be watched from the day it is hatched until it is fully matured. Some chicks will hatch that appear a little gray on the back while others hatch absolutely white, and others cream colored. The gray and white ones will be the whitest when matured and by careful mating along these lines you can soon have a flock as white as any flock of birds regardless of breed. Remember the toe marking comes in along then.

On this page will be found a picture of one of my absolutely stay-white males. Regardless of sunshine and rain, he will remain white. This bird won second prize in a class of thirty-two. Also one of my cockerels won fourth prize in the same class. One of his pullets won third prize in a class of forty-six pullets. His cockerels turned down 30, while his pullets turned down 43. This alone shows what a few years of careful mating will do.

While the color of my White Orpingtons is good, I have not forgotten type and size, and have had pullets weigh at seven months from 7 to 10½ lbs. These pullets were not bred from small, under-sized birds, but from large framed, healthy, vigorous stock. Large males were used as well as large females, keeping in view all along these lines, the type or shape and as to type

tures of birds and prices. If in need of the stay-white quality, or birds to improve your flock, address, Garvey McKee, Route 1, Watertown, Tennessee.

PURDUE EGG SHOW.

The 5th annual egg show at Purdue University will be held in the Agricultural building the 7th, 8th and 9th of May. The show is under the management of the freshman class and is in the interests of more and better eggs.

Poultry associations and prominent breeders throughout the state are offering many valuable prizes while the associations offers sweepstakes, 1st, 2nd and 3rd ribbons. There will be no entry fee and all that is necessary to exhibit a dozen eggs is to write for a premium list with instructions for selecting eggs for show purposes, and fill out the inclosed entry blank and send it to the Secretary of the show. All judging will be done by score card and will be in sole charge of a prominent judge.

The exhibits will be divided into classes as follows:

A—General or Fanciers' Class. Open to anyone not a student of the University, especially for fanciers and farmers.

Awards to be given under this class for the highest scoring eggs of the different breeds and varieties of chickens, ducks, geese, etc.

B—Commercial Egg Class. Open to anyone not a student of Purdue Uni-

versity. For farmers and commercial egg producers especially. All score cards will be sent to the exhibitors so each one may know just how his eggs were scored and eggs will be returned to the owners if desired—the show committee guarantees that absolutely no eggs shown will be used or sold for hatching purposes.

RATIONS FOR LAYING FLOCK.

I am feeding my flock a mixture of most all kinds of grain grown, with beef scraps, ground bone and charcoal. My pullets began to lay October 16th. In November the egg yield was 42 per cent; December, 67 per cent; January, 78 per cent, and to date in February, 81 per cent. My flock consists of 68 White and Brown Leghorns. I feed for the morning feed oats that have been soaked 24 hours, then put in a box and left there for 54 hours. I have three boxes and feed from the one that has the oldest oats and refill when empty. For noon feed, a mash composed of one-third each by weight, corn meal, middlings and bran. To this I add 4½ lbs. of the above, ½ lb. beef scraps, ½ lb. ground bone, 1-4 lb. linseed meal, ½ tablespoon salt, 1 teaspoonful charcoal. For evening feed I give 2 quarts scratch feed, adding one quart wheat and one quart corn. At 11 a. m. the hens are given all the green food they will eat.

E. W. Eastman,
Florida.

Kellerstrass \$150.00 Egg Blood Trap-Nested White Orpingtons

Baby chicks with vim and vigor, 15c to 25c each. Safe delivery guaranteed. Eggs \$1.50 to \$3 per 15, tested for fertility before shipping. I have some of Kellerstrass' best blood from his \$150.00 per sitting of 15 eggs. Specialty breeder big, trap-nested, winter layers. All Kellerstrass strain.

FORESTVIEW WHITE ORPINGTON FARM, CLINTON MILES, Proprietor, R. D. No. 2, Box P. K., Saint Johnsville, N. Y.

NOT A CANDIDATE.

Despite the fact that I was not a candidate and did not send out even a postal and had not asked a single member of the Association to vote for me as a member of the Executive Board of the American Poultry Association, I received nearly 500 votes on the nominating ballot. I wish to thank my friends for this expression of confidence. I have served three years and tried to stand for what I thought was right. I have not been a candidate because I had any fear of being defeated, but because my own work is crowding me for time and I want others to share the honors and responsibilities of the Association. I am greatly interested in its welfare, and hope the policy of those who will be selected for position will be broad minded and progressive for it is the duty of this Association to foster all branches of the industry. If I have the opportunity before my term expires, I expect to vote to open the Executive Board meetings to all members, and hope that the time will come when this is done. In my opinion, the next few years are certain to be a most critical time in the history of the Association. We need big men to safely and wisely mold the destiny of a big association and a big industry.

Thanking my friends throughout this country for the honors conferred upon me, I shall now be content to work as a private in the ranks of the Association, and do what I can in my feeble way to benefit the industry in Missouri and elsewhere.

Yours truly,
T. E. Quisenberry,
Mt. Grove, Mo.

A 200 EGG INCUBATOR ONLY \$3.00.

The most difficult problem of all poultry raisers has been entirely overcome by a German poultry specialist, operating in this country, through his simple Natural Hen Incubator, which uses the hen herself. The problem of getting as strong and healthy chicks as the hen herself could ever hatch has confronted incubator manufacturers, practically ever since the first incubator was manufactured.

No manufacturer has ever been able to claim such a feature on his incubator, until Mr. Siems put his system on the market several years ago, which has won tremendous popularity among poultry raisers.

One of the most startling features of the Natural Hen Incubator is the fact a 200 egg size costs only \$3. The same size incubator in almost any other make would cost from four to ten times this price. Its remarkable advantages and its low price, and the fact that thousands of them have been sold, gives great promise for revolutionizing the entire poultry industry.

The system patented by Mr. Siems

OWEN FARMS OF COURSE

"Ewing, Ill., Dec. 21st:—I write you of my winnings as I won everywhere I went. One pullet scored 96 1-4; none under 92 3-4. Showed 5 of the 7 Buff Orps. hatched from your eggs."

"....., Ky., Sept. 18th:—Am just home from State Fair, where I won 1 and 2 on White Orp. cockerels, 1, 2, 3 and 5 pullets. All from Owen Farms eggs."

"Milwaukee, Jan. 8th:—I got 10 White Rock eggs from you last April and hatched 5. Showed these at, taking 1 and 2 cockerel."

"Roselle, N. J., Dec. 15th:—From the White Wyandotte eggs I raised a grand cockerel. I showed in and got 1st."

"Des Moines, Ia., Jan. 4th:—You may be interested to know that on S. C. Reds from your eggs I won at 1 and 5 cockerel, 3 pullet."

White, Buff and Black Orpingtons, White Rocks White Wyandottes and S. C. Reds

By April 5th we are confident we can make prompt shipment of EGGS and in all our varieties. You can order direct from this advertisement and save time.

\$1 Per Egg, \$40 Per 50, \$75 Per 100

from the grandest pens we ever mated and containing more Prize Winners than were ever owned by any one farm. From other pens (absolutely grand birds), \$5 per 15; \$30 per 100.

Remember the best hatches and the finest birds of the year are brought off in April and May.

STOCK We are ready to ship promptly the grandest value ever given in trios at \$15 and upwards and cockerels at \$5 and upwards, fit to give immediate results and guaranteed to please.

Send your order now—TODAY. Catalogue and Mating List free.

Owen Farms

127 William Street,
Wm. BARRY OWEN, Proprietor.

VINEYARD HAVEN, MASS.
MAURICE F. DELANO, Manager.

is astoundingly simple, even though it offers the poultry raiser far more advantages than have ever been found heretofore.

The Natural Hen Incubator has proven a success in every way. It does away with lamps, oil expense and trouble, hot death dealing fumes, uncertainty of temperature, and the possibility of losing the entire hatch by allowing heat to go out.

In the Natural Hen Incubator, where Mrs. Hen is the controlling feature, she is kept strictly on the job until the entire hatch is produced, and it is safe to say that her work with the Natural Hen Incubator has a much higher degree of certainty than she has ever been able to claim where she worked independently and alone. The uniform hatching produces a larger percentage of chicks.

The advertisements of The Natural Hen Incubator have appeared in this paper from time to time, and for the benefit of our readers we can say, by all means send for their catalog if you are in the least way interested in poultry raising.

The address of the Natural Hen Incubator Company is Station H, Department One, Los Angeles, California.

DON'T SUBSCRIBE.

To any poultry journal, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and journals and can quote you better prices than you can obtain elsewhere. Address Poultry Keeper Publishing Co., Quincy, Ill.

POULTRY KEEPER

ISSUED THE FIRST OF EACH MONTH
A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
(Incorporated) QUINCY, ILLINOIS.

Subscription Price: Fifty Cents a year; Single Copies, 5c.
Foreign Postage: Thirty-six cents a year additional.
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Entered at the Quincy, Ill., Post Office as Second Class Matter.

Remittances should be made by Draft, Money Order, Express Order or Registered Letters. Small sums will be accepted in United States one or two cent postage stamps.
Change of Address—When this is desired, be sure to give old and new Post Office addresses.

All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising Rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

F. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

APRIL, 1913

No. 1

In selecting eggs for hatching it is well to reject all eggs that you are doubtful about. Have an ideal egg in mind and cull close to it. When you once do this it is surprising how quickly you will divide the eggs into good and bad. Rough shells, porous shells, ringed shells, round eggs, pointed eggs, seldom hatch well. Even the sense of touch will tell you much, being worth fully as much as the sense of sight. Everything else considered the good sized egg produces the big chick, that grows into the large bird. Usually the eggs from a moderate layer will be more generally fertile than those from the heavy layers. During the hatching season, March to June, less animal food is needed and more green vegetable food.

Apply the fresh air idea to your hatching room, whether it contains sitting hens or incubators. Stale air will injure eggs whether held for eating, held for hatching under hens or in the machine. Mold germs injure eggs for any purpose. While dipping the eggs in some disinfectant will not kill the dreaded germ of bacillary white diarrhoea it will destroy all of the mold germs on the shell. Wash out the machines with some such mixture before starting, and after every hatch. A spraying of the cellar wall and bottom with a tar disinfectant will help you improve the hatch from the incubators. We have seen patches of mold all over the earth bottom of some cellars—a condition that is not helpful to good hatching. Conditions surrounding hatching work should be as favorable as man can make them. Starting with a germ free cellar, germ free incubator, germ free egg shell, you should get better and healthier chicks. During the foggy days of spring you will find that mold increases, becomes more abundant in the presence of heat and dampness and is less abundant when the outside air is dry and the weather is cooler. If you use the wet, sand-tray incubator the addition of a teaspoonful of Zenoleum, to the water, will keep the moisture perfectly sweet.

We believe it best to get out busi-bred chicks before the middle of May. Pullets hatched before that date seldom fail to begin laying by middle November and many lay a month earlier than that date. Eggs are now at the low prices of the year, if sold for eating, and are plentiful and fertile. The weather is fine for the incubating period, May will give good brooding days of mildness and June gives the best growing weeks of the season. The fancier may hatch early for the getting of chicks for the fall fairs, may hatch late to breed the winners for the winter shows, but the practical poultry man gets out his chicks as near April as he can. When you hatch the desired number of chicks you can care for, cease setting. Too full coops and houses will not pay as good profits as when there is less crowding.

Poultry raisers need to plan for the roots and green food for the coming year. It is time to have the seeds bought and some of them in the ground. Oats, barley and spring wheat cannot be seeded any too soon. Cabbage and rape can wait till May, while corn and sunflower do their best when the soil is warm after the middle of May. There comes a time in the spring when the soil is in best condition to plow or spade, when it is neither too wet nor too dry. One or two harrowings will kill millions of small weeds and make the cultivating less hard, as well as allow the fertility of the soil to go into the crops. If it is possible to turn over the soil in a yard or two and plant to oats, it will use up a lot of the filth of past seasons and give good hay or straw for the poultry. Green food of many sorts, roots of several names, grain and straw in abundance, will reduce the cost of feeding and add to the health of the birds. If you have not bought your seeds, you should make your selections and get them at once. Buy seed of quality. It is just as important to have well-bred seed for the field and garden as to have thoroughbred stock in the poultry house. Good seed is worth all the extra price that it may call for and

returns big dividends on the extra amount paid.

There seems to be renewed interest in the raising of turkeys this year. At both Boston and New York shows were good exhibits of turkeys and some sales of fine birds. The raising of turkeys is being made one of the features of a few of the large institutes this winter, and letters from our readers make us think that we are right when we say that more people will try to raise turkeys this spring than for several years. We are glad of this interest, believe that the turkey is yet to be produced in the old numbers, because the turkey is head of all poultry. There seems to be interest in newer varieties of turkeys, perhaps because it is hoped they are less likely to disease, as we have heard of more sales of Kentucky Red and the Buff turkeys than the older kinds. All through the east it has been hard for twenty years to raise turkeys because of the ravages of the so-called "blackhead" disease. The Rhode Island experiment station, in its work to raise turkeys, tells us that the best work is along producing birds of vigor. That the germ of the disease known as blackhead can be best fought through strength in the breeding stock. That moderate feeding is far safer than to allow the growing turks all the food they will consume. Dr. Hadley, of the Rhode Island College, stated at the Connecticut State Poultry Association meeting at Hartford, in February, that small turkeys remain well, and grow best, when fed about one-third of the food they would eat if given the opportunity. Is there not a good point made in this statement that might apply to the feeding of chicks of all sorts? Let us give you this advice: Try out a few eggs from turkeys, from your own stock or bought, and if you succeed, be pleased with your venture. At the same time do not build "air castles" of what you can do with raising of this fine bird. Old breeders, men and women who have been successful in the past, have not been doing satisfactory rearing the last few years and why should you expect to do better than they? At the same time you may have started it at a more favorable time. Let us have your results six months from now.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

POINTS ABOUT HENS AS HATCHERS.

I started to raising what you would call dunghill stock and received my first knowledge from them. I also found that it did not cost any more to raise full-blood stock than it did poor blood, if as much. I am now raising the S. C. R. I. Reds and I find them to be as good a fowl as I care to feed.

As to the breeding, I endorse line breeding, and I have at the head of one of my pens today a great grandfather. Of course I have with him my strongest and best colored pullets. I have just bought a cockerel to go with my old hens, which will put new blood of the same strain in my spring pullets. During hatching season I find feeding green food or scalded clover increases the fertility of the eggs.

I always set my hens in a nest on the ground and use my gentlest hens for the purpose. Close by is their dust bath, which I mix, containing road dust into which I put a couple of lbs. of snuff and I find that the best of lice removers. The first thing I do in the morning is to feed and water the sitting hens and see that there are no eggs broken, as a broken egg has spoiled many a good clutch of eggs. I test my eggs on the 7th and 10th days and remove all infertile ones. The ones I remove on the 7th day I save for the baby chicks but I think those of the 10th day are not good enough for them.

I do not feed my chicks until the 3rd day and I have never had any trouble with bowel complaint. On the 3rd day I boil the eggs hard and mix them with a real fine chick feed and cracker crumbs rolled almost into a flour. The hens remain with the chicks until the 4th or 5th day and then the chicks are placed into my brooder. As the chicks are hatching they are removed from the nests as soon as they are dry, to make room for others, thereby keeping the mother from tramping on the wet, helpless ones.

Harry W. Schnabel,

Indiana.

WHITE LANGSHANS.

As an all 'round or general purpose fowl I think the White Langshans are hard to beat. For size, color, laying qualities and motherly instinct, they are second to none and as a table fowl they are excellent. Their plumage being very heavy, they withstand cold weather better than dark colored fowls. White fowls are also more easily prepared for the show room as all know who have had both kinds. The White Langshans will mature early, making fine broilers in two months. Cockerels a year old will weigh 9 to 11 lbs., and pullets 6 to 7 lbs. The Langshans are also good layers, laying large brown eggs with highly colored yolks. I consider them a very hardy breed. Their small feathers are almost as nice for cushions and pillows as duck or geese feathers.

Mrs. Wm. Aldrich,

Ohio.

America's Largest Line of Incubators and Brooders

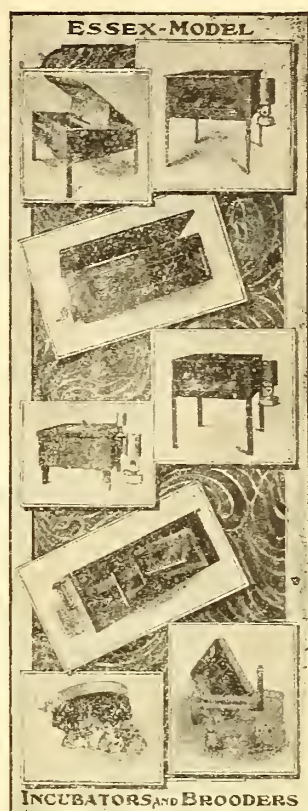
Your Choice of 19 Sizes and Styles \$2.25 to \$48

Some people think Essex-Model Incubators and Brooders might cost more because they are Superior Machines and cost more to build. Don't get a wrong impression. It is true they are better, but our profit is smaller than others—and so you get the benefit of High-class machines at low prices. You get the best machines on earth at the price you would have to pay for inferior machines; so surely you should choose the best. Our Catalogue illustrates how they are made, and proves that they Hatch Better and Brood Better.

Mr. Essex offers you the advantage of his Quarter Century of experience at no cost to you. Let him Start you Right. It is half the battle.



Your Friend "BOB" ESSEX



We Manufacture Everything In Wood and Metal For Poultry-Keepers

We have Agents all over the country who have these goods in their stores where you can see them. Write us for address of Agent near you. If there is no Agent near you we will sell to you at Factory prices. Anything you need we can sell you—Better and cheaper. Insist on seeing Essex-Model goods before you buy. If your storekeeper does not keep them, please write us. Write for our FREE 1913 Catalog containing Five Chapters on Poultry-keeping written by Mr. Essex. It will start you right. This Free Book also contains 30 Illustrations of Down-to-date Poultry Houses in use at Experiment Stations all over the country, and much other valuable information. All Free. Address nearest office.

Robert Essex Incubator Co.
7 Henry St., Buffalo, N. Y. or 67 Barclay St., New York City

REGAL RECORD LAYERS.

Regal White Wyandottes have long been noted for their splendid laying qualities. By means of the trap-nests I have developed a strain of birds that are wonderful performers. Scores of letters from customers bear testimony to this fact. I submit the following affidavit from a Michigan customer giving the laying of an exhibition pullet I sold him:

This is to certify that on the eighth day of December, 1910, I purchased of John S. Martin, of Port Dover, Canada, one White Wyandotte pullet and that on or about December 20th, 1910, said pullet began to lay and from said date until the 1st of November, 1911, I received from said pullet 235 eggs.

(Signed) Fred Koons, 210 Summit Ave., Jackson, Mich. State of Michigan, County of Jackson.

Personally appeared before me Fred Koons and makes affidavit that the above foregoing statement is true to the best of his knowledge and belief.

Subscribed and sworn to before me this the 12th day of December, 1911.

(Signed)
(Notary seal).

Frank J. Wheaton, Notary Public.

For the season of 1913 I have mated up twenty beautiful exhibition matings all headed by my winners at the New York State Fair and Boston and containing all my exhibition females.

Prices of eggs from Pens 1 to 20, (as they run) \$5 per 15; \$9 per 30; \$12 per 45; \$24 per 100. Pens 5 to 12 are special matings. Eggs from special matings only (as they run), \$10 per 15; \$18 per 30; \$25 per 45; \$50 per 100. RECORD LAYING PENS—Dorcas Line. Pens 21 to 26 are headed by males bred from females with high records. Some of these males also have exhibition records. The females in the six pens are composed of yearling with trap-nest records from 180 to 224 and pullets of the same breeding. From these pens eggs are \$5 per 15; \$15 per 50; \$27 per 100; \$50 per 200. Utility matings of vigorous surplus stock, \$5 per 50; \$9 per 100; \$17 per 200; \$25 per 300; \$75 per 1000.

500 cocks, hens, cockerels and pullets for sale. SPECIAL—50 big, vigorous, stay-white, Dorcas line cockerels, \$10, \$15, \$20 and \$25 each. Dorcas pullets, \$5, \$8 and \$10 each. Utility cockerels, \$3 and \$5 each.

Send four cents in stamps for the Regal White Wyandotte Book, the finest book ever published, dealing wholly with the White Wyandotte. FREE 20 page illustrated catalogue and mating list. It gives full description of my matings for 1913.

JOHN S. MARTIN,

Box 408,

PORT DOVER, CANADA.



EGGS AND CHICKS AT REDUCED PRICES

Send for this 132 page Free Catalog

Now is the time to hatch Leghorns for Winter eggs. May hatched birds will lay in October and November and produce eggs all winter.

Eggs from our bred-to-lay utility matings are only \$1.95 per setting or \$10.00 per 100 in April and in May only \$1.75 a setting or \$8.00 per 100. We can make prompt shipment of orders of any size. Day old chicks \$20.00 per 100 or \$180.00 per 1000 in May. Our thousands of breeders and our incubator capacity of 25,000 eggs enable us to ship any number promptly on receipt of order.

We have some splendid exhibition matings and trapnested laying pens and you will find complete description and prices of these in the big 132 pp. catalog.

We guarantee safe arrival of chicks and replace all infertile eggs free of charge.

Summer Sale of Stock Starts May First

Splendid values in stock of all grades, thousands of cocks, cockerels, pullets and hens bred from our special laying pens and our exhibition matings. Large vigorous birds that will win and produce winners for any show. Write for prices and full particulars—we ship on approval and guarantee absolute satisfaction.

Have you had a copy of our new 132 page catalog? If not send a postal today for it contains so much valuable information about White Leghorns that you cannot afford to be without it. Remember that it is absolutely free and that we will be glad to send you a copy by return mail.

GEORGE B. FERRIS
The Ferris Leghorn Farm
909 North Union, Grand Rapids, Mich.

The Hall Coal Heated Colony Brooder

If you want range raised chicks you cannot afford not to use Hall Colony Brooder.

Chicks Are Healthier

With the coal heated brooder there are no fires, no chilled chicks, no kerosene fumes. Greater indoor comfort and cleanliness and range afieid result in chicks of superior vitality.

Three-Fourths of the Expense and Labor is Saved

Coal is a far cheaper fuel than kerosene and the Hall Brooder Heater requires less attention than a kerosene lamp. When you care for one Hall Heater you are attending to from three to four hundred chicks. A like saving is experienced in feeding, watering and cleaning.

Professor Rice of Cornell says: "The most expensive factor in rearing chicks is the labor required to handle the larger number of brooders when the chicks are kept in small flocks."

Loss from Moving Chicks Eliminated

When the chicks are old enough the brooder is removed and the chicks remain in the house until mature, avoiding both labor and the serious setback to chick growth that results when they are removed to strange quarters.

Write at once for our Catalog and prepare yourself to raise more and better chicks with less expense and labor.

THE HALL MAMMOTH INCUBATOR COMPANY

176 SOUTHERN AVENUE, LITTLE FALLS, N. Y.

GOOD RESULTS FROM LEGHORNS.

I run two incubators of 150 eggs each. One is hot water and the other hot air. While the hot air machine cost more I like the hot water machine the better. I prefer a brooder to raise the chicks. Last year I put 150 chicks in one brooder and raised all but ten. The first feed I gave was hard boiled egg, with grit and chick feed. I used the eggs that tested out as infertile. For winter eggs I feed Kaffir corn in the morning, oats at noon and corn at night. This is all the grain they get. For mash, I use shorts, bran, corn meal, cotton seed meal with a little salt. My birds have free range with plenty of green food. Some people say that Leghorns are not good layers, but I furnish some of my neighbors with eggs and some of these neighbors have larg-

er flocks than I have. There is money in the poultry business if you will manage it right. The main thing is to not get into it too big until you can make it a success. Get the breed that suits you and stick to it. Keep things clean, use open front houses and give the birds plenty of exercise.

Roy R. Howell,
Texas.

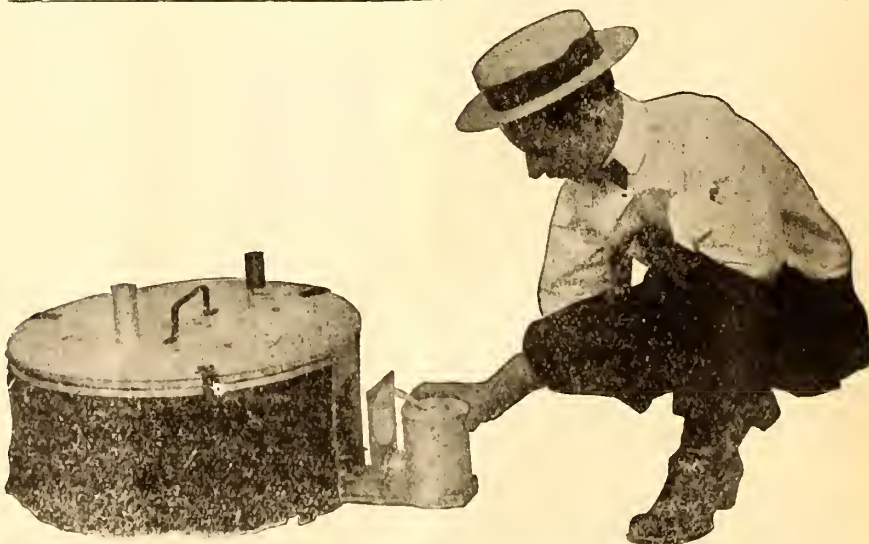
CURE FOR EGG EATING.

I clean all the straw out of pen for two or three days and made a hole in large end of egg. I melt some yellow soap and dope it well with strong red pepper and put in egg and close end with court plaster.

Reader,
(Another reader gave the same cure, only said to use common soft soap.)



Three Hundred Chick Hall Colony Brooder with hover raised by counterweight. Note ease of access for cleaning.



Removing the lamp from the Ideal Hover, manufactured by the Duplex Incubator Co., Tremont City, Ohio. The lamp is removed or pushed into place with one hand. The oil fount is outside the lamp box and oil and they guarantee the lamp to never smoke. Another important feature is the Duplex Drum heater, producing more heat than the single drum heaters from the same amount of oil. The Ideal just sits on the floor any place and if interested in a handy, neat, safe and low priced brooding device look up their advertisement and mention Poultry Keeper when writing.



Crown Bone Cutter
BEST MADE
Lowest in Price
WILSON BROS., Box 820, Easton, Pa.

EXCELSIOR Simplest, surest hatcher ever built. 36 years experience. Earning \$1,000 profit easily every year for hundreds of others. Sold direct, guaranteed. Book free.—Geo. H. Stahl
208 Elm St., Quincy, Ill. **INCUBATOR**

HEN HATCHING AND BROODING.

The time for hints and exchange of experience is close at hand, not so much for the practical poultryman who has nothing to learn, but for the beginner. Of this latter class there are thousands every year who are misled by unscrupulous incubator concerns or by the account of some successful poultryman, venture into the business equipped with a few dollars, a couple of books on poultry and plenty of enthusiasm. While this will help considerable in starting they certainly will find that a good deal of perseverance is required, also being able to work by system. It is best to follow one system and try to master it thoroughly, rather than try one and then another.

When starting I would suggest to get eggs of a reliable breeder, the best you can afford; this is the cheapest way to start, or, if one has the means to buy a good pair, trio or pen, the best your pocketbook will let you.

The care of chicks starts with the care of the parent stock. These should be kept free from vermin, their coop should be clean and well aired, droppings must be cleaned away at least twice a week, daily would be better. The floor of coop must be dry and should have about 6 or 8 inches of litter for the fowls to exercise in. They will do this readily when grain is fed in the litter. Fowls should be fed regularly on well balanced rations with

a daily allowance of green feed, such as cabbage, mangels or sprouted oats.

When ready to start hatching set your hens in a place where they are not disturbed by the rest. Put a piece of sod in the bottom of the nest box and some clean straw on top of that. Take some china nest eggs or some other kind of nest eggs and put them in the nest, then in the evening move your sitting hen on this nest. Leave her there two or three days and when sure biddy likes her nest give her the eggs you want her to hatch, in the evening. It is well to dust the hen before setting and on the 10th and again on the 18th day with a good insect powder. Feed and water her daily and see that biddy does not stay off her nest too long. When hatching time comes do not disturb her, for if you do she is liable to kill some chicks by stepping on them and some may get chilled and weakened so they won't be able to free themselves from the shell.

After the chicks are hatched, do not feed them for the first 36 hours. The first feed to give them should be stale bread mixed with hard boiled egg and crumbled up finely. Feed about 5 times a day a little at a time. After the first couple of days give them some commercial chick feed in place of egg and bread crumbs. Give plenty of fresh water in a fountain so the chicks cannot get themselves wet. A saucer with an inverted tin can will do. Give all

the skim milk or sour milk the chicks will drink. If you can't give them milk a good grade of beef scrap will answer the purpose.

For green feed before grass can be had, the tops of sprouted oats or cabbage or lettuce cut up will be fine.

See that your chicks are free from lice; look carefully on their heads and should you find any rub some lard and a few drops of kerosene mixed on their heads and a little under each wing. Do not use too much kerosene or else you are likely to kill the chick.

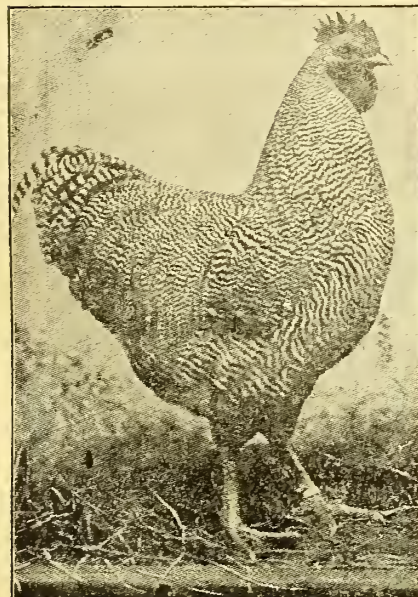
Do not over feed your chicks but keep them so they will always be hungry when feeding time comes.

Don't let the chick out in the morning before the grass is dry or chicks will get wet and chilled, bowel trouble will start and many will die. Have charcoal and grit where they can always get it.

When chicks are about 10 or 14 days old a mash made up of equal parts ground oats, cornmeal and bran with about 5 per cent of beef scrap added will help development considerably. Feed this about 2 or 3 times a day.

Illinois. J. Neubauer,

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.



150,000 Day-old Chicks

are all we can supply this season

Last season we returned hundreds of dollars because we could not hatch enough chicks to supply the demand. During the spring months our capacity was booked from six to eight weeks in advance. Only those who had their orders booked ahead could get chicks, so heavy was the demand of buyers for this early-maturing, heavy-laying strain. We have greatly increased our hatching facilities this season, but, even then, there is only one sure way to get stock when you want it and as much as you want. **Book your order now—FREE.** Make sure of getting your shipment. Send no money now. Do not pay a cent until just before the date of your shipment. There is nothing in the poultry world equalling Pittsfield Strain. Think of these records made by our customers:

Eggs for Hatching
We invariably fill orders with hatching eggs laid the same day that shipment is made. We ship any distance—frequently to the Pacific Coast. Sale delivery guaranteed. See that you have your order hooked now. We use the utmost care in packing, insuring fresh, hatchable conditions, as well as safety.

8-weeks-old Chicks
Eggs from our special pens of Prize Winners can be had. Our Pittsfield Birds won more prizes at Boston this year than any other Barred Rocks.

*Pullet lays first egg at 96 days
 Ten hens lay 2497 eggs in one year
 These records are unapproached except by Pittsfield birds
 We make shipments anywhere and guarantee safe arrival. Remember, we can hatch only 150,000 chicks this year, so get in your order at once.*

A new and highly successful plan to get high-quality stock, introduced by us last season. Has all the advantages of day-old chicks, and in addition saves brooding losses and losses from accidents, had weather, rats, hawks, as well as mistakes in handling. Can ship all pullets, or in any proportion, as desired.

"Money-Making Poultry"

Get this great, free, helpful poultry hook. New edition, new illustrations, new facts, along with the old truths. Explains our feeding system and tells you how to adapt our simple methods to your own profits. If you want the latest word in poultry handling, you should certainly have this hook—not like most poultry hooks.

\$225 in Prizes to be Given Away

Our great "First Eggs" contest, to see how early Pittsfield Pullets will lay for our customers, is under way. Send for details. Write us about your needs—Day-old Chicks, Hatching Eggs, 8-weeks-old Chicks. Utility and Exhibition stock. Quality always high. Prices reasonable.

PITTSFIELD POULTRY FARM CO.
 410 Main St., Pittsfield, Maine



Lice Kill Chicks

Nothing retards the growth of chickens more than lice. They irritate and suck the lifeblood from young fowl, mar their growth and impair their usefulness at maturity.

Lice can be effectively checked by the application of Instant Louse Killer to the chicks, setting nests and roosts and in the dust bath.

INSTANT Louse Killer

is quick and sure in its action. It destroys all poultry parasites. Instant Louse Killer kills bugs on cucumber, squash and melon vines, slugs on rose bushes, cabbage worms, etc. Also kills lice on horses, cattle, ticks on sheep.

Instant Louse Killer in big sifting-top cans. Be sure you see the word "Instant" on the can before you buy.

Sold under a written guarantee.

1 lb. 25 cts.; 3 lbs. 60 cts.

Except in Canada and extreme West.

If your dealer cannot supply you, we will forward 1 lb. by mail or express, prepaid, for 35c.

Manufactured by

DR. HESS & CLARK

Ashland, Ohio

Also
Manufacturers
of Dr. Hess
Poultry
Pan-a-ce-a



Eggs From Full Blood Stock Eggs

25 White or Brown Leghorn Eggs.....	\$1.50
25 Barred or White Plymouth Rock Eggs.....	1.00
25 Silver or White Wyandotte Eggs.....	1.00
25 White Orpington Eggs.....	1.50
25 Rhode Island Red Eggs.....	1.00
25 Black Minorca Eggs.....	1.50
25 White Pekin Duck Eggs.....	1.00
25 Indian Runner Duck Eggs.....	1.00

100 Leghorn Eggs, \$6. 100 White Orpington, \$12. Others \$3 per 100. 50c extra for 2 sittings or less by Parcel Post, otherwise by Express. Book orders early; will send when wanted. Remit by Postal, or Express Order, on St. Louis. **W. F. CHAMBERLAIN, (The Perfect Chick Feed Man)** Dept. 27, KIRKWOOD, St. Louis County, Mo.

DAY-OLD CHICKS

Healthy, vigorous, from heavy laying stock. Guaranteed satisfactory. Place orders NOW.

Hatching Eggs

Breeding Stock

S. C. W. Lechorns, White and Barred Rocks. All eggs and stock GUARANTEED.

Write for big new catalog: "Tywacana Quality." It gives

TYWACANA FARMS POULTRY CO.

es much information of value to poultrymen. It's FREE.

TYWACANA FARMS POULTRY CO.

A. E. Wright, Supt.

Box 57, Farmingdale, Long Island, N. Y.

BARRED PLYMOUTH ROCK eggs from pen, 15, \$1.00; from range, 15, 75c; 100, \$5.00. Head of pen scored 92 per cent. Barred Plymouth Rocks only. Nellie Hume. R. R. No. 4, Versailles, Illinois. 4-4

LICE ROB YOUR HENS OF VITALITY THEY ROB YOU OF EGGS



DR. LEGEAR'S LICE KILLER

is an excellent and perfectly safe remedy for the killing of lice, mites, and all vermin on poultry and all live stock. It is a fine powder, put up in large sifting-top cans, and is very easily applied. To use it on poultry, catch the bird by the feet with the head downwards and sprinkle it freely into the feathers, especially under the wings and about the vent.

Large Cans 25c at Druggists and Dealers everywhere. We are sole manufacturers of Dr. LeGear's Famous Stock and Poultry Remedies. Send for Stock and Poultry Book—its free.

Dr. L. D. LeGear Medicine Co.
723 Howard St. St. Louis, Mo.



HOW THE FARMER MAY HELP TO SOLVE THE HIGH COST OF LIVING.

While everyone you meet, nowadays, has his pet theory of how to bring down prices on the necessities of life, there are at least two practical ways in which the farmer may bring this to pass.

The theme is necessarily in everybody's thought and on everyone's tongue because of its vital relation to the very existence of the masses.

And while it is commonly supposed by those in other walks of life that the farmer is one of the chief beneficiaries of boosted food-stuff prices, the farmer himself can surely tell a different story. He knows even better than the consumer the profitable part the middle men play in the game of feeding humanity.

Indeed, the situation has become so intolerable in places that many cities have of late established regular farmers' or "curb" markets, thus bringing the farmer and consumer in the closest possible relations, to the saving of the consumer and the advantage of the grower as well.

The agriculturist has definitely within his grasp a two-fold opportunity of helping to solve this serious popular problem.

In the first place, he can aid by lending his co-operation to the establishment of "curb" markets in his territory; and in the second place, he may materially decrease his own operating expense by doing away with haphazard methods, and determining to run his farm upon principles of scientific management. Take, for instance, the method of cultivation: By using the up-to-date Planet Jr. Implements one man can actually do the work which requires three to six men with ordinary implements. This is not only a plainly-apparent saving in time and cost of labor, but considerably better results are secured in the quantity and quality of the yield.

The extensive corn-grower who uses the Planet Jr. two-row Pivot-wheel Cultivator, Plow, Furrower and Ridger, which finishes two rows at a single passage, finds his work cut in half and his time likewise curtailed.

Then for the grower of cotton and similar crops the Planet Jr. one-horse Cultivator does more kinds of work in such crops than has ever been thought possible could be accomplished with a single tool, or in such short time.

The orchardist who uses the Planet Jr. Orchard and Universal Cultivator progresses rapidly and profitably in his work because of the demonstrated efficiency of these implements in this line of cultivation.

Moreover, the market gardener—and even the amateur kitchen gardener—finds possibly the greatest burden of actual labor materially lifted by a variety of Planet Jr. hand implements, which, beginning with opening the furrow and sowing the seed, accomplish the various progressive stages of cultivation till the matured crop is ready to harvest. S. L. Allen & Co., Box 1106-C, Philadelphia, the makers of these time- and labor-saving tools, issue gratuitously a comprehensive illustrated catalogue, and describe upwards of half-a-hundred tools that do just such scientific, profitable work.

One of the largest pure bred poultry farms in the country is owned in connection with the factories of the Mankato Incubator Co., Box 823, Mankato, Minn. This means that the incubators and brooders made by this concern are put to the most thorough, practical tests before they are placed in the hands of the buyers. Incubators and brooders marketed on this plan are no longer experiments, but the result of experience. There is nothing uncertain as to what they will do. They must prove their worth in actual operation on the company's own farm before they are turned over to purchasers.

Twenty years of poultry success are back of Mankato Incubators and brooders. The mistakes have been made and overcome. The strong points have been discovered and proven. Demonstrations that were a part of the company's own poultry experiences have established the worth of each feature, and this twentieth anniversary year is showing a marked and deserved increase over any other year in the concern's history.

It is safe to say that the points which have made "Mankato" profitable for the practical poultrymen who manufacture it will prove profitable for others, whether they be skilled in poultry raising or mere beginners. A fine catalogue telling why Mankato has succeeded, and what it will do for others, is sent to anyone who asks for it.



A NEW TRADE MARK—WHAT IT STANDS FOR.

The Wonderful Improvement and Enlargement of the Michigan Poultry Farm and Its Increased Facilities for Producing Finest Chicks and Breeding Stock.

Readers of the poultry publications have noted the new trade mark of the Michigan Poultry Farm, at Lansing, Michigan, with perhaps passing interest, yet without stopping to consider what, if anything, it might stand for. The fact that it does stand for something and just what this is, is well worth considering.

Buyers of chicks and breeding stock throughout the country have known the Michigan Poultry Farm for years as one of the best and most satisfactory plants from which to purchase these essential products. Hundreds of customers in every section patronize the big farm, whose output is often half sold before the first of the year to advance orders. Michigan Poultry Farm has stood for highest quality, at all times—for satisfaction-guaranteed-or-money-back.

As good as it was, however, there has been found room for further improvement—for a still higher standard. And all the energy of the up-to-date superintendent, together with the resources of the already thoroughly modernized plant, have been

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Austin's Pyrotone is sure death to Lice and Mites. It also kills Texas Fleas and prevents scaly leg and feather pulling. Austin's Pyrotone is a preventive as well as a remedy, and will rid all animals of fleas.

If your dealer does not keep Pyrotone, send me \$1 and I will ship you prepaid a full sized bottle; six bottles \$5. A complete success for over 20 years. My new circular is free for the asking. I have a very attractive offer to Dealers and Agents.

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Baby Chicks and Ducklings

Safe arrival, guarantee to your express office, Rocks, Leghorns, Reds and Buff Orpingtons, Pekin and Indian Runner Ducklings. Write for Illustrated CATALOG.

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Ready to book your orders now for hatching eggs. S. C. Crystal White Orpingtons, S. C. White Leghorns, S. C. Black Minorcas, R. C. Rhode Island Reds, R. C. White Wyandottes, also White Pekin and the famous Fawn and White Runner Ducks, the kind that lay the pearly white egg. Write for prices.

FRED N. SMITH.

1122 Watworth St., WHITEWATER, WIS.

brought to bear to reach this standard. So that this is what the new trade mark stands for—an even greater improvement.

The layout house has been increased in capacity by the addition of three more wings, each connected with the central feed building and having tracks down the middle for feed car. The completed house will care for 4,000 birds with plenty of room and ample ventilation.

Another great improvement and radical departure is in the brooding system. The Colony Brooder is now used altogether, with its increased health and vigor giving properties. These have a total capacity of 5,100 chicks, numbering seventeen in all. They are situated in open range, on level, well drained land and afford the very greatest degree of spaciousness and air for chicks to thrive and grow to maturity without the danger of oil heated small brooders and the constant changing from one house to another.

The hot water mammoth incubator capacity has been increased from 30,000 to 60,000 eggs at one time. Sundry improvements have also been made in the cellar as to light and regulation of ventilation, until the hatching unit of the plant is as perfect as science can make it. This is as it should be, for the fame of the Michigan Poultry Farm day-old chicks rests on their vigor and strength and these in turn depend chiefly on the manner in which they are hatched, although much is the result of careful breeding on the farm.

Michigan Farm Poultry stock is, and has been for years, carefully bred for the highest laying efficiency combined with great inherent vigor. Every breeder is carefully tested throughout the year, and the pens are rigorously culled. Under intelligent handling the breed has come to be one of the very best for every desirable utility purpose, and this is another secret of the great success of the Farm.

While a large trade in breeding stock is carried on, and custom hatching is done on a big scale, by far the most important feature of the business of Michigan Poultry Farm is the Day-Old Chick. Thousands of these leave the Farm daily in the height of the season, going to every part of the country. And owing to the care with which they are packed, to say nothing of the rigid inspection before being put into the boxes, they always arrive in fine condition.

The new catalogue of the Michigan Poultry Farm describes the new and improved conditions there. It gives current prices on chicks and breeders, and contains information of value to prospective customers. Every poultryman should send for a copy of this booklet—no matter whether he is in the market or not. It will save him money. It is free, and can be had by dropping a postal to Michigan Poultry Farm, Lansing, Mich.

Ironclad

TRADE MARK



140-EGG Ironclad Incubator

Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications. Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering. Large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boiler, self regulator, Tyco's Thermometer, glass in door and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this adv.

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Wins in the Two BIGGEST HATCHING Contests Ever Held

Why take chances with untried machines when for only \$10 we guarantee to deliver safely, all freight charges paid (East of Rockies) BOTH of these big prize winning machines fully equipped, set up ready for use? Why not own an Ironclad—the only incubator that has for two years in succession (1911 and 1912) won in the greatest hatching contests ever held. In the 1912 contest conducted by Missouri Valley Farmer and Nebraska Farm Journal, 2000 machines were entered including practically every make, style and price. With 140 egg Ironclad—the same machine we offer with Brooder, freight paid for only \$10. Mrs. C. F. Merrick, Lockney, Texas hatched 148 chicks from 148 eggs in 1912 contest.

30 Days' Free Trial Money Back if not Satisfied.

Both for

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140 Chick Brooder

TO INVESTIGATE PROBLEMS OF INCUBATION.

The Hall Mammoth Incubator Company, who were the originators of Mammoth Incubators and who have behind them a record of nearly forty years of continuous experience in incubator construction and operation, are not content to rest wholly on the laurels of past achievement.

Their latest step toward keeping pace with the progress of the hatching industry is the establishment of a research laboratory in incubation. This enterprise has been under consideration by the Hall Company for some time, but a commercial laboratory is more difficult to launch properly than a scientific one.

If, for instance, a man whose training has been purely scientific be put in charge, he will tend to devote his energies largely to those phases of the work which may be better handled in universities or at government experiment stations. On the other hand, if the enterprise is left wholly to a practical man, who is not schooled in science, he is likely to fail to grasp basic principles in his thinking; and, because of his lack of scientific training, his findings are in danger of being discounted by the scientific world.

In the incubator business—at least from the manufacturer's viewpoint—the research man much be not only a poultryman, but also a mechanic or engineer. From biology, chemistry and practical poultry culture, he will derive his problems, but he will have to work them out in the machine shop. Above all he must know human nature and appreciate what the busy poultryman can understand and utilize and what he cannot, or at least does not, take time to learn.

The man who best combines these qualities in the eyes of the Hall Company is Mr. Milo Hastings, who was selected to take charge of this research laboratory department and who quietly began the work the first of the year.

Mr. Hastings constructed his first incubator at the age of eleven. His father was a retired minister living on a farm near town and the son worked his way through high school with a flock of hens. Entering the Kansas Agricultural College, he immediately applied for and secured the position of poultryman, which place he held until graduation.

At this time (10 years ago) experiment station poultry work in the Middle West was in its infancy and appropriations meagre. Despite the difficulties Mr. Hastings built up quite a plant and published several poultry bulletins. In 1904-5 he conducted the first experiment station egg laying contest in the United States, in conjunction with the chemical department

he completed one of the most thorough analytical study of eggs that has ever been made.

After taking his degree at the Agricultural College, Mr. Hastings took up special work in egg bacteriology. While at the Kansas Experiment Station, he had made a special study of the egg marketing business of his state and had interested the United States Department of Agriculture in the problem. As a result he was later appointed by the Federal Government to undertake a nation-wide study of the egg trade. While awaiting the beginning of these duties he was employed in the egg department of the Armour Packing Company.

Of Mr. Hastings' work in the Department of Agriculture and his findings concerning the losses in egg marketing, cold storage methods, etc., the poultry world is familiar.

Since resigning from the government service, Mr. Hastings has had headquarters in New York City, and has been engaged in poultry and scientific writing and as an engineer or expert in cold storage and incubating problems. He has designed and constructed a number of poultry plants and installed several large hatcheries. For the last two years he has been largely engaged in private investigations in incubating, which research will be continued with the larger facilities which the present connection will offer.

Mr. Hastings is exceptionally well traveled and has studied the poultry and hatching industries from the Atlantic to the Pacific and from Canada to the Gulf Coast. During the past year's hatching season, he spent five weeks in the world famous poultry district of Petaluma, California, where the hatcheries within a ten-mile radius have a combined capacity of nearly a million eggs at one time.

With the source of practical information and opportunity for the study of hatching on a large scale which the Hall Company and its patrons can place at his disposal, a man of Mr. Hastings' ability and experience may certainly be expected to add something worth while to our store of knowledge. Moreover, when there is anything new to tell, the poultry public may look forward to something readable as well as informative, if the opinion of Mr. H. H. Stoddard, himself a veteran poultry writer, is to be taken as a criterion. Mr. Stoddard, in the American Poultry Journal, of which he is associate editor, recently said:

"As a general poultry book, The Dollar Hen is the best by long odds that I ever held in my hand. Aside from the subject matter of the work, Milo Hastings, the author, has used in its pages some of the best English that has ever appeared in poultry literature to my knowledge."


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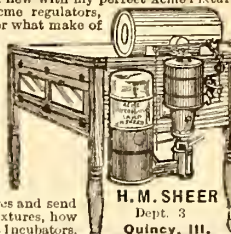


Make it better than it was at its best. Make your old hatcher new with my perfect Acme Fixtures and it will hatch more, better and stronger chicks. My Acme regulators, Lamps, Burners, etc., are made to fit any incubators. No matter what make of incubator you are using my improved fixtures will reduce your operating expenses fully one-half. Thousands of incubators remodeled and repaired with my fixtures. It's as easy as A-B-C. Remember

My Fixtures Fit Any Machine

If you are thinking of a NEW machine do not buy any incubator until I tell you how 200,000 poultrymen have built their own Peerless Incubators with my Acme Fixtures and my Free Plans. Anybody can do the work. I guarantee results, absolutely the most perfect, cheapest to operate and surest hatcher possible to secure. My exclusive patented automatic fixtures and my plans give you in a Peerless Incubator

The Peerless Automatic Vapor Heating System. The Peerless Automatic Moisture System. The Peerless Automatic Ventilating System. The Perfected Acme Automatic Lamp. The Perfected Acme Trip Burner. The Acme Tandem Double Compound Thermostat Regulator. Let me tell you about these marvelous features and send you my Free Book describing my fixtures, how to remodel old incubators, build Peerless Incubators.



H. M. SHEER
Dept. 3
Quincy, Ill.

THE BROODY HEN.

In March the broody hen is a scarce and much wanted article. With the American breeds April is the ideal month in which to hatch chicks that are desired for fall laying. In order to get out chicks with hens early in April one needs broody hens in March.

Heavy feeding that has resulted in a fair to good egg yield during January and February is likely to produce a fair number of broodies in March. The trap-nest has shown that the poor to medium layers, as individuals, are most likely to become broody after laying two to four dozen eggs. The most persistent layers often lay heavily for four to six months without showing a sign of broodiness. Some of them do not become broody at all.

Good feeding, careful handling and quiet comfortable quarters tend to bring on the broody condition. When broodies are wanted, never frighten or disturb birds that are on the nests. If trap-nests are used and one has enough of them, it is well to leave each hen on the nest undisturbed until she wants to get out. Nest eggs are useful to hold broodies and that is all they are good for. They are not even necessary for that.

Broodiness comes on very gradually, the bird remaining on the nest for longer and longer periods each time she lays, until, if undisturbed, laying ceases and broodiness is confirmed. During this period, while the desire to incubate is gradually developing, the bird takes less and less exercise day by day and may become quite fat. This fat helps to sustain her during her three week's confinement should food be so distributed over a wide territory that she cannot spare time enough to get a good feed every day, as would be the case in natural conditions, but it would be a mistake to assume from this fact that getting hens fat will make them broody. That would be putting the cart before the horse. It is the gradual development of the broody condition that causes them to get fat—when they do. Some broody hens are very thin and sometimes very sick hens become broody. Such hens should never be allowed to sit.

Every broody hen used for sitting should be in good flesh, quiet and perfectly healthy. Incubating eggs is in no proper sense "rest," but is really the most exhausting work that any hen ever does. A very strong hen may be

set twice in succession and come through the ordeal in good shape if she be properly fed and kept free from vermin, but no hen should be set more than twice in succession.

It is not a good plan to allow broodies to incubate in the laying pen. There should be a separate place provided for them; a clean, quiet, dry and not too sunny place to which they should be removed carefully, preferably after dark, as soon as they have become sufficiently broody to remain on a nest over night voluntarily.

This month it is a good plan to set as many hens as possible at one time, even if some extra ones have to be bought. But when buying broodies be sure that they are quite heavy and wholly healthy. Dust all broodies thoroughly with some good lice-destroying powder before setting them and do not make the mistake of giving too many eggs to one hen. Give her no more than she can and will cover all the time. In cold weather 10 to 12 are enough, unless the hen be very large.

A clean nest; dry, quiet, semi-dark quarters; fresh, clean water, grit and plenty of sound whole corn and freedom from vermin will keep the sitting hens in good condition. No soft food is required.

It is well to test out all infertile eggs on the ninth or tenth day same as you would with an incubator. Infertile eggs, having no animal heat, cool the fertile ones and annoy the hen. They should be removed. If but few fertiles remain under each hen they can be divided among a portion of the sitters and fresh sittings given to the others. Testing out infertiles makes for greater efficiency and economy.

In another article I will take up the treatment of broody hens at the later season when they are not wanted.

F. O. Wellcome.

\$60 PER HEN PER YEAR

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All thoroughbred stock, bred from prize winning birds, and big layers. Won more prizes at Mo. State Show than all other White Rocks shown.

25 Choice, large, vigorous cockerels at a bargain. Must be sold soon. Also few choice hens and pullets cheap. EGGS FOR HATCHING from prize winning pens. Illustrated catalog and mating list free. I guarantee to please.

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S. C. Reds Eggs

FOR HATCHING, from six grand pens. Best eggs, \$3.00 per sitting 15. Utility Eggs \$1.00 per sitting 15 eggs. Mating list free. ED. PALM,

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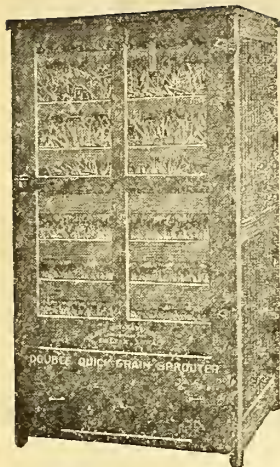
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In the spring of 1893 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. If, after you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free? Don't delay. Write today.

Mark H. Jackson, No. 310 Alhambra Bldg., Syracuse, N. Y.



Eggs---Sprouted Oats---Eggs

To meet the great demand for eggs this spring—eggs of high fertility for hatching—feed the hens something green, and there is no green feed the equal of the living, vitalizing, growing, Sprouted Oats.

Eggs of a high per cent of fertility mean chicks of great vitality—chicks that live and grow.

To force chicks growth, to bring the young pullets To force chick growth, to bring the young pullets quickly, feed the chicks germinated wheat.

To get great quantities of Sprouted Oats and germinated wheat quickly, buy a

Double Quick Grain Sprouter

THE PERPETUAL POULTRY SILO.

A veritable hot-house, growth-forcing machine. Makes two to four bushels of feed from one of grain. Soon pays for itself in the feed it grows and the increased egg yield. Sprouted in 24 hours and forces growth of 2 inches and more daily. The Double Quick is the original grain sprouter, now three years old, several thousand being in use in every part of the United States and Canada, and is endorsed by hundreds of users.

Made in six sizes from a few hens to 1,000. Send for complete booklet on the grain sprouters and sprouted oats.

CLOSE-TO-NATURE COMPANY, 20 FRONT STREET, COLFAX, IOWA.

NATURAL BROODING.

By J. E. Willmarth, Amityville, N. Y.

It is not practical to raise chicks with hens when they are hatched in large numbers at a time by incubators, but for the suburbanite and others who keep but a few chickens, the hen is often the most convenient and the best mother, especially during late spring and summer.

We know of cases where chicks have been successfully raised with hens during the coldest weather. If one has a good tight shed, facing south, in which the chicks can run, they will do quite well during the latter part of the winter, for at that season the sun is quite warm, but they must have a good warm shelter at night and protection from storms. If one has a heated room that can be properly ventilated, of course chicks can be reared with the mother hen at any season. A room facing south, and with windows to admit the sunshine and so arranged that plenty of fresh air will be admitted, will answer for chicks, even though the temperature run as low as fifty degrees, but about sixty is the proper temperature, in fact we think this better than to have it much warmer when chicks are with hens. As long as chicks are running about they will be comfortable at sixty degrees and when they get cold can run under the hen and rest and get warm. A higher temperature will be necessary to raise broilers, but if chicks are wanted for breeders, this higher temperature is apt to weaken them and if it should fall they will feel the difference in temperature sooner than if they were used to a cooler room.

As a rule, chicks are better off out of doors, after the middle of March if the season is not too backward. Placed in a sheltered spot they will do very well. It is nearly always best to confine the hen and allow chicks their freedom during the day time. If one has small yards the hen may also be allowed her liberty, but if there are two or more broods the hens are likely to quarrel, especially if chicks are of different ages. Some hens may injure the larger chicks. Seldom will a hen with chicks attack a chick from

another brood, if that chick is smaller than her own, but let another chick the same size or larger come within her reach and she will attack it immediately and sometimes will kill such chicks if she gets a chance. Where several hens are running together with chicks it will be necessary to watch them most of the time, for they are apt to peck each other's chicks or fight with one another and accidentally jump on some chicks, often injuring them sometimes killing them.

Good brooder coops can be made from dry good boxes. Get boxes about two feet square. Lay them on the side, knock off opposite side and make a single pitch roof. Nail slats perpendicularly in front, far enough apart to allow chicks to pass through freely, but near enough together to keep the hen in. Have one of these slats so it will slide in and out of place so you can let the hen out when you desire. We like the whole front made by itself, and buttoned in place. This makes it easy to clean out the coop. If the coop is not good and tight is must be covered with roofing paper on top, back and sides. Also have a panel to fit against the front to put in place nights to keep out vermin. Such a coop can quickly be constructed and is probably the most convenient to many poultry keepers.

Where one cannot conveniently obtain boxes but has to buy lumber, the old style A coops are easiest and cheapest to build. We would make them about thirty inches high and have them cover a ground space of about thirty square inches. These should have a platform the size of bottom of coop to rest on. Of course one gable should be used for the front and should be slatted the same as on the box coop, but the front can be nailed fast in this case, for when we wish to clean we can remove coop off the floor and thus conveniently get at it. We like the A shape coop best for one reason, there is a space of about six inches on each side where the hen cannot step and thus the chicks can retreat there if the hen should get excited and start to jumping around. Possibly the sizes I have given may appear large to some who have been used to keeping a hen and her brood in a coop not over

35 VARIETIES CHICKENS, DUCKS, GEESE, TURKEYS. Fine stock. EGGS and CHICKS at bargain prices. Big illustrated circular free. John E. Heatwole, Harrisonburg, Va.

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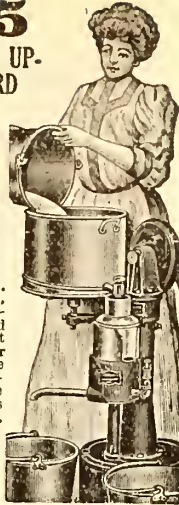
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HUMPHREYZE The new way to make hens lay. "The Golden Egg" tells all, free. A Humphrey Bone Cutter on free trial. HUMPHREY Blue St. Factory, Joliet, Ill.

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PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

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NATURAL HEN INCUBATOR CO., Sta. H., Dept. 1, Los Angeles, Cal.

eighteen inches square, some even using a coop not much over a foot square. These are altogether too small. They give the hen hardly any room to move around and if the weather is bad, chicks will want to stay inside a great deal and are greatly over-crowded in such small affairs.

Then again the larger coops serve as brood coops until chicks get quite large and if the brood is not very large the pullets can stay in it until ready to go into winter quarters, a couple of perches being placed therein for their convenience. Better have coops too large than too small. In fact we hardly think we can get them much too large and if one can have coops three feet square they will learn to appreciate them after a season's use.

Barrels are often pressed into service as brood coops, but these are very poor make-shifts and should never be used if one can possibly help it. A barrel laid on its side gives but very little floor space. The sides slope upwards and chicks are all crowded together in the center under the hen's feet and are pretty apt to be stepped upon and unless the rear of the barrel is propped up so as to be considerably higher than the front the front edge of the barrel will be higher than the center of barrel. This is caused by bulge of barrel and when it storms the rain will probably beat in and will run back into coop forming a little pond in center of barrel into which chicks are compelled to stand and at night the hen has to brood them in this water. The result is a lot of drowned chicks in the morning.

Numerous different styles of coops may be used, but they must be roomy, dry inside and easily cleaned, to give best results.

Having our coops ready, the next thing is to place chicks in them. The hatch being completed, we place chicks in box or basket and take hen under our arm. Place hen in coop first, then give her the chicks. If this is done at dusk she will brood them at once and by morning they will be strong enough to look out for themselves. If given chicks during day time, frequent visits should be made to coop for a while, until hen has all chicks under her. Sometimes it will be necessary

to place chicks under her but as a rule she will hover all her chicks at once.

INCUBATOR AT HIGH ALTITUDE.

It is getting around to the season of the year when all users of incubators must look over their machines and see that everything is in good shape for spring hatching. We are fortunate in this country in not having rats to contend with but occasionally the pesky mouse will take a shine to the incubator as a place of comfort for its nest. The altitude is too high for rats. Once in a while one will come into the city unheralded in a car from some eastern point but he disappears, no one seems to know just where. In this respect, we consider ourselves fortunate as they caused us a lot of trouble and loss back east.

Previous to five years ago we hatched all out chicks under the hen but early in 1908 we were desirous of having some early birds and as none of the biddies were in the right humor we bought a good incubator. We filled the machine and carried out the maker's instructions to the letter, but no luck, or chicks either for that matter. We solved several of the difficulties but it seemed there was still something wrong. At last we concluded that we were not applying moisture early enough, despite the maker's instructions to apply it on the fourteenth day. We finally solved the thing and have had very good success ever since. But, instead of the fourteenth day, we apply moisture from the first and have had some remarkable hatches. One of 100 per cent.

We also found that by changing the air on the eggs oftener the shells became more brittle and the chicks could get out easier.

Before we had located the trouble with the incubator we thought we would go back to the old-fashioned way, hen fashion. We set two and they literally burned up the eggs. Here was the matter of moisture causing us more grief. However, we did not quit and sat several more hens, but before making up the nests, we would fill in the bottom of nest box with two or three inches of sand. This was moistened and kept moist during the sitting period and we found to our satisfaction that we had the mystery solved. Ever

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Just set on the floor anywhere, light the lamp and in 20 minutes you have as good a chick Mother as money can buy. Pick it up and carry any place with lamp burning. **HEATER:** Our Duplex or Donlie Drum hot air Heater will produce 15 per cent more heat from the same amount of oil than any single drum Heater used in others. The Des Moines Seed Co., Des Moines, Iowa wrote us that the Ideal heat up the best of any Hover they had ever experimented with. **LAMP:** Our lamp will never cause trouble by smoking. Oil cannot become overheated as oil font is on outside of Lampox feeding oil to wick just as needed and just enough to keep it covered all the time. Lamp flame always in plain view. Lamp removed or pushed in place with one hand. The Ideal is 24 inches in Diameter, all metal but Double Curtain, has no Hot Center, and will brood 100 chicks. **GUARANTEE:** We will refund money if not entirely satisfactory. **SPECIAL NOTICE:** On account of Galvanized Iron and other products used in its Mfg., advancing in price, we have put the price to \$9.00 freight paid on 3 or more west of Rockies; \$7 freight paid on 3 or more west of Rockies. It is still from \$1 to \$2.50 cheaper than others, and the price will never be changed again, unless something extraordinary happens. Upon receipt of \$1 we will ship by Express C. O. D. to be examined. Freight allowed on two or more. Don't buy another Hover until you see our illustrated Circular; we can interest you. Don't fail to mention this paper.

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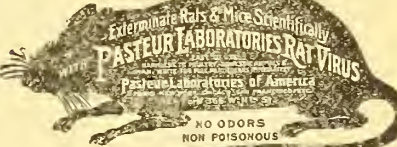
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since, when we give a hen a clutch of eggs we always use the moistened sand in bottom of nest box and find that it does the business.

There are a great many obstacles to be met in successfully raising poultry in this country. We have terrific wind storms at times and they seem to have a bad effect on a nervous bird like the Minorca. My birds will go along shelling out the big white eggs, but just as soon as the wind starts up they will fall off at least 25 per cent in their egg production and we think we would fall off entirely.

Not to throw any bouquets at ourselves, we have been successful at the business in a small way. We hear on all sides that there is no money in poultry. Well, there isn't for a lot of people, especially those who are too lazy to look after the details as they should and must be looked after if one expects to succeed. We have read volumes upon volumes upon the subject and many able articles, but at the same time we have found that the poultry business is a specific business. It requires as much time as any other business and last but not least, a goodly supply of gray matter. If you will dig out all the little details, use your wits and last have good foundation stock, you are bound to meet with some degree of success. You won't get into the J. P. Morgan class the first inning, but you will get to the place where you can look at his picture in the supplement of the Sunday paper without an attack of palpitation of the heart.

A. DeArmon,

Wyoming.

ONE CAUSE OF POOR HATCHES.

One cause of poor hatches lies in the eggs or the hens before the eggs are laid. The best incubator ever made cannot hatch an egg unless the germ is strong enough. Eggs are just like the parable of the sower who went forth to sow. Some eggs are like the wheat sown by the roadside, they will not even start life. In other eggs the germ is strong enough to develop a

little but soon dies. The germ may be strong enough to hatch and may live a while but will die within two weeks. Only good strong germs will hatch out good, strong chicks.

To get eggs with strong livable germs, you should have the parent stock in a good, healthy condition. Birds that have gone through the winter without laying an egg will not produce eggs as soon as spring opens that will run any way near a 100 per cent hatch. To be in the best of breeding condition a hen should have laid regularly all during the winter. An extra fat hen will not lay many eggs and they will not lay eggs that will hatch well. Make her exercise. She should be made to work for all her food. This can be accomplished by feeding the grain in deep litter and feeding green food suspended above her head so she will have to jump up to get it. Green food of some kind should be supplied if you want to get eggs that will hatch well. Keep the hens in good condition. Anything that will prevent a hen from laying will prevent the eggs from hatching well. If all her vitality is required to produce the egg there will be more left to impart to the germ.

Lice and mites sap the vitality of chickens. Make war on them. Paint the roosts with crude carbolie acid weakened with about one-third coal oil. Clean out the house often and see that your hens are not bothered with these parasites. If you still have trouble dust the hens with a good insect powder. Do not let the wind blow through cracks in the house. The hens will take cold and roup. If a hen once gets the roup she will not lay good, hatchable eggs. Don't let them run out during cold and damp weather. Getting their feet wet is not good for them.

The male bird should not be neglected. He should be as well treated as the hens. Do not mate an old male bird with many old hens, but rather with pullets. It is better to mate the old hens with a young and vigorous cockerel. Do not mate too many females with one male bird. About one

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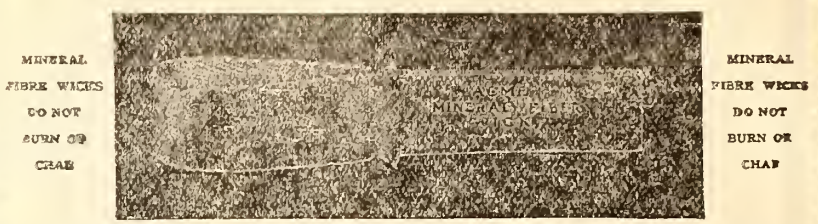
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male to twelve or fifteen females is best. Of course this depends on the breed, the age and vigor of the male and whether they are to be penned or have free range. Two male birds must not be penned together with any number of hens. If they are your eggs from that pen will not hatch well.

Do not handle the eggs with dirty or greasy hands. Eggs having others broken on them should be cleaned as soon as possible if intended for hatching. Keep the eggs in a place where the temperature is around 50 degrees and turn them every day. Gather the eggs twice a day. Before putting them into the incubator clean off all dirt with a dry rag moistened a little with alcohol.

T. E. Botts,

Missouri.
ABOUT POULTRY LITERATURE.

Some time ago I sent for a sample copy of all the poultry papers I could obtain addresses of. I readily divided them into three classes.

- First. Those intended for the fanciers who attend the poultry shows.
- Second. Those edited by someone who has something to sell and runs the papers for his benefit as an advertiser.
- Third. Those treating in an able way, subjects pertaining to every-day poultry keeping, such as the Poultry Keeper.

How many people who are running incubators profit by their experience? We all think we do, but how much? Say you had one hatch last year that was more successful than others. Why was it so? You think you know, but are you sure you know? When we purchase an incubator, we are advised by authorities to follow the instructions of the manufacturer, but little things are constantly coming up that are not provided for in our instruction book. We are called upon to use our own judgment. Again the instructions are for everybody and not particularly for you with your surroundings. A good plan is to take a memorandum book and record the date the eggs are put in the machine. On each succeeding

day, make a record of every little detail concerning your machine for the entire hatch. Record the temperature frequently. If the weather is damp or dry, record it. Record the length of time you aired the eggs. If you have a mishap, record it, possibly it may be for the better. I have in mind a machine set in a cellar. During the second week heavy rains came and flooded the cellar. Water was knee-deep everywhere. The walks were dripping wet with everything so damp that the flame of the lamp actually burned pale. It was thought that the eggs were worthless, but at the proper time 85 per cent of the eggs hatched and only two of the chicks died before they were six weeks old.

When you take off your hatch, if it has been a good one, look over your notes carefully and if it has been a poor one study the notes just as carefully, noting the details you would not have remembered. If you keep this up through a whole season you will have a little packet of literature more valuable to you than anything else you can obtain on the subject of incubation. Such notes are your own particular experience and for your needs, locality, surroundings, etc.

You may think this too much bother. It may take a minute or so a day but it does not amount to so much in three weeks. Usually the beginner who has the most successful hatch the first time, owes it to the fact that he was enthusiastic over his venture and left nothing undone. During succeeding hatches he should have been wiser, but as the novelty of the thing wore off, he took less pains and failure was the result.

W. J. Rodgers.

HANDY CHICK GROWING.

I am a new subscriber to the Poultry Keeper and think it a good paper. Would like to tell your readers how I raise my chickens; I think it is a different way from the way most people do. I set from 10 to 20 hens in a house by themselves. On the 12th day I test out all infertile eggs and put the re-

maining number under hens at the rate of about 13 eggs each. I reset the other hens and as many more as want to sit, on new eggs to be tested out again on the 12th day. In this way I keep hatching until I get the number I want to raise that year.

The first eggs are taken from the hens on the 16th or 18th day, put in a heated incubator and hatch out at the regular time, the most healthy, natural chicks one could wish for. Then I put them in cheese box brooders, (same are home-made) with little doorways in sides to allow them more floor space as they get older. Have cloth hover to fit the tops of boxes and put from 20 to 25 in each. The boxes are put in a warm house and if it is very chilly, I put a warm stone or brick in their bed at night. Of course they need looking after often, the first few days but I find it is so much less trouble than to allow the hens with them and they are healthier than when put in heated brooders. I raise several hundred chicks every year in this way. I have the use of the hens for two sittings which makes only four weeks' work for them and when put back in the pens they are soon laying again. After the chicks are eight weeks old they are put in houses on the lawn or field where they stay till fall.

A. C. R.,
New Jersey.

HATCHING AND REARING CHICKS

To start with, I find it best always to use old hens for breeders. The eggs will be larger and more fertile than pullet eggs and the chick will be larger and stay larger than the pullet hatched chick. Such chicks will always lay more eggs in the winter when eggs are high. I use incubators for most of my hatching. The machines are less work for me and do just as well and sometimes better than the hens. I try to use eggs not over two weeks old but have used them over three weeks old with good results. In cold weather eggs should be gathered about as soon as laid. I use trap-nests so I have to gather the eggs often.

I will not say anything about the hatching part as the book that comes with each incubator will tell more about that one machine than I can tell and I do not know enough about sitting hens to tell anything about them; only to those people who have never used either, my advice is to get an incubator, for you can learn to operate them, but you can never tell what a hen will do.

The best place I have found to set the machine is in a good, dry basement, but almost any room will do where you can keep the temperature at about the same degree. The incubator should have a good washing after each hatch with Zenoleum solution. If the top can be taken off I remove same and set it out to dry and air.

For the brooding part I use a home-made brooder coop 3x6 feet, with one end for the hover and the other for runway. I also use a home-made heater but am going to install Prairie State hovers as I think they are the best

TEST YOUR EGGS

before you set them under hens or put them in the incubator. Whether you buy or sell eggs for hatching discard every one that does not pass the Magic Egg Tester. Don't try to hatch weak eggs—it kills the profits. Regulates moisture in the egg chamber perfectly. Demonstrated at poultry shows everywhere. This is positively the only way to tell which eggs won't hatch before you begin to incubate them at all. Read on:

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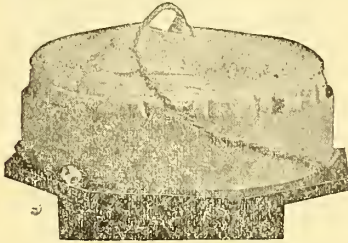
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KNOLLENBERG MILLING CO., Dept. A, QUINCY, ILL.



I have seen. I have never gotten over a 75 per cent hatch, but it is best to have brooder room enough for 25 chicks for every 25 eggs set as 25 chicks will do better in a 50 chick size brooder than 50 will. Always have the brooder cleaned and ready for the chicks before the hatch is to come off. If there is a nursery tray in the incubator, the heat under the hover ought to be 95 degrees, but if there is no nursery, the heat should register 100 degrees and then gradually be reduced to 75 or 80 degrees at the end of three weeks, depending upon the weather. If it is cold you will need more heat. If it is not too cold you will need no heat after the chicks are six weeks old.

In taking chicks from the incubator and brooder keep them covered well and never move a sickly or weak chick. I do not think there is any use in helping chicks out of the shells. If they are not strong enough to get out themselves, they are no good.

The chicks should be fed and watered when they are 48 to 60 hours old. I find commercial chick feed the best. I also feed rolled oats till chicks are three weeks old, then one part bran to two or rolled oats, for one or two weeks then they get a mash of ground oats, bran, corn meal, middlings and beef scraps. This is fed to them at noon, in hoppers. The chicks should be fed often and not much at a time. Give them all the fresh water they want and keep their runs clean. Also keep them free from lice and furnish necessary shade when they need it. If you are breeding for eggs you will get them or if you are trying to breed for show birds, you will be more apt to get them than you will if you let them grow up any old way.

Wisconsin.

James Borte,

HOME MADE BROODER COOPS.

After having made one coop I find it so handy that I would like to have a description of it printed in the Poultry Keeper. My coop is made in open front style, facing the south. It is six feet long, three feet wide, three feet high at back and four in rear. The back and two ends are made of planks. The front is made into two doors, hinged to each end so as to close in the center. I have a curtain to let down on bad days so it is warm and dry. Anyone can make a coop of this kind. I now have (Feb. 4th), twenty-six little chicks one week old and have lost but one. They are let out only on warm days. I feed them three times daily, giving them nothing to eat the first twenty-four hours. The feed consists

of corn bread crumbled and dampened with milk, with a dash of pepper, and twice a week a half teaspoonful of sulphur to every cup of feed. Old dishes broken up finely enough to sift through an old flour sieve are also given them. Old dishes broken up about the size of a pea make fine grit for hens. A good supply is always kept before my hens and it has never failed to make them lay when they had any feed at all given them. As soon as my chicks get large enough to change to other coops I intend to put 50 chicks in a fireless brooder and place them in the brooder coop.

Joe Ward,

Texas.

ABOUT COAL OIL AND CONDITIONS.

With the greatest interest I have read the February issue of the Poultry Keeper, finding more sound, common sense methods and more advice than I ever read in any journal on poultry in general. If anyone keeping a few hens would read Poultry Keeper one year he would get more knowledge in general than could be gathered in any other way.

I noticed an article on poor coal oil. I have overcome this obstacle to good advantage. If bought at a store, have them stir it up well before filling your can. If oil is drawn from bottom of barrel it will be poor, if from the top it will be good, so stir it up well. If your lamp does not burn well, empty

P. K. MARKER.



There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 65c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

CONGDON'S Barred Rocks

BRED FOR
Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants.

INCUBATOR EGGS—\$5 per 100; \$45 per 1,000.

Our farm consists of 145 acres of land all within the corporate limits of the village of Waterman and valued at \$200.00 per acre.

\$3,000 invested in Barred Rocks and buildings. Booklet free.

W. A. Congdon

Box 14, WATERMAN, ILL.

THE BIRDS THAT ALWAYS MAKE GOOD

KELLERSTRASS STRAIN Crystal White Orpingtons

My pens consist of high priced birds, direct from Kellerstrass and also some raised from eggs from Kellerstrass' best breeder. EGGS FOR HATCHING from the CHOICE BIRDS of the above strain AT \$3.75 PER SITTING of 15. THESE ARE 200 EGG STRAIN AND GREAT WINTER LAYERS. Write to

THOS. H. KEAN, Box 521 NANTUCKET, MASS.

Member American White Orpington Club.

Buy Diamond Egg Carriers NO OTHER LIKE IT.



It is a fact and not a boast that eggs get the maximum protection in the Diamond Egg Carrier. Order today. Sample 25c. 15-egg size, doz., \$1.50; hundred, \$1.00.

DIAMOND EGG BOX CO.,
1133 New York Life Bldg.,
Minneapolis, Minn.

Get My Price on This Guaranteed Incubator

For 31 years my reliable incubator has been known to hatch every hatchable egg. I guarantee it to operate perfectly—to be made of perfect material and to embody perfect workmanship. You can't lose. The Reliable is virtually a poultry success insurance policy.

You Will Be Surprised when you read my detailed description and prices. Send for them today. Either hot water or hot air heat. 6 sizes.

Reliable Brooders are made of the same high grade materials and same workmanship as Incubators. Send for catalog and prices today. J.W. Myers, Pres., Reliable Incubator & Brooder Co., Box A, 15 Quincy, Ill.

Weed Out Those Drones "The Ideal" Trap Nest

SHOWS WHICH HEN LAID THE EGG.

The world's leading trap-nesters use them. The "Ideal" is practical for you or I will refund your money. The cost is small. Mr. N. G. Dun, Van Buren, Ark., writes: "I am more than pleased." Have made the nests at

FIVE CENTS EACH.
NO WATCHING! NO FREIGHT!
PLANS, TRAPS, BANDS AND
RECORD SHEETS.

Write me today for prices and proof.

F. O. Wellcome

Box C, Yarmouth, Maine.

the oil back into the can and reall after snaking the can well. You will find a difference to your advantage.

As to condiments, allow me to suggest one tried out with good results. We have sauer kraut once a week at home. After cooking I take the broth and mix it in the mash feed. I believe the chickens know the day for this treat. I have never had birds to do better. Not one sick one this season, besides I am certain it will stop feather pulling, so if your birds are pulling feathers, try it and it will assure your success, besides, it is a good conditioner.

Pennsylvania.

CHICK GROWING EXPERIENCES.

I started in the poultry business last spring. I bought a 155-egg incubator and set it. I also set 120 eggs under hens. As I had never run an incubator before I hatched only 97 chicks, 10 of which died before they were three days old. There were 23 fertile eggs which did not hatch. I think the eggs needed more moisture. The hens hatched 90 chicks, which were stronger than the incubator chicks. I set S. C. White Leghorn eggs which I bought from a friend. I built two houses, each 5 by 10, 3½ feet rear and 5 in front. I used old fence boards and covered them with tarred felt. I made a window in front 2 by 4 feet, covering same with burlap to let in the air, but I think wire screening is better. I hinged a door back of the window to lower when it stormed. I also made a small door through which to get in and out of the house. This I left open during the day. There was a board nailed to inside of the house to keep the chicks in. Each house had four boxes to keep the hens which brooded the chicks. Fencing was nailed over the fronts of these boxes with a three inch opening at the bottom for chicks to pass through. Eight hens were used to brood the chicks. These hens were taken away from the chicks, two at a time, taking the first away when the chicks were four weeks old and the last two hens when chicks were eight weeks old. I believe the brooder stove method a better way to brood the chicks and I think I will get one of these stoves next year. The incubator chicks were put in one house and the hen hatched chicks in the other.

The first three weeks I fed the chicks pinhead oatmeal, afterwards on chick

feed. At noon I fed corn meal mash. Pratt's Poultry Regulator was mixed in the mash when I thought the chicks needed it. Eight drinking fountains were made of old cans. The tops were cut off, and then a notch one-fourth to one-half inch put in the edges and the cans stood bottom side up in saucers.

The houses were moved in the pear orchard and the chicks did well until the crows found them, when they took 50 or 60 of the chicks. The chicks were then moved to the hen house. A number of the chicks also died and I found I have only 87 left when they were transferred to the hen house. The chicks were hatched about the middle of May. When they were about three months old I sold the males which averaged two pounds each.

Ed Uhl,

Ray Bauer,

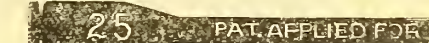
New York.

LIGHT BRAHMAS.

I was interested in Mr. Tichenor's article in the February issue of Poultry Keeper, expressing his admiration for the Light Brahmas. In closing he calls upon others who may be interested "to speak up." Now I am as great an admirer of the good old Brahma

THE IMPROVED ALUMINUM CHAMPION LEG BAND. PRICES REDUCED.

The Champion Leg Band is the oldest and most popular band on the market. It is made in one piece, in



two sizes, adjustable to fit any fowl.

This band always stays securely where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the broad part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend the two lugs over the loose end as shown in cut. Cut off surplus with scissors.

Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state that you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

The Best Methods

READER, the *Brooding and Feeding* Season is right before you now! Upon the care you take of your chicks in the *next few weeks* depends very largely the net Poultry Dollars you will make in 1913.

The Big Poultry Profits are made on breeders, layers and prime market fowls, *reared right and well developed.*

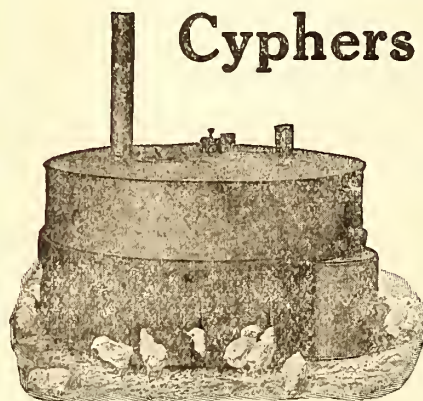
Good hatching is only *half* the battle. The question that should interest you most just now is *what to do when the chicks arrive*—how to house them, keep them plump and strong—how to prevent losses that may cut into your flock and make your big, successful hatches *count for nothing*, except work and worry.

Let us "mark" these questions "*personal*": How Are *You* Going to Brood Your Chicks? What Are *You* Going to Feed Them? Have *YOU* decided to Use Right, Safe, Proved Methods All the Way to SUCCESS?

You simply *cannot postpone* giving these *vital* matters your immediate, thoughtful attention, provided you want to be in the Big Profits Class this year.

The Cyphers Company Brand and *Trade-mark* means the World's Standard in *everything* for Practical Poultry Keepers; *without exception* "the best article for the purpose."

Sixteen years of experience and *continued success* have proved



Cyphers Portable Hover

Set it down Anywhere Indoors, or in a Colony House or Roosting Coop and You Will have a Safe and Comfortable Place for the Little Chicks. "Movable" on a Moment's Notice without even Turning Down the Lamp Flame. Is Self-Regulating, Self-Ventilating, All-Metal and Practically Indestructible.

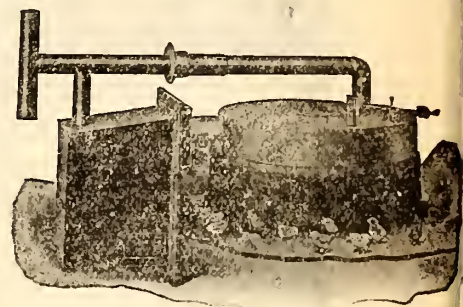
Cyphers Company's Methods Right for Money-Making Poultry Raising

Adopt and *follow* Cyphers Company's Methods. They will guide you right—will help you not only in *producing* live, healthful chicks, but in bringing your poultry into *market at best prices.*

Thousands of successful poultry raisers and egg producers, both men and women, use Cyphers Company's goods *exclusively*—and with *gratifying results.* Cyphers Incubators, Cyphers Brooding Equipment, Cyphers Foods, Cyphers Standard Supplies, for all *practical purposes*—and why not you, Reader?

Time and opportunity *now* are too precious to risk on experiments! *Action*—quick, intelligent action is your *insurance* of *safety*—of *results.*

Write *today* for helpful *free* books described on opposite page. *Then act!*



Cyphers Adaptable Hover

Fire-Proof, Insurable, Self-Regulating and Self-Ventilating. Used In Full Line of Cyphers Indoor and Outdoor Brooders. Best Device for Home-Made Brooders.

Sample Reports From Customers

"Coldest Month South Has Had"

Charlotte, N. C., July 5, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
This spring I purchased one of your Self-Regulating and Self-Ventilating Adaptable Hovers, and it has been highly satisfactory in every respect. I ran it outdoors in a home-made brooder box as early as February, which this season was the coldest month the South has had in a good many years, but I had no trouble in keeping up the required heat in the Adaptable Hover to properly care for the comfort of the little chicks entrusted to its care. We raised every chick from this February hatch.
FRANK A. FOTTS.

"Have Eight of Your Brooders"

Moodus, Conn., July 1, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
Am always ready and willing to speak a good word for the Cyphers Company products and for the "Cyphers Service." We attribute considerable of our success, especially in the earlier days, to the fact that we "started right" with the Cyphers way of doing things. Last year I had the "fireless craze" and tried one early lot of chicks on the fireless plan. On the third day, after losing one-third of them, I put the chicks in one of your Style B Outdoor Brooders and had no further trouble. No more fireless for me for early hatches when I can get your brooders to do the job. I have eight of your Brooders in operation.
C. A. RUSSELL.

"Don't See How Could Be Improved"

Argos, Ind., July 1, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
The Cyphers Style B Outdoor Brooder, equipped with Adaptable Hover, has proved entirely satisfactory, and is the best brooding device of which I know. I don't see how your Adaptable Hover could be improved. Out of 85 chicks placed in the brooder we raised 80 of them, and the loss of the five was through no fault of the brooder. We also reared our chicks on your Cyphers Chick Food, with good results. Have found it to be sweet and sound, and free from dirt or waste materials. The chicks eat it up clean. All our dealings with your Company have been entirely satisfactory.
ED. M. MARTIN.

"20 Degrees Below Zero—Did Not Lose a Chick"

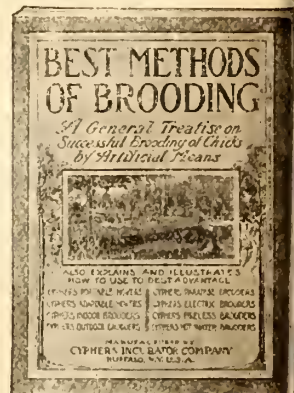
Brown Station, N. Y., July 5, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
Am using one of your Style A Outdoor Brooders, and also a Style B Outdoor Brooder, additional to the Adaptable Hover which I have installed in a home-made brooder. I have operated these brooders in February, when weather went 20 degrees below zero, and I did not lose a single chick. Am enclosing herewith photograph showing two cockerels hatched February 10th, that tipped the scales at 5 1/2 pounds.
June 20th. I consider that pretty good. These birds were hatched in my 24-egg capacity Standard Cyphers Incubators and like the rest of my chicks, they came out strong and healthy. They were fed on Cyphers Chick and Developing Food, which accounts for the rapid and satisfactory growth, and development of the birds. I want nothing but Cyphers Incubators, Brooders and Poultry Foods for me.
F. A. DEMCAR.



Cyphers Style B Outdoor Brooder

World's Most Popular "Foster Mother" (Patent Heating System)
Cyphers Style B Outdoor Brooder, Colony-Type, Three-Compartment, Self-Regulating and Self-Ventilating. Part of Front is Cut Away in Picture to Show Partition Between Hover Chamber and Exercising Apartment.

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Cyphers Company's Latest New Free Book. Most Complete Treatise to Date on This Vitally Important Subject. Goes into Every Detail. Free Time Chicks are Taken From Incubator. 113 They are Placed on Range. Box of 52 Pages, 7x10 Inches in Size, Well Illustrated. Mailed FREE on Request to Any Address.

Give Best Results!

DON'T DUPLICATE WORK! That's a Success Secret in any business. Don't do over again what someone else has already done for you. In brief, don't invest your time and money in needless experiments in poultry raising, when the Cyphers Company already has blazed the trail—proved the way to surest and greatest success.

For this very purpose our Company owns and operates a \$75,000 Experiment and Demonstration Poultry Farm. Results are recorded; most modern, most successful methods are proved and passed along to Cyphers owners, through Cyphers Company's Free Bulletin and As-Often-As-You-Need-It Personal-Letter Service.

Cyphers Company's Methods are established and successful; they enable you to cut out all need for wasteful experimenting; they enable you avoid losses; to go straight ahead surely, safely, with the best results. Our own proved success, combined with that of many thousands of customers, IS YOURS when you adopt Cyphers Company's Methods and use

Cyphers—World's Standard Poultry Equipment

Write today for the three Great Free Books published by the Cyphers Company for distribution to every man and woman who is interested in poultry raising and egg production. Have you received your set? If not, write us today—right now, and we will send all three, postpaid, without obligation.

Poultry Foods and Feeding

52 pages—fully illustrated. A gold mine of practical, helpful information covering all details of feeding for special results.

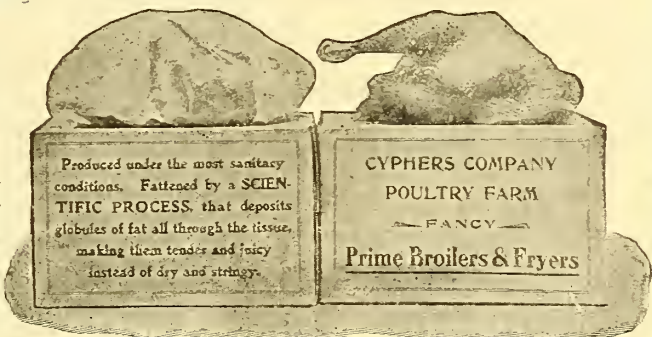
Best Methods of Brooding

Cyphers Company's latest free book—of direct value and timely help to every poultry grower. All Brooding Facts from start to finish. Successful care of chicks made easy. 52 pages, fully illustrated.

"Profitable Poultry and Egg Production"

Cyphers Company's big 1913 Year Book—244 pages—packed with richly valuable information on every branch of poultry raising. 8 special chapters of proved Money-making Methods—vital, down-to-date poultry facts and suggestions.

Write us today for any one or all three of these great free poultry books.



Command Top Market Prices

Picture Made From Photograph of Prime-Quality Table Poultry Produced Season of 1912 on Cyphers Company's \$75,000 Experimental and Demonstration Poultry Farm, Buffalo, N. Y.—Also Cardboard Boxes In Which Broilers and Fryers are Marketed. Every Detail of our Methods Will be Found Described In FREE Booklet, "Poultry Foods and Feeding."

"Consider Cyphers Foods Almost Ideal"

Atlanta, Ga., August 26, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
We are well pleased with your Cyphers Balanced-Ration Foods. We find that to produce a pullet which will lay 180 to 200 eggs per year, it is necessary to start the chick just right, to see that there is continuous healthy development every day, and that when the pullet has reached maturity she receives such a balanced ration as will result in the greatest possible egg production. After our experience we consider Cyphers Poultry Foods almost ideal. Yours truly,
WYANOKE FARMERS. W. E. Taliaferro, Prop. Bred-to-Lay S. C. White Leghorns.

"Raise Them To 3 Pounds, Without Losing a Chick"

Romulus, N. Y., September 5, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
This season I have experimented with different foods and feeding systems in caring for my young chicks. I find that those fed exclusively on Cyphers Chick and Developing Foods made much more rapid growth, had more even feathering and I was able to raise them up to three pounds in weight—often without losing a chick. I have always found your Sealed-Bag Brand Balanced-Ration Poultry Foods to be free from dirt and waste materials, and the chicks rat them with a relish, cleaning up the grains to the last particle.
CHAS. E. REED.

Sample Reports From Customers

"Free From Waste Materials"

Edwardsville, Ill., August 16, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
Your Balanced-Ration Granulated Chick Food has been used by us with entire satisfaction. In every purchase it has been clean, sweet, and free from waste materials that the birds will not eat. I have found that everything bearing your trade mark will serve the purpose for which it was intended. Every hatch brought off from your incubators has averaged 90 per cent., or better, and we have hatched more than 2,000 chicks which were successfully reared with your Cyphers Brooders and your Cyphers Foods. Yours truly, MENY-EGGS FARMS,
John Henry Lynch, Proprietor.

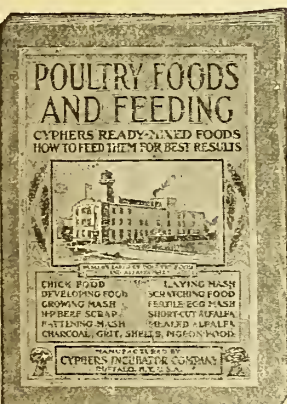
"Have Given the Best Results"

Mt. Clemens, Mich., September 30, 1912.
Cyphers Incubator Co., Buffalo, N. Y.—
I have tried all kinds of poultry foods, but the Cyphers Sealed-Bag Brand Balanced-Ration dry grain mixtures have given me the best results. I have tried your Chick Food, Developing Food, Scratching Food, Meat Scrap, Oyster Shells, Grit, Charcoal, and also supplies such as Water Fountains, Food Hoppers, etc. Each year I raise from 600 to 1,000 fowls. At our recent poultry show I won first, second, third pullet, second cockerel and second pen on White Wyandottes. All of these were hatched in Cyphers Incubators and raised on Cyphers Foods.
BUEL HART



Cyphers Company's Developing Food

This is a Medium-Granulated, Five-Grain Balanced Ration that we Advise our Customers to Feed to Growing Chicks Between the Ages of Six to Twelve Weeks, Before They are Given Whole Grain.



This Book Would be Cheap at \$5.00 Per Copy, Judged by Actual, Detailed Value of Contents. Tells How To Produce Broilers, Fryers, Roasting Chickens and Capons; Also Exactly How to Feed the Layers and Breeders. 52 Pages, 7x10 Inches. One FREE COPY on Request to Any Address.

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FACTORY AND HOME OFFICES, Department 23, BUFFALO, NEW YORK
BRANCH STORES: New York City, 23 Barclay St.; Boston, Mass., 12-14 Canal St.; Chicago, Ill., 329-331 Plymouth Ct.; Kansas City, Mo., 317-319 Southwest Blvd.; Oakland, Cal., 2127 Broadway; London, Eng., 121 Finsbury Pavement.

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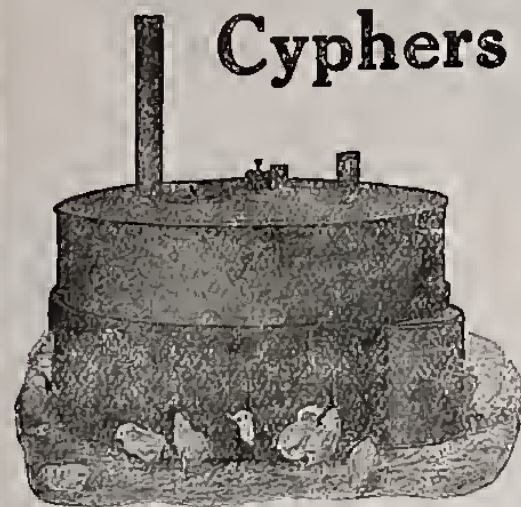
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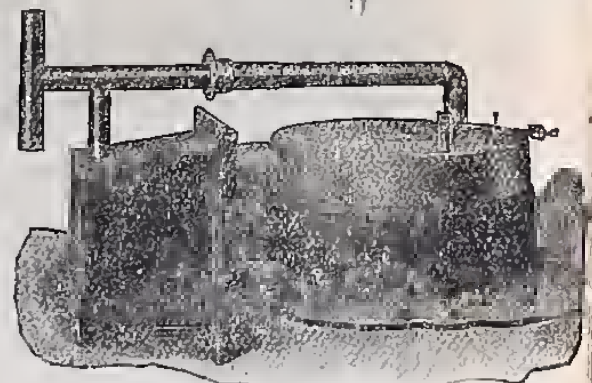
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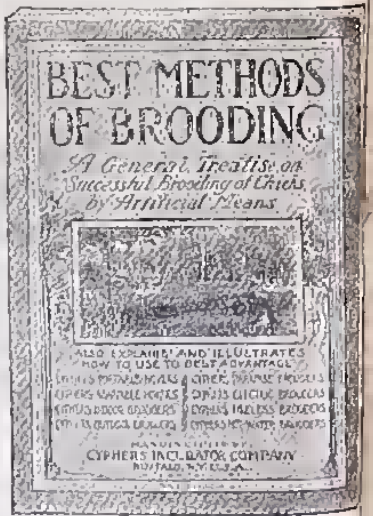
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P. A. DEMCAR.



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World's Most Popular "Foster Mother" (Patent Heating System)

Cyphers Style B Outdoor Brooder, Colony-Type, Three-Department, Self-Regulating and Self-Ventilating. Part of Front is Cut Away in Picture to Show Partition Between Hover Chamber and Exercising Apartment.

June 5th. I consider that pretty good. These birds were hatched in my 24-egg capacity Standard Cyphers Incubators and like the rest of my chicks, they came out strong and healthy. They were fed on Cyphers Chick and Developing Foods, which accounts for the rapid and satisfactory growth, and development of the birds. I want nothing but Cyphers Incubators, Brooders and Poultry Foods for me.

P. A. DEMCAR.

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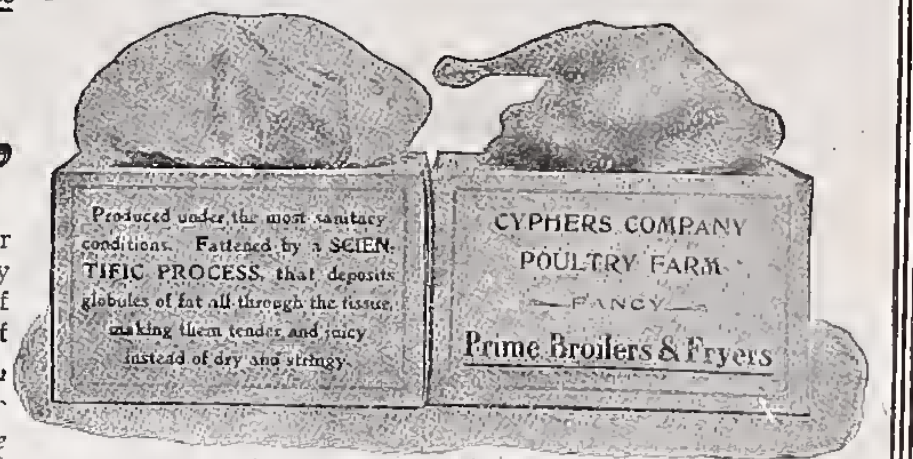
Cyphers Incubator Co., Buffalo, N. Y.—Your Balanced-Ration Granulated Chick Food has been used by us with entire satisfaction. In every purchase it has been clean, sweet, and free from waste materials that the birds will not eat. I have found that everything bearing your trade mark will serve the purpose for which it was intended. Every hatch brought off from your incubators has averaged 90 per cent., or better, and we have hatched more than 2,000 chicks which were successfully reared with your Cyphers Brooders and your Cyphers Foods. Yours truly, MENY-EGGS FARMS, John Henry Lynch, Proprietor.

"Have Given the Best Results"

Mt. Clemens, Mich., September 30, 1912.

Cyphers Incubator Co., Buffalo, N. Y.—I have tried all kinds of poultry foods, but the Cyphers Sealed-Bag Brand Balanced-Ration dry grain mixtures have given me the best results. I have tried your Chick Food, Developing Food, Scratching Food, Meat Scrap, Oyster Shells, Crit, Charcoal, and also supplies such as Water Fountains, Food Hoppers, etc. Each year I raise from 600 to 1,000 fowls. At our recent poultry show I won first, second, third, fourth, and fifth prizes on White Wyandottes. All of these were hatched in Cyphers Incubators and raised on Cyphers Foods.

BUHL HART



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Picture Made From Photograph of Prime-Quality Table Poultry Produced Season of 1912 on Cyphers Company's \$75,000 Experimental and Demonstration Poultry Farm, Buffalo, N. Y.—Also Cardboard Boxes in Which Broilers and Fryers are Marketed. Every Detail of our Methods Will be Found Described in FREE Booklet, "Poultry Foods and Feeding."

"Consider Cyphers Foods Almost Ideal"

Atlanta, Ga., August 26, 1912.

Cyphers Incubator Co., Buffalo, N. Y.—We are well pleased with your Cyphers Balanced-Ration Foods. We find that to produce a pullet which will lay 100 to 120 eggs per year, it is necessary to start the chick right, to see that there is continuous healthy development every day, and that when the pullet has reached maturity she receives such a balanced ration as will result in the greatest possible egg production. After our experience we consider Cyphers Poultry Foods almost ideal. Yours truly, WYANOKE FARMS, W. E. T. Harcero, Prop. Bred-to-Lay S. C. White Leghorns.

"Raise Them to 3 Pounds, Without Losing a Chick"

Romulus, N. Y., September 6, 1912.

Cyphers Incubator Co., Buffalo, N. Y.—This season I have experimented with different foods and feeding systems in caring for my young chicks. I find that those fed exclusively on Cyphers Chick and Developing Foods made much more rapid growth, had more even feathering and I was able to raise them up to three pounds in weight—often without losing a chick. I have always found your Sealed-Bag Brand Balanced Ration Poultry Foods to be free from dirt and waste materials, and the chicks eat them with a relish, cleaning up the grains to the last particle.

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This is a Medium-Granulated, Five-Grain Balanced Ration that we advise our Customers to Feed to Growing Chicks Between the Ages of Six to Twelve Weeks, Before They are Given Whole Grain.

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STRAIN. UNEQUALED IN STANDARD QUALITIES. Remember that we
are the ORIGINATORS, and for over 30 years SPECIALTY BREEDERS of the
justly celebrated "WYCKOFF STRAIN of S. C. 'WHITE LEGHORNS, the
MOST PROFITABLE STRAIN OF POULTRY IN AMERICA today. Place your
orders at headquarters and make no mistake. EGGS FOR HATCHING in any
quality from the grandest matings at \$2.00 per 15; \$3.75 per 30; \$5.00 per 45;
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as anyone and I have always seen their
many good points.

One thing which my experience with
them has shown is that they are very
consistent layers. When they start lay-
ing they usually keep steadily at it
till they start to molt and I have had
them lay steadily while dropping their
feathers. They are not great sitters as
some believe. I have hens on my place
that will be three years old this spring
that have never offered to sit. I visit-
ed the yards of one of the best known
Brahma breeders last spring and he
had just bought twenty Plymouth
Rocks for sitters.

Some may want to dispute me when
I say I can raise and keep a Brahma
cheaper than most breeds. The past
season I raised some R. I. Reds and
Rocks for comparison and found that
my Brahmas required less feed and
still I had two pound broilers from the
Brahmas nearly a week before I did
from the Reds or Rocks.

My experience also teaches me that
the Brahma puts on flesh very easily,
therefore care should be taken in feed-
ing corn. Their profuse feathering
tends to protect them from the cold
and they require less corn during cold
weather than the closer feathered
breeds.

While I have never had a Brahma
lay under six months they have the
laying ability and will produce a good
number of large eggs during the year.

My pullets hatched in the spring of
1910 gave me an average of 160 eggs
during their first year laying and a
130 average during their second of lay-
ing. I had one pullet that produced
39 eggs in 42 consecutive days.

As roasters they have no peer, their
flesh remaining tender to a greater age
than most breeds and they always de-
mand a good price in the market.

They are of a naturally docile dis-
position, bear confinement well. A
three foot fence is all that is needed
to confine them. This advantage makes
them especially adapted to those who
have a limited space. As a general
purpose fowl they rank well towards
the top and for beauty of plumage I
do not believe they are excelled by any.

Dr. Q. H. Merrill.

Massachusetts.

HOW TO HAVE SUCCESS WITH IN- CUBATORS.

I am not going to give a lot of in-
structions on how to operate incubators
and brooders. The manufacturers al-

ways tell us that, and its a mighty hard
job to beat a fellow at his own game.
Again, two makes of incubators can-
not be operated the same, for no two
have the same moisture and ventilating
device, so they must necessarily be op-
erated along different lines. Follow
the makers' instructions and use com-
mon sense are the two best requisites
I know of. More than one good hatch
has been ruined because of an experi-
mental mind and more than one batch
of brooder chicks killed by the same
cause.

The fellow who says incubator chicks
are all cripples and weaklings don't
know what he is talking about. They
are just as strong as hen hatched chicks
if the incubator is operated right; at
least I find it so. Some of my best
birds are incubator hatched and brood-
er raised, and I have some good ones,
(or that is what the judges say, any-
way.) Remember I am not trying to
advertise my stock, for I haven't
enough to supply the home trade, but I
am only stating facts.

If more people would follow instruc-
tions and not try to learn how much
abuse eggs and incubators can stand
there would not be so many persons
condemning incubators. Of course
there are incubators and incubators;
just the same as there are chickens and
chickens. Some hens won't lay enough
eggs to pay their feed bill no matter
what care they get, and some incubators
wouldn't turn out a good hatch if op-
erator and eggs were both perfect.

I use one of the standard make in-
cubators (hot air) and I have always
had good success, but have never been
able to hatch 105 chicks from 100 eggs.
No indeed, I have never hatched one
hundred chicks from one hundred eggs
yet, and never expect to. The hens
don't usually lay them that way.

While the hot water machines are
all right I prefer the hot air machines;
they give just as good results and are
not apt to spring a leak in the middle
of a hatch. As the instructions with
my machine say plainly don't put any
water in the machine. I don't.

They also say don't be in a hurry
to remove chicks from incubator, so I
leave the little fellows in the machine
until they are at least 24 hours old.

Don't feed them until they are 43
hours old. I am very particular about
this, for I know from experience that
this very thing has killed many chicks,
(that is feeding them too soon after
they are hatched.) Nature has supplied
them with nourishment to last them



Bird Life Demands Open Air—Close-to-Nature Brooders Give It

Contact Warmth like the old hen—Plenty of Fresh, Open Air—No Piling up or Over-Crowding. Give chicks these things and raise every chick in flocks of 100 to 300. Hot Air or furnace heat dries out, weakens and kills. But chicks in Close-to-Nature Hovers nestle their backs against a warm body that perfectly simulates the broody hen and breathe temperate, pure air.

Of all the forty or more kinds of brooders, there is not one that is like the Close-to-Nature. Send for free catalog.

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20 Front Street,

COLFAX, IOWA.

at least 48 hours, and they will be better prepared to withstand the struggles that are bound to occur later on if they are allowed to rest the first 48 hours of their lives.

There is an old saying, "Well hatched is half raised," but just the same many a well hatched chick has been killed by improper care. They are not immune to death simply because they were well hatched.

Colorado.

Mrs. Baker,

SUCCESSFUL HATCHING AND BROODING.

At this time of the year most poultry lovers are afflicted more or less with the chicken fever, and it is high time to be at work if we want those rosy combed, early laying pullets in the fall. If the hens that are to provide the eggs for hatching are confined in houses, let them run at large by all means. My pullets are confined in a large open front house and my year old layers—the breeders—have full liberty to range at will. I believe it is a mistake to select our breeders and confine them in pens with so many feet of space for so many hens, for under these conditions, no matter how well cared for they cannot have the exercise and consequently lack the vigor of hens on the range. Free range, then, and a well balanced ration is the ideal way to obtain those strongly fertile eggs that will produce those vigorous, livable chicks we all desire.

Turn your earliest attention then to the breeding hens, give them free range if possible unless there is snow on the ground, use the same common sense in caring for the hens as the stock farmer does with his stock. Provide some green stuff as there will be little to pick up out or doors in the earlier part of the season. Don't forget the beef scraps and of course we will not let them go thirsty, for laying hens drink lots of water. Do not set eggs from pullets if it can be avoided, at least from those pullets laying their first litter of eggs, for they will give you undersized chicks that lack the vigor of those from year old hens, and if persisted in will gradually lessen the size of the off-spring. We don't want to retrograde but improve.

In selecting the eggs for setting choose those of medium and uniform size. Avoid the long, narrow egg or the round bullet shaped egg and of course no ridged egg should be incubated. If the eggs have to be kept a few days

place them in a cool, not cold, room. I pack mine in boxes of bran which I stand on one end one day and invert and place on the other end the next. In this way the position of the egg is changed daily, thus preventing the germ from adhering to the side of the egg.

The sooner the eggs are set after being laid the better. I never keep them over one week. A cellar where it will be free from draughts, and the direct rays of the sun, is the best place to run the incubator if the machine is of a reliable make and carefully run according to the directions for that particular machine, and filled with good, fertile eggs a good hatch may be expected. It is a good plan to test the accuracy of the thermometer by placing a clinical thermometer in a cup of warm water along side of the incubator thermometer and see if they register alike, and run the machine according to your findings, higher or lower as the case may be. When the eggs are hatching I think it well to darken the chamber and do not disturb the machine until the hatch is well cleaned up.

The baby chicks need no food for

twenty-four hours, when they should be removed to the brooder which has been previously heated to ninety degrees, then they may be given some water and chick grit. Feed carefully at first. Rolled oats or pinhead oat meal is good to start with, and the infertile eggs tested out of the incubator. I boil them hard and run through a meat chopper, shell and all. Do not over-crowd; fifty is enough for any brooder. The temperature should be kept high enough so the chicks do not crowd or bunch up. There should be sufficient room in the brooder for the chickens to have a little exercise outside of the hover for the first week, then they should be given more and more liberty as they grow older. Get them out on the ground as soon as possible, the first week if the weather permits, but be careful that they find their way back again to the heat and first, last and always keep the brooder clean.

With careful feeding, heating and cleanliness and given intelligent care, free range and a good ration these early hatched chicks cannot fail to give a good account of themselves in the fall.

B. S. Francis,

Massachusetts.

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Dr. Hess Poultry Pan-a-ce-a

and no one can dispute the absolute, positive value of the remedy for the above-named poultry diseases, because the best authority on earth recommends them. Don't lose your flock after it arrives—insure and protect the lives of your little chicks with Poultry Pan-a-ce-a.

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140 Chick Brooder
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ROSE COMB BROWN LEGHORNS A GOOD BREED.

To compete with the high cost of living a great many city dwellers with a back yard lot will make a start this spring in the poultry business in order to have fresh eggs and a bird to eat occasionally.

To those who have not yet chosen the breed or variety to start with I would like to say a few words in favor of the Rose Comb Brown Leghorn. They are among the oldest of breeds and have been popular for many years. One who is looking for a breed for beauty, as well as business, will find the R. C. Brown Leghorns unequalled. They lay large white eggs weighing from 24 to 26 ounces to the dozen, are non-sitters and are very persistent layers, for which they are famous. They are quick growers and the cockerels can be marketed for squab broilers at 1 to 1½ pounds at six to eight weeks old. They being active and vigorous are not easily overfed and are not prone to sickness. The pullets lay at about 5 months of age.

The eggs hatch well and the chicks are the kind that live and grow. They stand confinement well, and if put on range will pick up half their living. The Rose Comb is frost proof and the egg yield in winter is not checked by this trouble, as with the single comb varieties.

The past winter I have been feeding my laying stock as follows and they have given me better than a 50 per cent egg yield. In the morning equal parts of oats and wheat fed in deep litter so as to induce exercise. At night corn and some times a little buckwheat. I keep a dry mash before them composed of 100 lbs. bran, 50 lbs. corn meal, 50 lbs. middlings, 50 lbs. beef scrap, and twice a week a feed of ground bone about one ounce to each bird; also a hopper filled with grit, oyster shell and charcoal and plenty of fresh water. They get sprouted oats, cabbage or mangels every day. Those who do not care to mix the dry mash can buy it ready mixed from the feed dealers. Those who take up the Rose Comb Brown Leghorns will not regret it.

C. Batteiger,

Ohio.

WHAT IS THE RIGHT MONTH TO HATCH PULLETS FOR WINTER LAYERS?

The above is asked by Mrs. C. E. Melville, of New York, in February issue of Poultry Keeper. As the in-

quirer lives some distance from Colorado and conditions, surroundings and location differ somewhat, it is quite difficult for us to give a real intelligent answer, however, will do our best.

As Mrs. Melville has been in the business only a few years we will give some of our experience of near 25 years. Some problems have taken four or five years to solve and many are yet unsolved and as the poultry business is quite an experiment from start to finish. We believe there are some problems that never will be solved. While we admit that much of her writing is true, yet to reason from cause to effect we must admit there is a cause for everything.

In regard to fertility January and February layed eggs at our plant carry a higher per cent of fertility than any other month. We use our yearling hens and do not feed them for egg production until December or January, then begin with nature's feed as nearly as possible, such as green feed, green cut bone and in our dry mash dry meat and bone meal.

For early layers we hatch from our winter layers as "like begets like." We do not care to hatch from April and May heavy layers. You will therefore understand that if "like begets like" that the winter laying qualities will be transmitted to their progeny and in order to perpetuate this quality the male should also come from heavy laying strain. Then again by hatching early the pullets are more matured and ready for their task.

The pullets we feed for egg production from September 1st and by trapping and other kindred devices are able to know our best layers which are carefully selected for our next season's breeders.

We judge from the lady's article that her birds do not want for proper care or feed and seemingly well balanced, yet there seems to be something lacking and we believe that something is bred-to-lay strain. If the above is followed closely for four or five years we believe the inquirer will be amply paid for her trouble.

Another thing to remember is, it is well enough to read everything along that line you can and try out such suggestions as sound plausible, but to adopt nothing permanently until thoroughly tried.

Many articles and books of systems are printed and circulated by persons who never raised a chicken and could hardly tell a cockerel from a pullet before fully developed if they were in the same yard. Advice from that class is generally expensive, even at little

BUTTERCUP AND BUFF ORPINGTON SALE.

Change of business necessitates reducing my stock at once. So I am offering some of my finest birds at about half their real value. Most birds have won ribbons at leading shows, and are mated for best results.

BUTTERCUPS—10 nice pullets and fine cockerel for \$25.

BUFF ORPINGTON—Best cockerel produced from 225 Owen Farm's eggs direct and 5 massive pullets, \$20.

Eleven pound cock, twice winner of blue, and 7 fine pullets, \$25. Besides these pens I offer 25 nice pullets at \$1.25 to \$2.50 each. Also fine cockerels at \$3 to \$5. A 390-egg Cyphers Incubator, good as new, cost \$38, \$12. Booking orders for Buff Orpington, Buttercup and Campine eggs at \$2.50 and \$5 per 15. Circular.

L. S. WELLES,

Box 13,

E. Fultonham, Ohio.

or no cost.

We advise reading the monthly reports of the two great national contests carried on at Storrs, Conn., and Mountain Grove, Mo. Such advice is practical and will bring results and as that is their object (getting the most eggs possible from the hens) we may rest assured that the best methods and feed obtainable will be procured and practiced.

In the first place the writer hatched Leghorns first, while the heavier breeds require more time to mature they should have been hatched first. We are decidedly in favor of White Plymouth Rocks for all around birds and especially for early winter layers and try to get the bulk of them out in January and February. To be sure they will molt either in early fall or many during the entire winter if not aided. They must put on their adult clothes and the sooner this is accomplished the sooner they are ready to produce.

A. W. Gingery,

Colorado.

HATCHING AND BROODING FOR WINTER EGGS.

The season for hatching and brooding is at hand and it is a subject that is not understood or rather not learned except by actual experience and experimenting. My first experience was with the old hen for hatching and brooding but it was not very long till I bought an incubator and brooder. I found if I wanted early chickens and many of them, I could not depend on the old hens, because not many of them wanted to sit very early in the spring and of course you must have the chicks hatched early if you want them to start to lay in November and continue through the winter, for it is the winter eggs that bring the highest prices and most profit.

I had good success with my incubator from the start, hatching 42 chicks from 45 fertile eggs and raising 37 of them in the brooder but one should always be very careful to follow directions you get with your machine and if you use a brooder keep it very clean and if you use the old hen and coops be sure to keep your coops clean. When I set my incubator I also set several hens at the same time and then when the chicks hatch give them to the hens to raise. If you have no hens that want to sit at the time you set your machine set it anyway and it is very likely you will have some hens that will want to sit before your machine hatches, then several days before it hatches put 2 or 3 eggs under them and they will take the chicks from the machine when you put the hens in the coops and not know the difference.

Feed the chicks some good brand of chick food and mix a little wheat bran with it and have fresh water before them at all times. Be sure to have board floors in your coops so as to keep them off the ground when it is wet and cold. When they are five weeks old feed them a mixture of ground oats and corn and also add some bran. Mix this with milk so as to be crumbly and feed all they will eat up clean and you can almost see them grow. By this method I have been raising from 90 to 95 per cent of all that I hatched.

It is the early chicks that bring the most money. I received 55c a pound for my first bunch of fryers sold last spring and 52½c a pound for the second lot, but I would advise selling the cockerels only. Be sure to keep all the pullets and give them the best of care and in October or November put them in a good warm poultry house that is well ventilated and do not let them out until spring, except on nice warm days, but never when there is snow or ice on the ground. See that they always have fresh water. Feed oats or wheat in litter in the morning, a quart to 25 hens. Feed them a dry mash in hoppers, composed of ground corn, 110 lbs.; ground oats, 64 lbs.; wheat bran, 50 lbs., mixed thoroughly, also feed cabbage or sprouted oats for green feed and give them all the corn they will clean up at night. Also give them green bone or beef scraps and oyster shell and you will surely get winter eggs. I have the R. C. Rhode-Island Reds. They are very hardy and splendid layers.

E. Shank,

Ohio.

INCUBATION BY THE NATURAL METHOD.

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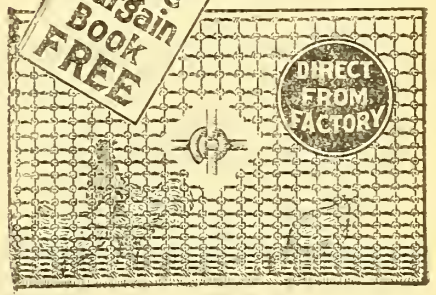
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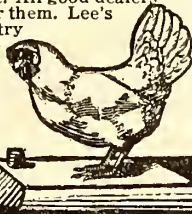
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may be used to feed the little chicks when they first hatch.

The sitting hens' worst enemy is the louse. To over-come them take a sponge and saturate it with crude carbolic acid and coil oil or creosol dip. Place this under the straw in the nest. This will kill all the lice and mites in the nest and will not affect the hatching of the eggs. By many it is believed that chickens will hatch better providing eggs are set in a nest made of sod or earth. This is a mistake as by experiment it has been proven that the eggs will hatch equally as well in a nest of straw or chaff.

The sitting hen should be provided with plenty of fresh water, grit and corn, (cracked corn preferred); also she should have a place to dust, as the first place she goes after she gets off of the nest is to the dust bath. This is nature's way of getting rid of lice.

As fast as the chicks hatch and are dry they should be removed from the nest so that the hen will not get restless and leave the nest. If the hen is to be reset she must not have the chickens with her any longer than is necessary or she will refuse to sit again. The baby chicks should have their heads greased with turpentine and lard. Do not put too much grease on them or they will die. This is the best remedy for head lice.

Many people feed their chickens too soon after they hatch. This is harmful to them, so don't feed them until about thirty-six hours old, when they may be fed boiled eggs and stale bread crumbs and a little warm milk or water. Don't forget to give them some fine grit. White dishes pounded up is very good for this purpose. Little chicks should be fed often but not too much at a time.

Clifton H. Dickerson,
Oregon.

A BARRED ROCK RECORD.
Editor, Poultry Keeper:
Through the courtesy of Marvin

Coppes, of the White Feather Farm, of this place, I got hold of a copy of the Poultry Keeper and will send for it for one year. Enclosed please find fifty cents in stamps to start subscription, beginning with March issue.

I notice in the October issue which I have, an egg record for a year of some birds belonging to H. Farnsworth which I believe I can beat. I will give my record for thirteen months of 42 Barred Rocks, beginning with December 1st, 1911, and running until January 1st, 1913. I will give the monthly record and the money I received for each month. I have a poultry house 12 by 37 feet and 10 feet high, with a tight matched floor for the hens in winter and use the lower part during the summer. This house is built on the Corning plan. The house is an open front house, with seven window sash 3 by 5 feet, on hinges to drop down. I feed wheat or soaked oats in the morning, corn and dry oats in the evening. Dry food is kept before them always, together with grit and chacoal.

	Eggs.	
December	257	\$ 5.55
January	291	6.66
February	494	8.37
March	716	10.71
April	957	11.62
May	912	11.60
June	775	9.13
July	639	8.84
August	663	11.85
September	517	8.40
October	445	10.85
November	241	6.40
December	359	8.36
	7266	\$118.34

Total 605½ dozen in 13 months.

Egg sales, \$118.34.

Sales of hens and roosters, \$32.40.

Feed for the thirteen months cost about one-third of what the egg sales amounted to.

John Eshenbaugh,

Indiana.

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The reader can secure two subscribers at 50 cents each, send us \$1.00 and we will send Poultry Keeper one year to the one who has procured the new ones.

It is easy for one to secure two new subscribers in almost any locality. All it takes is a little energy and a few minutes, time.

There are many interested in poultry raising who would subscribe for the Poultry Keeper if they understood the value of the paper. Others are securing their papers without expense to themselves under this offer. Are you willing to do the same?

Below is a subscription blank on which the names and postoffice addresses may be written. We urge an early effort to secure three names under this liberal offer. A dollar will reach us if sent in a letter.

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Enclosed find \$1.00 for three subscriptions to Poultry Keeper for one year.

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THE BUFF WYANDOTTE.

By J. E. Willmarth, Amityville, N. Y.
 About eighteen ninety there was quite an awakening to the fact that Buff colored poultry would take with the general public and several breeders were working on different breeds of poultry of this color. A Wyandotte of Buff color was one of these breeds. The first of these were selected from among the farmers of Rhode Island and vicinity. They choosing the lighter colored of the red fowls generally bred in that locality, taking those with single combs for Plymouth Rocks and those with rose combs for Wyandottes. These were the first Buff Wyandottes shown, but at the same time other breeders had been experimenting, crossing Golden Wyandottes with White Wyandottes, then crossing the off-spring with Buff Cochins. This gave by far the best type, and was the foundation of most of the present day Buff Wyandottes, although the Rhode Island Red strain was bred in with them by some breeders. The first of this new breed, of course, showed defects that would place them in the mongrel class when compared with the Buffs we have today, but the most conspicuous of these defects were rapidly eliminated and this breed has been steadily improving ever since, until now the Buffs are second only to the Whites in type and we have seen Buffs in the larger shows that were just as good shape as any White Wyandotte we ever saw. In color it

is generally admitted that the Wyandottes are the equal if not the superiors of any other buff breed.
 As a market towl the Buff Wyandotte is "Top of the Heap." It is generally known that the Wyandottes comply with the American market requirements the best of any breed. The American house wife decides this question. She wants a bird with rich yellow skin and legs, a plump compact body, with as little bone as possible, and a small comb. Now, if there is a breed that excels the Wyandottes in these points I would like to know what you call them. And the Buffs have the advantage over other colors of Wyandottes in that it is no trouble getting yellow skin and legs with buff feathers. Now, how about eggs? Of course we all think our favorites are the best layers, but many have an idea that it is the bird with an oval or oblong body that makes the best layer. Ask these people why and they will say that this shape gives lots of room for a large egg sack. Granting this is the reason for large egg production, the Wyandotte still comes out on top. Any architect will tell you that the nearer round any building or structure is the more room it contains in proportion to the amount of material required to enclose it. This the Wyandotte, being nearest round of any breed, has the largest internal cavity of any breed, in proportion to their size and according to this theory the long body fowl is not the best layers.

Anyway the Wyandottes gave a mighty good account of themselves in the laying contests last year. At the Missouri contest Silver Wyandottes led (there being no Buffs entered), and at the Storrs contest Buff Wyandottes led all other varieties of poultry in the average of eggs produced per bird per year. (Their average for the year was 169 1-4 eggs per bird.)
 The Buff Wyandotte is the greatest general purpose fowl. They have no useless frills about them, such as crests, feathered legs, large combs, etc. These all take food to grow them. Wyandottes also have as small an amount of bone as any breed. Thus they are cheaper to raise to a marketable size, and a marketable age with the Wyandotte is any time from six weeks to old age, as they are plump at all ages. In beauty they are the equal of any, as it is generally agreed that the Wyandotte is most gracefully proportioned, as their shape is all curves. Their nice even buff color is a thing of beauty forever. This color does not soil easily, thus they present an attractive appearance, even in a small yard.
 In mating Buff Wyandottes, as in mating most other breeds, do not go to extremes. If your birds are too light in color, don't pick out a very dark male to go with them, but select one of medium color, possibly just a trifle darker, but there should not be any great difference of color, for very seldom do we succeed in combining the

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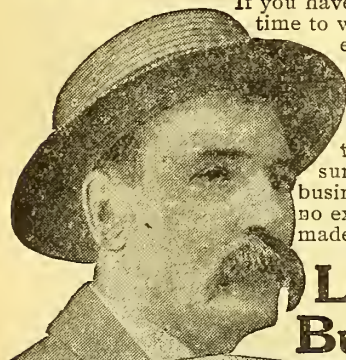
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 Every part of the Old Trusty is made in the most careful way, of the best materials. Honest all through—just as Abraham Lincoln would make it if he were my partner in business. Don't you want the Old Trusty Book? Be sure to mail postal card now.



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And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

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BREEDS

CHARACTERISTICS OF

BREEDS

PRACTICAL POULTRY HOUSES

(Plans)

FOWLS: CARE AND FEEDING

MODEL BROODING HOUSES

(Plans)

CARE OF ADULT FOWLS

FEEDING FOR EGGS

A HEN CATECHISM

FEEDING YOUNG CHICKENS

CARE OF GROWING STOCK

ARTIFICIAL INCUBATION

INCUBATOR CELLARS

BROILER AND BROILER

RAISING

CARE OF BROODER CHICKS

PEKIN DUCKS FOR PROFIT

5000 DUCKS WITH STAND-

ARD-BRED POULTRY

PROFITABLE EGG FARMING

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DISEASES OF POULTRY

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W. F. Chamberlain Feed Co., 367 N. Commercial St., St. Louis, Mo.

HAS NO EQUAL—NO CORN—NO BOWEL TROUBLE

good qualities of a mating, but rather they show a tendency to follow either one side or the other of the mating. It is best to make haste slowly; take several years in bringing your stock to the proper shade.

As to proper shade of buff, beginners are prone to attach too much importance to this. A medium shade, that runs even all over is to be preferred to any exact shade that runs uneven. The hackle and saddle of a fully developed male should be about the same color as gold money, the balance to be same color, but lacking the gloss. Of course females should match breast and body of males.

In shape most breeders have trouble with their stock not being blocky enough, but remember that we can go to extremes and get our birds too blocky. A Wyandotte is a sprightly bird and should have legs long enough and a body compact enough to enable it to get around quickly. We do not want a great bulky bird of the creeper type, with a mass of loose fluffy feathers covering its whole body. We want good size. The standard weights are about right, giving us a medium size bird, that develops quickly and makes a size that is preferred on the markets. This is the size to stick to. When we get them too large we also get the poor traits of the larger breeds. These are slow of development and growth, and thus more expensive to grow, and they will be larger food consumers after grown, for it takes more feed to keep a large animal than it does to keep a smaller one.

The Buff Wyandottes have never been boomed. They have never had any millionaires to advertise them as world beaters. Neither have there been any ten thousand dollar pens, but they have made a steady growth ever since their introduction and the past few years have been coming faster than ever and the future looks very bright. We advise any one who thinks he would like this breed, to make a start at once and any one who is in doubt as to what breed to take up, to give the Buff Wyandottes careful consideration and look carefully into their good points.

THE INCUBATOR CHICK FROM THE TIME HATCHED UNTIL EIGHT WEEKS OLD.

I suppose every person who is interested in poultry raising has read articles on the above subject, but nevertheless it is always a good point to read the views of all writers.

To begin with, I will say that I have been in the poultry business quite a while. I am interested mostly in the raising of young chicks until they are ready for the market.

I never feed baby chicks until they are at least twenty-four hours old. and thirty-six hours is nearer right. The first thing I do is to scatter sand on the brooder floor. The chicks pick at the sand which help them to digest their best food. An hour after I give them the sand I give either of the following feeds. Dry bread moistened in sweet milk (not soaked so as to make the bread real wet, but just enough to make the chick relish it), and scatter over the sand in very small crumbs, or hard boiled egg cut into tiny particles and fed the same way as the moistened bread. I feed this ration for two days and keep water before them constantly. A little sweet milk is very good. On the third and fourth days I give them rolled oats, upon which a strong chick will make a vigorous attack. On the fifth day I introduce a feed of five parts wheat bran and one part corn meal which I mix and put before them in hoppers; also chick feed No. 1, which can be gotten at any poultry feed store. I use this feed for 5 weeks, giving them rolled oats at intervals. Only feed as much as the chicks are willing to pick up clean—never over-feed them for the remaining food will soon sour.

Now that I have partly explained my feeding system I will undertake to describe my brooders in brief. I rear my chicks in large, roomy brooders—never giving them a chance to crowd. The brooders face the south so as to permit the sun to shine in on the chicks through the window. Right here I will mention that I never allow the chicks to huddle against a cold glass window. I always heap a thin six inch board against the window on the inside of the brooder.

I use the overhead system of heating the brooders as the under heating system frequently causes the chicks to become weak on their legs. Use a mixture of fine hay chaff and sand on the brooder floors and clean this out at least every third day. If the weather is warm and calm I allow the chicks to get some green food in the portable screen pens which I carry around to the different places every day.

After the fifth week I feed the chicks a variety of grain feeds (mostly dry) of cracked corn, wheat and a scratch feed, keeping bran before them constantly. Chicks will grow and thrive on this treatment if no contagious disease sets in. Under the above treatment my chicks average 2 lbs. at 8 weeks old, and I owe my success to the raising of market poultry entirely to it.

L. G. S.,

Ohio.

QUESTIONS and ANSWERS

FALLING DOWN BEHIND—MASH HOPPER.

1. I have a pullet that has been a good layer all fall and winter, laying a number of double yolk eggs, but now, back of the breast bone in the soft part, she seems swollen and in walking or standing seems to be sitting on her tail. What is the trouble? Is there any remedy? Would you use her eggs for hatching as even now she is generally the first hen on the nest? For feed she gets table scraps, dry mash, scratch feed, cabbage and some green bone. I give no litter, using ashes on the floor.

2. A. H. Watson, of Georgia, in the February issue of Poultry Keeper, speaks of making an automatic dry mash hopper and feeder from instructions found in the Poultry Keeper. Please tell me through your columns what issue they were in and what is your price on back numbers or can you furnish them?

Michigan. C. E. V. D.,

1. The pullet has what is termed falling down behind. Treatment is not satisfactory. We doubt if the hen is laying to any extent, even if she does go on the nest. Her eggs would probably not be affected but we should not care to use them.

2. The article you referred to must have appeared in the February, 1912, number as we failed to find it. There have been a number of feed hoppers and feeders described in P. K. at different times so we have no means of knowing which one Mr. Watson referred to. In August, 1911, is described a very practical feeder for whole and cracked grain and Dr. W. J. Sanders dry mash nopper. We cannot furnish this number now as supply is all exhausted.

DISEASE—WEIGHTS—MATING.

1. What is the cause of chickens acting as though they were crazy, craning their necks from one side to the other and when starting to walk off whirling round and round? I have thought it to be too close inbreeding. Am I right?

2. What are the Standard weights for White Wyandottes?

3. I have ten hens and eighteen pullets, also two cocks and one cockerel. How would you suggest mating them; all in one pen or in two pens? The cockerel is a son of the hens and sister to the pullets and one cock is father of the pullets and the other one I raised from a sitting of eggs which I purchased.

4. Give details of cockerel bred pullets and pullet bred cockerels.

Oklahoma. Mrs. O. A. W.,

1. This is caused by a pressure of blood on the brain. It is not the direct effect of inbreeding.

2. Cock, 8½ lbs.; cockerel, 7½ lbs.; hen, 6½ lbs.; pullet, 5½ lbs.

3. We should mate the hens in one pen with the cockerel. If the pullets are large, vigorous and fit to breed from we would use one of the cocks with the entire eighteen. You might get a little stronger fertility if you divide the pullets into two pens, but the percentage of cockerels from such matings would be larger. As to the males, we should use the one that is the strongest and most vigorous regardless of relationship.

4. These are terms applied to birds used in double matings. In parti-colored fowls it is often necessary to make special matings in order to produce both males and females of exhibition color. One pen is mated to produce good cockerels, and the pullets from this mating are not suited for exhibition. They are termed "cockerel-bred pullets." Another mating is made to produce good pullets and the cockerels from this mating are useless for exhibition purposes so are termed "pullet-bred cockerels." We cannot give you any details without knowing the breed.

DEFECT IN BLACK SPANISH.

I have White Faced Black Spanish and

one of my male bird's face is rather yellow instead of clear white. What causes this and will he do to use in the breeding pen? He is the finest bird I have, excepting that he has the yellow face.

F. E. P.,

Missouri.

All we can tell you is that the bird is defective. It would be as useless to attempt to state the cause as it would to give the reason why all mankind is not of the same size, shape and shade. It is due to the breeding or environment in both cases. The bird would be very apt to transmit this quality to at least a portion of his offspring, so if you are breeding for exhibition quality it would not be advisable to use him.

SCALEY LEGS.

Please advise what is the quickest way to get rid of scaley leg.

E. M. I.,

Tennessee.

One method of getting rid of scaley legs is to hold the fowl's legs in kerosene for a few moments, wipe dry and apply sulphur ointment. We do not know as this is the quickest way. The old scales must come off and new ones grow.

EGG EATING.

I have two, White Wyandotte pullets in with some other pullets and hens. They are fed wheat and barley for scratch feed, also all the dry bran they will eat, with shell from the lake shore and granite for grit. I use trap-nests for them to lay in but when they lay they eat their eggs. Is there anything that can be done to make them quit it? If so I should like to know what to do. I also want to know if it is necessary to use grit, if one can get a good grade of oyster shell? Is broken glass and earthenware good for grit.

W. C. F.,

Oregon.

When hens get into the habit of eating their eggs it is a very serious matter. There have been many remedies suggested but none are an absolute cure. One remedy is to remove about half the contents of an egg through a small hole in the large end of the egg and to fill it with household ammonia, stirring the contents well. The egg is then sealed and placed in the nest. Unless the habit is quite strong a few treatments will disgust the hens. Another remedy is to cut off the end of the bill so it is tender and the hens cannot strike an egg with sufficient force to break it. Keep them well supplied with water. Any hard substance will make good grit. Oyster shells are most too soft to answer this purpose, though in many cases it is all the hens get.

AILMENTS.

1. I had three or four chickens last season whose skin became as red as fire. Can you tell what causes this redness and what will cure it?

2. I also have two pullets that have swollen faces, little bumps on each cheek, but nothing sore. Kindly answer through your columns.

New York. C. J. A.,

1. We cannot. You do not state to what part of the body this redness is confined. Of course it is caused by some form of irritation of the skin. It may be a parasite such as mange in which case sulphur or mercurial ointment will effect a cure.

2. This may be chicken pox, warts or the effect of roup. You do not state anything about the nature of these "bumps" except that they are not sore. If they are simply hard lumps they are probably warts and can be removed with a sharp pair of scissors. Cauterize the wound with lunar caustic. If the whole face is swollen and tender it is some form of roup. Treat by applying carbolated vaseline.

DRY MASH.

I wish to thank you for your answers to my questions in the January Poultry Keeper but you fail to answer one of my

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EGGS FOR HATCHING.... 5.00 PER 100

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"GOLDEN PRINCESS" laid 291 eggs in year; others 180 to 270. Wm. Lloyd, of Mass., got 240 from my strain. Cockerels and eggs.

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"Kant-Klog" Sprayer

gives twice the results with same labor and fluid. Also for spraying trees, vines, vegetables, etc. Agents Wanted. Booklet free. Rochester Spray Pump Co., 909 Broadway, Rochester, N. Y.





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questions in full, namely number two. In number one when you say one part ground wheat, one part bran, and two parts corn meal, will make a very good mash, but much better if you add one-half part gluten feed, you say nothing about oats. I wish you would give me a formula for dry mash for hens and pullets consisting of the following, and give it in proportion, either by weight or measure and how much: (this is for White Leghorns.) Ground oats, ground corn, ground wheat, bran, beef scraps and gluten feed. Would you use any middlings? Would you mix any and how much of each, pepper, salt and oilmeal? If you think it would improve it by adding anything else, please mention it. C. J. R., Ohio.

We did not think it necessary to use oats with the mash given. If you wish to use the ingredients named use one part each by weight except the gluten, of which use one-half part. It is not necessary to use gluten where you use oats. When you use ground wheat there is no need of middlings as you get both the flour and middlings in the wheat. If you use only bran then you should have one part middlings and one part gluten. It is well to place salt in the mash if you can get it well incorporated. Use about ten pounds of salt to 500 pounds of feed. We would not put in any pepper or oil meal. It will be all right to use a small amount of oil meal during the late summer.

WHEN TURKEYS LAY.

Please tell me in the next issue when turkeys begin laying, how many eggs they lay, also if turkeys can be caponized.

R. A., New Mexico.

It depends on the climate. In the north they commence in March or April and earlier in the south. The number of eggs they will lay will depend on the strain and how they are handled. All the way from twenty to fifty. Turkeys can be caponized but there would be nothing gained by it and there is the risk.

DRAKE HAS PILES.

I have a Fawn and White Indian Runner drake that was taken sick about two weeks ago, his vent protrudes several inches and he has lost all control of his legs. He cannot stand up and has lost his voice entirely. Up to the time he was taken sick he was a very vigorous bird. Can you advise what to do for such trouble?

C. W. G., Pennsylvania.

The best thing you can do in a case of this kind is to kill the bird. He will never be worth anything to you as a breeder and if you kill him at once the flesh may be fit for food.

MASH FOR BREEDING DUCKS.

What makes a good mash for breeding ducks? Also can you let me know what was fed to the ducks at the Mountain Grove, Mo., contest?

W. Bros., Illinois.

Here is a mash used on a large duck farm with good success: 7 parts corn meal, 7 parts bran, 3 parts No. 2 flour and 2 parts beef scrap. The mash used at the Missouri contest was 100 lbs. wheat bran, 20 lbs. middlings, 200 lbs. corn meal, 150 lbs. beef scraps, 75 lbs. alfalfa meal, 50 lbs. gluten meal, 25 lbs. O. P. oil meal, 8 lbs. table salt, 25 lbs. powdered charcoal. The White Indian Runner ducks in this contest aver-

All Steel Triple Wall Double Air Space INCUBATOR



It bears the label of the Fire Underwriters, which insures durability and protection. It is built entirely of metal, with the exception of the pressed fibre inner lining. Double air space on all sides, top and bottom. Send for our catalog showing the most complete line of Poultry Supplies in the United States.

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	Exhibition Matings		Utility Matings.		Per 100
	Per 15	Per 30	Per 15	Per 30	
S. C. White Orpingtons.....	\$3.00	\$5.50	\$1.75	\$3.25	\$8.00
S. C. Buff Orpingtons.....	3.00	5.50	1.75	3.25	6.00
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Trios \$3.00 and up. Baby Chicks, 15c and up. Few cockerels at \$1.50, \$3.50 and \$5.00 each. Going fast. Can please you.

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Order from this ad, to save time Send for booklet.

Fort Gage, Ill.

INDIAN RUNNER DUCKS--'QUALITY WINS

And LONG'S INDIAN RUNNERS are returned the winners. Again "Princess," the undefeated duck for two years, a Guelph, the Madison Square Garden, of Canada, and at the National Exhibition at Toronto. While her mate was winning the same honor. We won on the English Waiton Strain at the Des Plaines Valley Poultry Show, held at Joliet, 1913, under the severe cutting of Judge Frank Heck. First adult drake on Prime Wonder, score 95 1/2; first young drake by a son of Prime Wonder, score 95 1-4; first and second adult ducks, Princess and Princess the First, scores 95 1/2 and 94 1/2 respectively.

On Whites first and second young drakes, score 94 1/2 and 94 1-4. Same on young ducks, score 94 1/2 and 93 1/2; also Special for best display.

WE BREED THE BEST FROM THE BEST THAT WILL PRODUCE THE BEST. Are you satisfied without the best? DRAKES, EGGS AND BABY DUCKS.

The breed with a golden future resting on the bed rock of a golden past.

May we send you our prices?

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Box P. K.,

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Donisthorpes' White Orpingtons

Most popular birds in fancy show room class today. None compare with them in fine points and utility qualities. Year 'round layers except when broody, ideal sitters and mothers when growing chicks in the natural way. Unequaled for style, size, winter laying and gentleness. Birds direct from strains winning leading prizes at London, Crystal Palace Show and at Madison Square Garden, New York City. Let me show you what I can offer in this variety, before ordering elsewhere. No better can be bought elsewhere and I know I can please you. All prize winning stock. Write for illustrated catalog and prices.

F. B. Donisthorpe, Proprietor,

Box P. K.,

Geneva, Neb.

aged 90 eggs each and the colored 131 eggs each. They averaged to consume about 120 pounds of feed. We do not know what method of feeding was followed with the ducks. You might get full particulars by writing for the report of the contest.

HOUSING, CROSSING AND FEEDING.

1. What should be the winter temperature of a poultry house?
2. Will a Barred Rock and R. I. Red cross make a good laying strain?
3. Does sifted coal ashes make a good substitute for dust bath?
4. Should green bone be given poultry every day during the winter season?
5. What ratio of corn should be allowed each chicken of the American breeds for the evening meal?
6. Is it proper to house ducks and chickens together?
7. Do Indian Runner ducks eat more than chickens?
8. Are Barred Rocks the leading utility fowls?

Pennsylvania.

V. H. McD.,

1. About ten degrees warmer than the outside temperature.
2. They might make a good laying cross, but there would be no uniformity in the pullets either in size, shape or color. We

doubt if they would be as good as a good strain of either of the breeds pure.

3. Sifted coal ashes make a fair dust bath but the hens do not like them as well as they do soil or earth.

4. It is best to feed the meat ration, whatever it may be, every day. Some feed green bone one day and some other meat produce the next.

5. This will depend on what they have had during the day and whether they are laying or not. We cannot feed hens by route. Usually it is safe to give them all they will clean up in fifteen or twenty minutes.

6. No. They should have separate quarters. They do not agree or get along well together and should not be kept in the same house or yard.

7. Yes. At the Missouri laying contest the hens ate from 60 to 75 pounds of feed and the ducks 120 pounds. A Runner duck will eat about twice as much as a Leghorn hen.

8. They were given first place as an exhibition fowl by the American Poultry Association, but how they stand as a dual purpose fowl we do not know. The S. C. White Leghorn is more largely bred for utility purposes than any other variety and in numbers bred will probably equal all other varieties. The Leghorn is a specialty fowl and is used almost exclusively on the



ORPINGTONS!

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egg farms except through sections of New England and the middle west where it is desired to combine both poultry and eggs.

WEAKLINGS.

A neighbor of mine had four sick pullets. They weighed about 2 1/2 lbs. when taken sick. They moped around for a few days then seemed to get stiff like from rheumatism but, would always eat well and had no diarrhoea. They got weaker and three died. The other one was taken into the barn and the legs bathed with warm water and rubbed with liniment and it got well but the right foot dried up and the toes dropped off. These birds ran in the orchard and clover field and were fed about as other fowls, with wheat, corn and oats and what they got on the range. I never doctor a bird as life is too short to keep birds of low vitality, but I am anxious to know what this trouble was.

W. C. S.

They were probably weaklings which had some inherent disease. It might have been tuberculosis. It don't seem to us it was worth while trying to find out. Where one or two chickens are sick with some disease which we do not readily understand and it is of such a nature that they will probably be worthless the best thing to do is to kill them and let the matter drop. If people would doctor their chickens less they would make more money. Not in one case in a hundred does it pay to doctor a sick fowl. The money spent for medicine and the time the bird will be unproductive, taking into account that it should never be used as a breeder, it is far more profitable to kill the bird.

EGGS IN WATER GLASS.

I would like to ask you a few questions about putting down eggs in water glass for winter use. I put down several dozen as per receipt found in the Poultry Keeper and do not like the way they are keeping. The solution gets white and thick like jelly. Should it be that way? The whites of the eggs are very thin and the yellow stick to the sides of shells and nine out of ten break when the eggs are broken open for use. The whites are very hard to beat up for cakes. The eggs were put down in July and August and I used one part water glass to twelve parts water. Can you tell me what is the matter and why they are not keeping better? What is the best time to put them down for use in December, January and February?

J. L. H.,

Ohio.

Water glass solution will naturally thicken some. The usual method calls for one quart of water glass to nine quarts of water and the water should first be boiled to kill all germs and deposit mineral substances. There may be two reasons for the eggs not keeping well. They may not have been first class when placed in the solution and the solution may have been too weak to keep them well in the temperature. The eggs should be kept in a cool place. The best season to put down eggs for winter use is in March and April, when the hens are laying the heaviest. April eggs are the best for every purpose of any produced throughout the year. Storage people prefer April eggs; April eggs hatch the best and keep the best when put down in water glass.

BUFF ORPINGTON DUCKS.

Please tell me something about the Buff Orpington ducks. Give a description of them, telling their weights, color, etc. Where can I get some stock and eggs? Will they lay as well as Indian Runners?

Subscriber.

We cannot describe Buff Orpington ducks very accurately except to say that they are larger than the Indian Runner and have buff plumage. They are non-standard, so do not have a weight class. Breeders of

Incubator and Brooder and Poultry Yard Supplies

SAFETY LAMPS, AUTOMATIC REGULATORS, Incubator and Brooder Heaters, Dry Mash Hoppers, Chick Feed Hoppers, Grit and Shell Boxes Sanitary Double Walled, Top Fill Drinking Fountains, Poultry Exercisers, Etc., Etc.



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O. K. Sanitary Drinking Fountains, Double wall construction keeps the water cool in summer, and prevents freezing in winter. Three sizes, 1, 2 and 4 gallons.

Large Dry Mash Hoppers, Three Compartment Feed Hoppers for fowls' Grit and Shell Boxes, and Chick Feed Hoppers—from 50c to \$1.85.

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The Oakes Mfg. Co.

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McKee's White Orpingtons

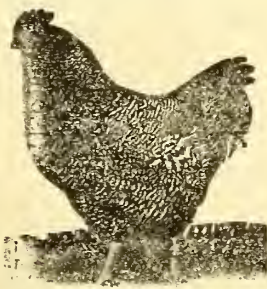
Equal those of any other breeders in the world today. Great, large, massive, low, deep bodied, full fronted, broad back birds. Birds stout in bone, exquisite in color, raised on free range, insure strong fertility and vitality. Eggs can be furnished from Real English or American strains. Have made sweeping victories. \$150.00 gold to customers. 200 range birds for sale at great bargain prices to make room for our grand lot of youngsters, price, \$2.00 to \$25.00. Eggs from same at \$2.00 per 15; \$3.50 per 30. Eggs from exhibition Matings, \$5.00, \$10.00 and \$20.00 per 15. Send for our catalogue; it is filled with valuable information concerning our birds, etc. A postal brings it.

MCKEE'S WHITE ORPINGTON YARDS

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Barred Rocks

Winners at Cleveland, Toledo, Chicago, and other leading shows.

36 Prizes in one season.

EGGS from the Best Matings I ever owned, \$3.00 and \$5.00 per 15.

Finely Illustrated Mating List.

838 W. GROVE PLACE,

TOLEDO, OHIO.

these ducks may have a standard which they are breeding to. Write some of them. You will find these ducks advertised in Poultry Keeper. We would not recommend one breeder above another. Write them and see which offers the best proposition. We do not know as to their laying qualities. They are credited with being great layers, as are also Indian Runners. In both instances these claims are probably somewhat exaggerated.

CHICKS DIE.

After chicks break the shell they give up and die. Is it in the health of parent stock, or my way of running the incubator. Would appreciate any information.

Texas.

E. F.

It may be due to weak parent stock, to conditions of incubation or conditions at the time of hatching and immediately fol-

SAVE YOUR CHICKS! Poultrymen! Double your profits! Let our FREE booklet show you how to cure and prevent White Diarrhoea in incubator and newly hatched chicks! Write today. Success Remedy Company, Blevins, Ark.

lowing. There is much foul air in incubators at the time of hatching and often the chicks are overheated or chilled at this time. This gives the germs which produce white diarrhoea favorable conditions and the chicks die from the time of bursting the shell up to ten days of age.

DISTURBED MOLT.

As I live on a town lot and have but eight hens, the loss of one means very much to me, so I write you about one hen I have and would be very glad if you would tell me what is the trouble with her and what I can do for her. She is a Plymouth Rock. Her feathers are rough and she seems to be molting, and has been that way since early fall and does not seem to be getting any more feathers to take the place of those she loses. She is poor but seems healthy otherwise and eats well.

Mrs. W. A. D.,

Illinois.

Sometimes when a hen is in poor condition at the time they commence to molt the molt is disturbed and the old feathers do not drop out or new ones come in. The only thing you can do in this case is to feed a nourishing and rather stimulating diet and make the hen as comfortable as possible. A little mustard or mustard bran in the mash will assist her. Douglas mixture is highly recommended in such cases. This mixture is made by dissolving one ounce of sulphuric acid and half a pound of sulphate of iron in two gallons of water. One or two tablespoonfuls are placed in each pint of drinking water, and the effect is that of gentle tonic.

WEAK INCUBATOR CHICKS—FACING POULTRY HOUSE.

1. My incubator hatched chicks become weak in the legs and cannot stand, but sit around at all times. They also have crossbeaks. I have been given two different explanations for the trouble, but would like your explanation.

2. I am thinking of building a new chicken house and am puzzled as to how to face it. The wind blows here quite a lot and very strongly. It comes mostly from the southeast. Would it be all right to face it south if I make only one opening and keep a muslin curtain down when the wind is blowing? I could put the door in the west end.

Mrs. E. J. T.,

Oregon.

1. There are many things which may be accountable for this condition among them being weak parent stock, improper handling of the eggs before incubation, abnormal incubation or improper care of the chicks after incubation.

2. If you turn the house a little to the west of south it would probably break the direct force of the wind but you would not get the morning sun which is the most valuable. If you face it direct south and have all openings in the south side there will be little danger of the wind affecting the fowls. Have the opening about three feet from the ground and about two-thirds the length of the front. This will give you room to have the door in the front instead of at the end. One of our houses has the openings to all pens in the front of the house and we like it much better than to have a door in the end.

TO TELL PULLETS.

What is the best, easiest and simplest way to tell a pullet from a hen. E. B., Ohio.

The easiest, quickest and simplest way is to band the pullets when you place them in the laying house and this should always be done. Put the bands on the right leg one year and on the left leg the next and you can tell at a glance the age of your fowls without looking at the number on the band, unless you keep them more than two years. Another way is by the feathers and veins. Raising the plumage on the body of a pullet it will be found to contain more down and the veins show blue through the skin. When the

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Through my Co-operative Plan and in addition to the MAIL ORDER BUSINESS of your own I give you a chance to

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blooded, Shylock's bargain with you. I started perhaps with a lot more than you will start with—I started with \$100, and received \$650,000 in eighteen months in the mail order business. I WILL QUICKLY TEACH YOU THE REAL SECRET OF MAKING MONEY FAST—AND MAKING IT CLEANLY, LEGITIMATELY, HONESTLY, SO THAT YOU CAN LOOK THE WHOLE WORLD IN THE FACE AND DEFEAT IT TO SAY THAT YOU NEVER ASKED YOUR DOLLARS WHERE THEY CAME FROM. I've a book you must get by return mail and read at once. It is called, "How to Achieve Mail Order Success," and I'll make you a present of it. Read it over, and get it soaked into your system from head to heel, and get full of new hope, fire, ambition and burning determination to begin the fight in a brand new way, and under the guidance of one who has fought the same fight and won it hands down. I'll take right hold of you and show you the way from beginning to end, and work with you, for you, help you, advise you—supply you with Money-Multiplying Ideas, Suggestions you can Quickly Coin into Cash, Methods you can Mould into Greenbacks, Swiftly-Successful, Sure Selling Plans, Persuasive Literature, Cash-Getting and Inexpensive Circulars, which will sell the goods I tell you to offer.

This broad-gauged, generous education I am offering you, covering the Entire Field of Newest Proven Ideas and Well-Tried Principles of Mail Order Money-Making, is open to every man and woman who has the blessed ambition to step up out of the wage-wearer crowd. They are so complete, my wonderful plans in long-distance merchandising, that they guide you into Profit-Creating Avenues and Cash-Producing By-Ways. I GUARANTEE, PLEDGE AND ABSOLUTELY ASSURE EVERY MAN OR WOMAN THAT HE OR SHE CAN TAKE HOLD OF THIS BUSINESS AT ONCE, FOLLOW ITS SIMPLE, SURE AND SAFE DIRECTIONS, AND BEGIN IMMEDIATELY TO MAKE MONEY FAST. You can start right out from the day you get this wonderful series of success plans.

IF YOU ARE MAKING \$600, OR \$900, OR \$1,200, OR \$2,400 A YEAR, AND REALLY WANT TO MAKE \$4,000 TO \$40,000 A YEAR, I CAN SHOW YOU HOW.

If you will write me, as suggested above, in answer to this advertisement this very day, I positively can and will equip you, with twenty complete, combined, ready-to-start, live, lucrative mail order businesses, which you can begin operating right in the privacy of your own home, without an office, or any outlay for office equipment.

I CAN SET YOU FREE! I can deliver you from the grim grind! I can liberate you from the treadmill of the time-clock. I can tear the well-worn shackles of wage-slavery from your hands and feet! I can lift the thorns of boss-brow-beating from your forehead! I can do these things, brothers and sisters, because I was fixed just exactly as you are when I went into this business and made all of this money. I had the same miserable doubts and mongrel fears—I, too, was once hand-cuffed to a job and gagged and speechless with boss-fright; ever cowed, ever-creeping, ever-afraid of getting fired! These were the things I decided I would be forever free from, and so I am! And so you, too, can be, if you will make up your minds to believe in me and write to me before this day's sun falls behind the horizon.

I will say no more—the opportunity is here, with its arms outstretched; today, right now, Dame Fortune raps on your door, and this message of mine to tell you about it has cost me thousands of dollars to send—it is flashed today across the country to all the ambitious men and women of America in all the walks of life—there is oceans of room for all of you in this business!

Whatever you do, get that letter or postal off NOW asking for my FREE BOOK, "How to Achieve Mail Order Success." Address, WALT C. CUNNINGHAM, President, The Mail Order School, Suite 5800, Brecht Building, Denver, Colorado.

bird is a year old these veins are no longer visible.

A LIST OF AILMENTS.

1. I first noticed a little blood spot on one of my cockerel's combs. Later more spots appeared until his comb was covered and they appeared on his eye lids and closed one of his eyes. This festered and swelled but there was no swelling of nostrils and no discharge from mouth. It has since spread until 12 fowls are afflicted, all in the same way. The spots look very much like warts and of a gray color. They vary in size from a pinhead to a marble. I have tried greasing them with lard and turpentine and washing the eye with borax and chloro dip. I painted sores with the crude dip and also tincture of iodine. I gave potassium bromide in drinking water and disinfected houses thoroughly with chloro dip and separated all sick fowls and yet the disease is spreading. What can I do

for it? Is this chicken-pox and what is the cause? My houses are clean and not damp. Will the fowls recover? They do not seem sick otherwise. Will they be all right for breeders when they recover?

2. I had a valuable Rhode Island Red cock which walked lame. I picked him up and noticed one of his toes ready to come off. I applied salve and liniment but without effect. He had a large swelling under his foot which was hard but contained no pus. This I anointed with iodine. Instead of getting better he developed complications, including diarrhoea and black comb. I gave him powdered chalk and ginger as well as Oculum and also a little bichloride of mercury. Nothing helped him and he died. This season I had another cock exactly the same. Was it the result of injury or a special disease? It did not resemble bumble foot for the whole trouble came from the sore toes which dried up.

Please give remedy for prevention.

3. Have been troubled a great deal with White Diarrhoea. Have tried all the preparations and remedies on the market and also dipped eggs in Zenoleum but still lost many chicks. The parent birds are all healthy.

4. Give remedy for liver trouble in grown fowls. C. S. M., Nebraska.

1. This is undoubtedly chicken pox. It is contagious and the affected fowls should be separated from the rest of the flock. Anoint the parts frequently with carbolated vaseline and remove the crusts or scabs as they soften and yield to gentle rubbing. You will have to clean and disinfect the premises thoroughly to prevent the spread of the disease. While this is a local rather than a constitutional disease we would not want to use the birds as breeders. Not that we think the disease will be transmitted, but on account of weakness and a predisposition to disease.

2. At the start this was probably only a corn. The other trouble was entirely separate or might have been brought on by the use of the iodine and other remedies. Chickens sometimes have a disease of the feet which cause them to shrivel up and sometimes drop off, but this usually occurs with small chicks.

3. The germs which cause White Diarrhoea are present in many chicks but do not cause serious trouble unless the chick becomes weakened and conditions made favorable for their development. The main point is not to allow young chicks to become chilled or overheated. If conditions are kept right for the first ten days there is little to fear from this disease, if we place only strong chicks in the brooders.

4. There are several forms of liver disease. It is usually caused by incorrect feeding and lack of exercise, a continuous diet of fattening grain being a prominent source. The symptoms are loss of appetite, sluggishness and a yellow color of the face. The disease can seldom be detected until it is too late to cure it. Treatment is not profitable.


THE RHODE ISLAND WHITE CLUB OF AMERICA.

Has its second annual year book ready to mail. The club now has 156 members representing 36 states and Canada. This book contains many items of interest to Rhode Island White breeders and each one should possess a copy. It is free to all members of the club. Non-members may obtain a copy by sending 10c to cover cost of mailing, to the Secretary. Or better send \$1.00 for membership fee and dues to Nov. 1, 1913, and receive the book free.

For further information and application blanks write the Secretary, Mrs. C. M. Vertrees, Cecilia, Ky.

A NEW BOOK ON BROODING.

We have received a copy of the book entitled "Successful Brooding" from the pen of Mr. W. P. Husted and published by the Simplex Brooder Stove Company, Grand Rapids, Michigan. This book covers the subject of raising chicks very thoroughly. It does not only deal with the chicks after they are hatched, but starts at the beginning and tells how to feed hens so they will lay eggs from which chicks that have a chance to live can be hatched.



Let Chas. A. Cyphers Save You 50% On A Standard Buffalo Incubator

The Cyphers who is "The Recognized Authority" on Artificial Hatching. The Cyphers who made Commercial Hatching Possible. The Cyphers who discovered the Cyphers Principle.

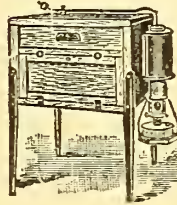
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Every vital principle that made my Original Cyphers a World Success is embodied in the Buffalo. The same three-compartment heater; the diffusive ventilation; and the sensitive and accurate regulator; combined with heavy insulation and durable construction; with refinements not included in the original. Buffalo Incubators insure you big hatches of strong chicks that live and are easily raised to make money for you.



The Buffalo is simply a wonder. I am proud of it. There is nothing cheap about it but the price.

I offer you an incubator that is second to none in Durability, Reliability, or Quality. You can't get a better incubator than the Buffalo, no matter how much you pay. You can't get one as good. There are incubators and incubators, and nearly any of them will hatch some chickens. The biggest profits are made by operating the Buffalo, which will hatch a strong and vigorous chicken from every hatchable egg.

Note My Low Prices:

Offer No. 0—50 to 60 Egg Size—Ship. Wt. 65 lbs. \$10.50 | Offer No. 2—220 to 240 Egg Size—Ship. Wt. 130 lbs. \$19.00
Offer No. 1—110 to 120 Egg Size—Ship. Wt. 90 lbs. \$14.50 | Offer No. 3—340 to 360 Egg Size—Ship. Wt. 160 lbs. \$24.00

My Brooder Prices Are Equally Low.

The New Big 4 1620 Egg Capacity INCUBATOR \$94.00

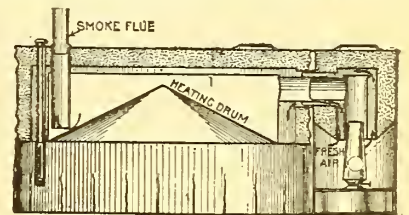
An Incubator—and a hatcher—occupies same floor space as any standard 360 egg machine. Incubating section run in conjunction with your present hatcher will increase its capacity by 1080 eggs.

Incubating section alone, 1080 egg capacity, operated with one lamp, costs but \$60.00.

Something New in Hovers

Buffalo Handy Hover \$8
Buffalo Home Hover \$7

The Buffalo "Handy" is a floor level hover—sanitary—perfectly ventilated—heats easily—uses little oil—flame can be seen without stooping. Send postal for fuller description, or better, send along your order before we are over-sold.



Buffalo Handy Hover—100 Chick Capacity

Chas. A. Cyphers, President Buffalo Incubator Co., 467 Dewitt St., Buffalo, N. Y.

The system which Mr. Husted has worked out is entirely different from anything we have thus far had the pleasure of studying. It is so simple that any man, woman or child can begin operations with his poultry the day he receives and reads the book. No special coops are required and no special knowledge along the lines of poultry raising. Just ordinary common sense combined with the instructions Mr. Husted gives you in this book will make a success of any poultry yard which has been on the ragged edge of failure for years.

The price of this book is 50c post-paid. If you have had brooding troubles

we strongly advise you to write to the Simplex Brooder Stove Company at Grand Rapids, Michigan, asking them to send you their free catalog which tells about the Brooder Stove and the entirely new ideas they have brought out for raising chicks. Better still, send them 50c and they will send you their catalog and a copy of this book, which will enable you to increase your profits wonderfully this coming year.

Remember it does not take any additional money to put this new system in operation. Write the Simplex Brooder Stove Company, 142 Fourth street, Grand Rapids, Michigan, today, now, while you think about it and get their catalog and a copy of this book.

ROYAL RINGLET BARRED ROCK
EGGS from prize stock, \$2.50 per 15. Pearl
Guinea eggs, \$1.25 per 15. F. A. Maryott,
Townville, Pennsylvania. 4-4

WHAT I HAVE LEARNED ABOUT HATCHING AND BROODING WITH HENS.

I have learned a few lessons from experience which I find worth while and hope they may be worth something to others.

Hatch chicks early or not at all in both warm and cold climate.

Be sure your hen wants to raise some chicks. If she stays on the nest two days and nights she is ready to sit. Get your place ready for her to sit. This should be on the ground, if possible, if not any place that will not shake or jar the eggs will do; shaking or jarring certainly will kill the chicks in the shell.

The nest should be so fixed that the hen can walk off and on without jumping on the eggs. The nest should be large enough for her to sit without being crowded, and so fixed that the eggs will neither roll out nor crowd one on the other. Put your hen on this permanent nest at night and shut her in, placing two or three eggs under her. Leave her in there till the next night, then let her off for feed and water. Watch and see that she goes on the right nest. Now Bidly is ready to sit.

Remove the eggs from her nest and put your sitting of eggs under her. Shut her in there for a few days or if you have other brooders or layers near her better keep her fastened in all the time, letting her off, of course, every day for feed, water and a dust bath.

Set three or four hens at the same time if possible to do so, then they will all hatch at once and you can put all the chicks with one hen.

I think ten eggs for a small hen and twelve for a larger hen in early spring and twelve and fourteen eggs for warmer weather sufficient. Gather your eggs three or four times a day for setting, so they will become neither chilled or warmed. Select only eggs perfect in shape. Let the hen do the hatching and do not handle eggs while hatching.

Remove the chicks in a dry, warm basket, cover and keep warm till the hens are through hatching. Burn all eggs left in the nests. If they are thrown away cats, dogs, pigs, etc., are likely to eat them and be the cause of eating chicks or eggs. If the dead chicks are left to decay they might produce disease, so I think best to burn and be rid of them.

Select the hen with the best disposition to be the mother of all the chicks. She will accept them all and the other hens will soon be laying. Remove the chosen hen to a clean, dry, warm place and give her the babies. Her home, if you have no brooding house, may consist of a box large enough for her to move around without stepping on the chicks; also giving her room to eat, drink and have a dust bath. Some clean hay or straw should be thrown on the bottom and removed and replaced as it becomes dirty. A piece of canvas large enough to cover the box well should be thrown over it at night

Special Sale of White Orpingtons

My flock of young chicks being so early and large at this time, and my incubators still doing full duty, have concluded to give the lovers of **S. C. White Orpingtons** chance to get winning stock for next fall and winter shows. Will furnish 100 to 150 from five to nine week old chicks, to be shipped between May 1st and May 10th—these birds all from prize winning stock. Cockerels, \$3.00 each; pullets, \$2.00. Orders booked and filled in order received, and when the number has been sold, those sending orders too late will have money returned.

See Page 34 for large ad.

F. B. DONISTHORPE, BOX P. K., GENEVA, NEB.

and on cold or windy days. The box and especially the south side, should be made of slats or netting, so the chicks may run in and out at will. Keep the mother confined so she cannot trot the chicks to death and give the sunshine a better chance to warm the babies' house.

Keep the mother hen confined till the chicks are two weeks old, then she may run at large when the weather is warm and the ground dry. Do not let the chicks get chilled or get their feet wet. You will loose some and maybe all if you do. Pen the hen in every night and do not let her out till the sun is up and the ground dry and warm.

Do not feed the chicks till 48 hours old. Then feed hard boiled eggs, shell and all mashed finely with some very dry powdered bread or some dutch or cottage cheese, if you have it. Keep water with the chill taken off of it before them all the time.

I feed four or five times a day, for the first two weeks, the following: Dry bread crumbs, a little meat scrap, corn meal, fine gravel, broken charcoal and a little of any green stuff I can get. After this I feed three times a day dry bread, corn meal, broken wheat, green bone, broken charcoal and almost any other stuff I have.

Watch for lice and mites. Paint their house once a week with crude carbolic acid. Turn the box upside down on sunny days.

I intend to have a coop made of netting or some substitute, ten feet long and six feet wide for the baby chicks dining room. After they are two weeks old I will put feed and water in there every morning to last them all day. They can go and eat when they are hungry and drink when they are thirsty and I will not be all the time trotting after them and fighting other chickens away from their food.

Mrs. R. D. Mack,

Wyoming.

RESULTS FROM SEVERAL BREEDS

I have had several breeds of chickens the past winter and have fed wheat, oats, corn and meat in different proportions, according to the weather. Each breed made a good showing but one day they were out, it got cold quickly and left only the small comb varieties laying, which all laid regardless of the cold, if they were old enough to lay. I use dry mash with cabbage for green food. Just one word about selling

eggs and birds to neighbors. I have always let my neighbors have all the eggs that I would have taken to the store and never could see that it hurt my shipping business. To be sure some would hatch the eggs and advertise themselves, but so much the better, it would help others to get pure bred birds and make more interest in the poultry business. The way I have handled broody hens has been to let them sit once a year, even if it was for only a week or two and then give them a brood of chicks from the incubator as the raising of chicks keeps a hen in good health and for the coming winter they will lay nearly as well as pullets, which helps to solve the winter egg question when early hatched pullets are scarce.

W. G. Yearly,

Minnesota.

A reader asks us to give a cure for black head in turkeys. Much of this trouble is claimed to be caused from eating new oats and new corn. The latter dries very slowly and if a supply of new corn is dried out in the furnace room or some warm, dry place, it can be made as safe to feed as old corn. Thirty days in a furnace room will make new corn thoroughly dry. If any of our readers have any additional information on the subject of black head we shall be glad to get it for publication.

The Bunker Hill Poultry Farm, Box 842, Mankato, Minn., is owned by R. F. Neubert. This well known poultry expert is engaged in more than the manufacture of Triumph Incubators and Brooders. His output includes poultry foods and supplies of all kinds, while his activities embrace the actual breeding of the finest birds.

In other words, here is an incubator manufacturer who is actually engaged in the general poultry business—knowing poultry requirements, skilled in the finer points of the industry and backed by real, practical experience.

In 1893 the Bunker Hill "Farm" was one small chicken house and a very limited piece of real estate. Today it is an immense poultry show in itself—a credit to the skill and energy of its founder. Mr. Neubert's friends declare that the success of Triumph Incubators and Brooders is natural, because it is built on such knowledge and experience. And thousands have come to know that the machines which hatch and protect fowls like the ones from Bunker Hill Farm are profitable either for the professional poultryman or the amateur.

"Neubert," "Bunker Hill" and "Triumph" appear to be permanently linked as signifying poultry success. A catalogue describing and illustrating this interesting business is sent on request.

The National Columbian Wyandotte Club has just issued its fifth annual catalogue and it is a book that will prove very interesting and helpful to all Columbian Wyandotte breeders.

The catalogue contains 80 pages printed on the best of paper to show up the half-tone illustrations and text. It has, besides the list of officers and members, many valuable articles by prominent fanciers, a full report of the annual meeting and list of awards of all club special prizes at last season's shows. Mr. D. Lincoln Orr, of Orr's Mills, N. Y., is the new president, taking the place of Mr. W. G. Fenton, who resigned.

The club has published its new and copyrighted Club Standard for Columbian Wyandottes. These are for members only.

The catalogue is free upon request. Address, National Columbian Wyandotte Club, Ralph Woodward, Sec'y-Treas., Grafton, Mass.

THE AMERICAN COLUMBIAN PLYMOUTH ROCK CLUB.

The regular annual meeting of the American Columbian Plymouth Rock Club was held at Philadelphia, Pa., in connection with the Philadelphia show, at which time the regular club business was transacted, various important matters discussed and the following officers elected: President, F. G. Bean, Collegeville, Pa.; Vice Presidents, Dr. E. B. Kaple, Elbridge, N. Y., F. L. Platt, Toledo, Ohio, and M. Munroe, Lexington, Mass; Secretary-Treasurer, D. Monroe Green, Waterville, N. Y. An elaborate new club book has just been issued by the organization. It is printed on heavy enameled paper with beautifully embossed imitation alligator skin cover. Contains an abundance of valuable articles and other information concerning Columbian Plymouth Rocks, together with original, life-like illustrations of prize winning specimens. Every person interested in Plymouth Rocks of any variety should read this book. It was issued at a heavy expense but a copy will be sent free to anyone upon receipt of 10c to cover packing and postage. Send for one today. Address, D. Monroe Green, Sec'y, Waterville, N. Y.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting someone else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

Classified Ads

ANCONAS.

SINGLE COMB ANCONAS. Day old chicks and hatching eggs from birds mated for strong, sturdy stock. Prolific layers of large white eggs. Write Norman S. Campbell, M. D., Germfask, Mich. 4-4

ANCONA EGGS, winners St. Louis, Terre Haute, Peoria and Olney, Ill. \$2.00 per 15; other matings \$1.50 per 15. P. Gregoire, Newton, Illinois. 4-2

ANCONAS, McCULLOUGH'S CHAMPIONS. Winners, layers, payers. Eggs, \$1.00 and \$2.00 per 15. W. P. and L. C. McCullough, Mercer, Pa. 4-1

S. C. ANCONA eggs and baby chicks at farmer's prices. Farm range, best stock. Eggs, 15, \$1.00; 100, \$4.00; chicks, 100, \$10.00. Mrs. Jerry Brinker, Mt. Erie, Illinois. 4-1

WYMAN'S ANCONAS made great winnings at Cleveland and Worcester, 1913, because they have quality. Write me. E. F. Wyman, Brunswick, Ohio. 3-3

SINGLE COMB ANCONA EGGS. Prices reasonable. Write Golden Rule Farm, Fillmore, Illinois. 2-4

EGGS FROM choice mated dark Mottled Anconas, 15, \$1.50. Esther Stormont, Salem, Ill. 3-2

S. C. ANCONAS and Buff Leghorns. Best blood. Fairest treatment. "Veribest" eggs \$1.50 per 15. Write Ivor Jones, Jackson, Ohio. 3-4

RIVER VIEW S. C. Ancona Farm. Bred to lay and win. Eggs, \$1.00, \$2.00, 15. Ole J. Lertald, Zumbrota, Minn. 3-4

PORTERS' POPULAR BLUEBELL Anconas. Type, color, size. Illustrated catalogue. S. P. Porter, Mallet Creek, Ohio. 3-4

ANCONA EGGS for hatching, from my great laying strain, \$1.00 per 15. Harry Burchell, Silverton, Ohio, Box 103. 2-3

OUR ANCONAS are bred to lay and win the blue wherever exhibited. Large dark birds of superior quality. Eggs from grand matings. Circular. Mrs. A. Guetter, Route 2, Media, Pa. 3-4

ANCONAS. Buy your eggs from an old reliable breeder. Dark, good size and finely mottled. 15 eggs, \$1.00; 100, \$5.00. Special, \$2.00. A. Gross, Alhambra, Ill. 2-3

ANCONAS, Sheppard strain. Bred for exhibition and laying purposes. Eggs, \$2.00 per 15. John Lent, Malta, Ohio. 3-2

ANCONA, THE EGG MACHINE. Eggs for sitting, \$1.50 per 15, or \$7.00 per hundred. Prize winning strain. C. W. Morrow, Cambridge, Nebraska. 2-4

S. C. ANCONAS. High grade. Chicks and eggs guaranteed. Circular free. John G. Meyer, R. 4, Oconto Falls, Wis. 2-4

ANCONAS. Dark, vigorous stock raised on free range. Won 15 ribbons and 2 specials from 13 exhibits this season. Cockerels, exhibition and utility eggs a specialty. Mating list free. C. W. Simmonds, Homestead, Pa. 2-4

GRIMM'S CELEBRATED ANCONAS won four first prizes Springfield, Dec. 1912; five first prizes St. Louis, Dec. 1912. Magnificent cockerels, \$3.00. Eggs, 15 for \$2.50. Booklet free. Fred Grimm, Webster Groves, Missouri. 2-4

ANCONA COCKERELS, \$3.50 up. Catalog for a stamp. Egg orders booked. R. W. Van Hoosen, Franklinville, N. Y., editor Ancona World, Pres. Ancona Club. 2-4

MOTTLED ANCONAS EXCLUSIVELY. The great winter egg machines and Blue Ribbon kind. Baby chicks and eggs for hatching in season, at less than millionaire prices. F. F. Hughes, Shellsburg, Iowa. 2-4

S. C. ANCONAS. Some cockerels for sale. Nice sturdy fellows. \$2.00 to \$3.00. Fred Haeger, Parkville, Mich. 2-4

STRONG, VIGOROUS ANCONAS, raised on range. The hardy kind. Stock, eggs, baby chicks. Catalog free. Evans & Timms, Malta, Ohio. 1-4

MOTTLED ANCONAS. The yardman and farmers' greatest utility fowl. Greatest egg producers of all breeds. We have the heavy laying kind. Eggs, \$2 per sitting. The Ancona Yards, Flora, Ind. 1-4

BABY CHICKS.

BABY CHICKS from pure bred stock. Barred Plymouth Rocks and Brown Leghorns, \$10 per hundred. Great bargain. Satisfaction guaranteed. Mrs. F. Cristman, Sunflower Hatchery, Scottsville, Kan. 4-4

BIG HEALTHY CHICKS, one pound size, \$7.50 dozen. Two pound ducklings, \$9.75 dozen. All varieties. America's best strains. 250 eggs. Order early. Guy K. Nelsler, Fillmore, Ill. 4-1

BABY CHICKS, 100 to 15c each; eggs, \$5 to \$6 per 100; Rhode Island Reds, both combs; White and Columbian Wyandottes; White and Buff Orpingtons; Barred Rocks; White Leghorns Toulouse geese; Bourbon Red Turkeys; Pekin and Indian Runner ducks; catalogue free. G. A. Mitchell, Freeport, Ill. 4-4

BABY DUCKS, Indian Runners, 20c. White eggs, English Walton strain. Eggs for hatching, \$1.50 per 15. Mrs. P. O. Larson, 1067 E. North St., Galesburg, Ill. 2-4

BABY CHICKS from pure bred White Rocks, R. C. R. I. Reds. Price from 8 to 11c each. Catalog free. The 20th Century Hatchery, Chatfield, Ohio. 3-4

RAY'S BRED TO LAY BABY CHICKS. Express paid. S. C. White Leghorns that live and lay. Ray's Farms, Springfield Ave., Rutherford, N. J. 2-4

BABY CHICKS. Standard bred S. C. Rhode Island Reds, Buff Orpingtons, White Wyandottes, Barred Rocks, \$2.00 dozen. 25 chicks, \$3.75; 50 chicks, \$7.50; 100 chicks, \$13.00. Guaranteed safe arrival 2,000 miles. 15 eggs, \$1.00; 60 eggs, \$3.00; 100 eggs, \$5.00. White Orpington and Leghorns. Martin Michelson, 232 5th St. Aurora, Ill. 3-4

BABY CHICKS \$12 per 100. Eggs \$5 R. C. Reds, S. C. White Leghorns. Kellerstrass White Orpington chicks 20c each. Booklet and testimonials free. Myron J. Morse, East Berlin, Conn. 2-4

BABY CHICKS 8 cents and up. Several varieties. Ducklings 15c to 25c. Eggs \$1.00 to \$5.00 per 15. Satisfaction guaranteed, circulars free. Mapleleaf Poultry Farm, Saginaw, W. S., Mich. 3-4

BABY CHICKS AND HATCHING EGGS from strong, unrelated fowls. S. C. W. Orpingtons, S. C. W. Leghorns. Both combs Reds. Prices reasonable. My formula how to produce eggs, 25 cents. Mrs. B. S. Hirsch, Box 272, Lyons, Ill. 2-3

EGGS AND BABY CHICKS from my Golden Nugget strain of S. C. Buff Leghorns. High scoring stock with egg records to 346. Write your wants. John Oudeans, Oconto Falls, Wis. 2-4

ANCONA BABY CHICKS AND EGGS. We pay express. Jersey Leghorn Farm, 4647 South Salina St., Syracuse, N. Y. 3-4

BABY CHICKS, Single Comb Baby Leghorns, White, Buff and Brown. Black Minorcas. Hatching eggs. Catalogue. Falling Poultry Farm, La Fargeville, N. Y. 3-4

S. C. BROWN LEGHORNS. Baby chicks, \$3.00 per 25; \$11.00 per hundred. Stock and eggs. Prices and booklet free. None better. Prompt service. H. M. Meyer, Bechtelsville, Route 2, Pa. 2-4

S. C. WHITE LEGHORN BABY CHICKS from our heavy laying range raised breeders, 8 to 12c each. Eggs, \$5.00 per 100. Safe delivery guaranteed. H. Roby, Box 163-A, Fairfield, Illinois. 2-4

BARRED ROCK BABY CHICKS from farm flock, \$15.00 per 100. L. T. Corey, Ventura, Iowa. 2-3

BABY DUCKS, Indian Runners, 18 and 20 cents. White eggs. Heavy layers, English Walton strain. Baby chicks, R. C. B. Minorcas, 15 cents; S. C. W. Leghorns, 12 cents. Eggs for hatching. Mrs. Wm. Schenck, Ft. Madison, Iowa, R. No. 2. 2-4

100 BABY CHICKS, \$10.00; 100 eggs, \$5.00; 15, \$1.00. 700 heavy laying, pure-bred Single Comb White Leghorns. Illustrated folder free. Ellsworth Shaw, Grand Junction, Michigan. 2-4

BABY CHICKS. We have the quality. Send for free catalogue, 10 leading varieties. We prepay expressage everywhere. Order now. South Kenton Poultry Farm, Kenton, Ohio. 2-4

50,000 "PITTSFIELD STRAIN" Barred Rock Chicks. Also White Leghorns, Cyphers Incubator Company's trap-nested strain, hatched in mammoth incubators. Quality stock, reasonable prices. Free catalogue, Fishing Creek Poultry Farm, R. H. Loveland, Prop., Lamar, Pa. 2-4

BABY CHICKS 10c up. Eggs, \$5, 100 up. All varieties. Specialty Leghorns, egg record 270. Mammoth Pekin ducks. Safe arrival and satisfaction guaranteed. Circular. Canisteo Poultry Yards, Canisteo, N. Y. 9-12

GET BOOKLET FOR PRICES of day old chicks and eggs of seven varieties of standard bred poultry. East Saugatuck Hatchery, East Saugatuck, Mich, Box 21. 1-4

BANTAMS.

"MOHAWK" STRAINS Superior Black Reds, Silver Duckwings, Red Pyle Game, Partridge and Buff Cochins. Shipped on approval. Eggs. Mohawk Bantam Yards, Box 4, Schenectady, N. Y. 11-12

BANTAMS. Classy stock, Sebright, Japanese, Cochins, Games, Polish, Barred Rocks, Rose Combs. Prompt shipments. Send 2c stamp for circular. A. A. Fenn, Box 77, Delavan, Wis., U. S. A. 3-4

RARE BARGAINS. Golden and Silver Sebright, Buff, Black, White and Partridge Cochin; Rose Comb Black, Red Pyle and Black Red Game Bantams, 1,000 birds. Proper & Son, Schoharie, N. Y. 3-12

BRAHMAS.

LIGHT BRAHMA farm range eggs, 15, \$1.50. Wm. Johnston, Waldo, Wis. 4-1

LIGHT BRAHMAS. Eggs from high scoring prize winning birds. Grandest pens I have ever had the pleasure of mating. Write me. I will treat you right. Jos. F. Garrison, 815 N. 10th, Mt. Vernon, Illinois. 3-3

FLORENTINO'S HIGH QUALITY LIGHT Brahmata. Pullet "Dutch Lil" has met 85 pullets this year and has not lost a first place. My birds are undefeated and win over them all. Mating list free. Write Fred Florentino, Elkins, W. Va. 2-4

HIGH GRADE LIGHT BRAHMAS. Stock and eggs for sale in season. Eggs, \$3 per sitting. Established since 1887. Send for circular. Nickerson Poultry Yards, W. H. Ward, Prop, Nickerson, Kansas. 3-4

LIGHT BRAHMA COCKERELS for sale. First come, first served. At Slouss Falls show we won on one entry, 1st cock. Score 33 1/2 under Shanklin. Write, Lister Poultry Yards, Sibley, Iowa. 2-4

BUCKEYES.

BUCKEYES THAT WIN wherever shown. E. L. McDill, 423 West 43rd, Indianapolis, Ind. 3-4

BUCKEYES, twelfth year, usual winning quality. S. Gardner Dunning, St. Marys, Ohio. 2-2

BUTTERCUPS.

BUTTERCUPS. Hatching eggs, \$2.50 per 15. Dr. E. W. Landis, Stillwater, N. J. 3-4

SICILIAN BUTTERCUPS. None better. Eggs for hatching, \$2.50 to \$5.00 per 15. Circular free. D. S. Thornburg, Cherryville, N. C. 3-4

SICILIAN BUTTERCUPS, world's champion layers. Lay large, white eggs. Very handsome and the tastest of all breeds of poultry. Larger and eat only half as much as Leghorns. Thoroughbred stock for sale cheap. Hatching eggs, \$2.00 per 15. Henry Woodworth, Box 505, Cheboygan, Mich. 4-4

SICILIAN BUTTERCUPS, imported cock. E. F. Moore, Ocala, Florida. 4-2

SICILIAN BUTTERCUPS and Owen Farms Buff Orpingtons. Best blood in America and greatest winners at Madison Square. Stock and eggs. Circular. L. S. Weller, Box 13, E. Fultonham, Ohio. 2-4

BUTTERCUPS EXCLUSIVELY. No better bred. Eggs from very select pens, \$10.00, \$6.00 and \$3.00 per 15. Good utility stock, \$18.00 per 100. Catalogue free. Secretary American Buttercup Club, Pactoryville, Pa. 1-4

CAMPINES.

IMPERIAL STRAIN Silver Campines, Golden Campines and Crystal White Orpingtons. Baby chicks and hatching eggs for sale. H. C. Biertumpfel, Newark, N. J. 4-4

SILVER AND GOLDEN CAMPINE stock and eggs for sale. Catalog free. E. B. Benson, Latimer, Iowa. 4-1

SILVER CAMPINES, best improved English and American strains. Eggs, \$4.00 per 15; \$7.00 per 30. Circulars. Robt. Clemans, Mechanicsburg, Ohio. 3-3

IMPROVED SILVER CAMPINES, Jacobus Strain. Pure white eggs from extra fine stock, averaging 200 eggs. \$2.50 for 15. Order at once for early delivery. Martling Henery, Box 1, Ridgefield, N. J. 3-4

GARRELL'S PERLESS CAMPINES, Blue blood aristocrats of poultry kingdom. Winners first prize St. Louis, Dec, 1912; Springfield, Dec., 1912. Stock and eggs modest prices. Booklet free. Julius Garrell, Tuxedo Park, Missouri. 2-4

CAYIES.

500 GUINEA PIGS in pairs, or many extra females as wanted. Stamp for circular. Geo. R. Palmater, Troy, N. Y. 4-4

CORNISH.

DARK CORNISH hens for sale. Eggs, \$1.10 per 15. Circular free. M. J. Van Eman, Box K, Elgin, Ohio. 4-4

CORNISH INDIANS. Exhibition stock. Fine Laced birds. Sacrifice sale. Pullets, \$2.50 to \$5.00 each. Eggs, \$1.50 per 15, delivered by Parcel Post anywhere in United States. Frederick Shank, Timberville, Va. 3-4

CORNISH EGGS from prize winners. Stock for sale. Farm range, large and vigorous. D. Barnett, Waynetown, Ind. 3-4

DOMINIQES.

DORSEY'S DOMINIQES won 3 Buffalo firsts. Best layers and broilers. Eggs, chicks. B. J. Dorsey, Box 53, Leon, N. Y. 2-4

AMERICAN DOMINIQUE POULTRY YARDS, Chasm Falls, Malone, N. Y. Established sixteen years. Breeder of American Dominiques, Columbian Wyandottes, and White Wyandottes of the very highest quality. Send stamp for circulars. 1-4

DUCKS.

ENGLISH INDIAN RUNNERS One laid 289 eggs in year; another 254 in 13 months. Ducks, \$3; eggs, 12, \$1.75; 100, \$10; ducklings, 25 cents. E. S. King, Berwyn, Md. 1-4

FAWN AND WHITE INDIAN RUNNERS, Harshbarger white egg strain. \$1 sitting; \$5, 100. Black Minorca eggs, \$2.50 sitting. Mrs. W. E. Hickman, Marietta, Ohio. 1-4

WHITE INDIAN RUNNERS, (Fishel strain). White eggs, \$3 sitting. Also Rhode Island White eggs, \$2.50 sitting. Alpine Poultry Farm, Marietta, Ohio. 1-4

WHITFORD'S Fawn and White Runners, American standard-bred white egg strain. Entire flock averaged 175 eggs each in 1912. No stock. Eggs, 13, \$1.00; 30, \$2.00; 50, \$3.00; 100, \$5.00. Special mating 13, \$2.00 per 32, \$3.00; 100, \$8.00. A. A. Whitford, Farina, Ill. 8-12

INDIAN RUNNER DUCKS, the wonderful white egg producers. Stock and eggs for sale at all times. Right prices. Eggs, \$1.00 per 15; \$4.00 per 100. Also White Runner eggs, \$3.00 per 15; \$8.00 per 50. C. W. Michael, Independence, Ind. 1-5

INDIAN RUNNERS, Light Fawn and white. White egg strain. Eggs, 15 for \$1. R. H. Vreeland, Manasquan, N. J. 1-4

OH YOU DUCKS! Pure White and American Standard Fawn and White Runners. White Eggers. White Wyandottes. Aristocrat Barred Rocks. Mating list ready. Hatching eggs cheap, considering quality. Crane, Soencer, Indiana. 1-6

FAWN AND WHITE INDIAN RUNNER duck eggs, \$1.00 per 13; \$5.00, 100. E. R. Helse, Brunswick, Mo. 1-4

MAMMOTH PEKIN DUCKS. Big breeders from stock that have won at state and other big shows. 16 years' experience breeding and showing Pekins. White eggs always, \$5.00 per 100. Oscar Wells, Farina, Ill. 10-12

MAMMOTH PEKIN DUCKS. Extra Large show stock. Silver cup and state show winners. No better stock at any price. Customers always pleased. Eggs, \$2.00 per sitting. Order early. Oscar Wells, Farina, Ill. 1-4

HARSHBARGER WHITE EGG STRAIN, American standard bred light Fawn and White drakes. All have fawn heads and tails. Eggs, \$1.50 per 15; \$7.00 per 100. Mrs. Ella Whitwood, Hudson, Ill. 2-4

ENGLISH PENCILED RUNNERS. The true Runner. Eggs, \$1.00 per 15. Guaranteed white egg strain. Stock, \$4.00 per pair. Eggs and stock any time. S. L. Greathouse, Campbell, Missouri. 3-4

I. R. DUCKS. (Fawn and White). Fawn Caps, white eggs. Pen 1, \$2.00; pen 2, \$2.00 per 15 eggs. Scoring from 91 to 94 3-4. S. C. B. Leghorns, \$1.00 per 15. Mrs. J. M. Barnes, Paris, Mo. 2-3

AMERICAN AND ENGLISH RUNNERS. Eggs 75c per sitting up. Massive White Embden Geese. Eggs, 25c each. H. A. Millard, Oregonia, Ohio, R. No. 1. 12-6

FAWN AND WHITE INDIAN RUNNER ducks. Place orders at once for stock and eggs. Mrs. D. R. Chenoweth, Lathrop, Mo. 2-3

GENUINE INDIAN RUNNERS, English and American standard bred, greatest layers on earth. Large pure white eggs, 13, \$1; 100, \$5. B. F. Morgan, Independence, Ind. 2-4

HEAVY LAYING WHITE EGG STRAIN Fawn and White Runners, from prize winners. Stock for sale. Eggs, \$1.00 per 13. Mrs. George Haseltine, Austin, Minn. 2-3

WHITE INDIAN RUNNER DUCKS. Banner layers of large white eggs. Write for price on eggs. L. J. Ferrill, Farina, Ill. 3-4

EGGS. High scoring Indian Runners. American Standard. Dalvin Schneider, Cass City, Mich. 2-4

INDIAN RUNNERS. See large ad elsewhere in this issue. S. H. Long, Elwood, Ill. 2-4

GLENN TRUE FAWN AND WHITE RUNNERS. Layers of large white eggs. Blue Ribbon winners. Eggs, 1st pen, \$2 per 15; 2nd pen, \$1 per 13. George C. Cannady, Danville, Illinois. 2-4

INDIAN RUNNER DUCKS, \$1.25 each. Eggs, \$1.50 per 15; \$6.00 per 100. Catharine E. Floyd, Steubenville, O., R. D. 2. 2-3

INDIAN RUNNER DUCKS, Light Fawn and White. Eggs, \$1.50 per sitting; \$5.00 per 100. White Leghorn eggs the same. Excellent strain. Rosa Staley, Forest Hill Poultry Farm, Clay City, Ill. 2-4

INDIAN RUNNER DUCK EGGS FOR SALE, \$1.00 per 13. English type, good layers, good size. Booking orders now; order early. Roy Crandall, Albion, N. Y. 2-4

FAWN AND WHITE INDIAN RUNNERS, (Harshbarger white egg strain), \$1.00 per 13 eggs. Mrs. Del Suter, Blggsville, Ill. 3-3

FANCY WHITE RUNNERS, Spencer Strain. Eggs, \$2.50, 12. Myrtle Stormont, Salem, Ill. 4-3

MAMMOTH PEKIN DUCKS, white eggs, 75c per sitting. Mr. J. C. Loewer, Worden, Ill. 4-1

FAIRY FAWN INDIAN RUNNER eggs, high fertility, \$1 per 15. Geo. Fabel, Turner-ville, Conn. 4-1

ROUEN DUCK EGGS from prize winners, reasonable. J. R. Shimmin, R. 5, Man- mouth, Ill. 4-3

I. R. DUCK EGGS for sale. Don't pay fancy prices for eggs, when you can get prize winners for \$1.00 per 13; \$2.00 per 30. Photo of duck if desired. Herman T. Miller, R. 5, Box 46, Decatur, Ind. 4-4

ENGLISH PENCILED, also White Runners. White egg strains. Eggs, ducklings, circular. Mrs. George W. Church, K-1, Townville, Pa. 4-4

WHITE INDIAN RUNNER DUCKS. Great layers of pure white eggs, \$3.00 per sitting. Wm. A. Peterson, Box K, Gal-es- burg, Ill. 4-3

INDIAN RUNNERS, Fawn and White, Harshbarger white egg strain, 12 eggs \$1.00. Sunnysbrook Farm, Deansboro, N. Y. 4-2

FAWN AND WHITE INDIAN Runners, blue ribbon winners, beautiful white eggs. Single Comb Black Orpington, Single Comb Mottled Ancona eggs, \$1 per 15. Ruby Murwin, Garrettsville, Ohio. 4-4

WHITE AND FAWN Indian Runner ducks. Eggs for sale, \$1.00 per 13. White egg strain. Ida Jennings, Mayview, Mo. 4-2

BARRED ROCKS, Fawn and White Run- ner ducks. Rocks, Pen 1, \$2, 15; Pen 2, \$1, 15; \$5.00, 100. Cockerel matings. Run- ners, white egg strain, \$2, 15. Mrs. E. W. Collins, Sigourney, Iowa. 4-4

MAMMOTH PEKIN AND AMERICAN STANDARD Indian Runner Ducks. Pure white egg strain. Eggs, \$1.50 per 12; \$5.00 per 50. Satisfaction guaranteed. Paul and Gordon Griffith, Fredericktown, Mo. 1-4

INDIAN RUNNER DUCKS. The great white eggers. Eggs, \$1.00 per 15; \$4.00 per hundred. Kellerstrass White Orpingtons, \$1.50 per 15. S. A. Moore, Alledonia, Ohio. 4-1

WHITE INDIAN RUNNERS. Goodacher Strain, two dollars for fifteen. Imperial Pekins one fifty for fifteen. Have one hundred choice breeder. No better. Ship- ment made day laid. Bolser Farm, Le Mars, Iowa. 4-4

WHITE RUNNER DUCKS of the superb laying and winning quality. We will send on request best booklet on them. Eggs, \$2.00 per 12; \$20.00 per 100. Baby ducks, safe arrival, 50c each; \$40.00 per 100. See large ad elsewhere. S. H. Long, Elwood, Ill. 4-4

ENGLISH PENCILED Indian Runner ducks. Mated with Church's prize winning drakes. Racy type. Eggs, \$1.25 for 11. Mrs. Galvin Wilcox, Spencer, N. Y. 4-1

BUFF ORPINGTON DUCKS, Mammoth Buff, English pfd Buff Geese. Jacob Leath- erman, Wadsworth, Ohio. 2-3

BUFF ORPINGTON DUCKS. Prettiest duck grown. Large, wonderful layers white eggs. Won prizes Indianapolis, Green- castle, Terre Haute, etc. Drinking water only needed. Eggs, prize pens, \$5.00; others, \$2.00, 12; 100, \$12. Shipped in Feb- ruary; March 1-4 off. H. Pherson, Bain- bridge, Ind. 2-4

LIGHT FAWN AND WHITE INDIAN Runner duck eggs, Harshbarger blue ribbon strain. \$1.25 per 13. Satisfaction guar- anteed. Mrs. E. A. Thomas, Mt. Sterling, Ohio. 2-3

BRED TO LAY Runner ducks, Fawn and White. Eggs, 12, \$1.50; 200, \$6.00. Ex- periment Farm, W. E. Hartz, Bloomfield, Mo. 3-3

BABY DUCKS. Pure White and Penciled Indian Runners, 35 and 18 cents. Eggs for hatchling. S. C. W. Leghorns. Mrs. H. W. Knemeyer, Ft. Madison, R. 2, Iowa. 3-4

FAWN AND WHITE INDIAN RUNNERS and Mammoth Pekins, 15 eggs, \$1.50. Buff Orpington Ducks, 15 eggs, \$3.00. Daniel Seifert, Mt. Vernon, Ind. 3-2

BUFF ORPINGTON DUCKS. Eggs, \$5.00 13. Runners, Harshbarger's best exhibition strain. 280 egg record. Eggs, \$4.00, 13. Fawn and White, 200 egg record, flock headed by prize winners, \$1.00, 13; \$6.00, 100. Mrs. J. J. Reese, Cordova, Md. 3-3

INDIAN RUNNER DUCKS, Fawn and White; White Leghorn and Barred Ply- mouth Rock eggs, 75c for 13; \$5.00 per 100. Mixed orders if desired. Baby chicks, ducklings. Mallison's Ideal Poultry Yards, Ocean View, Delaware. 3-4

INDIAN RUNNER DUCKS, Fawn and White. White egg strain. For delivered prices on eggs address Malby O. Eddleman, Dongola, Ill. 3-2

WHITE INDIAN RUNNER DUCKS. Prize winners. Pure white eggs, \$3 per dozen. No stock. T. F. Dice, Prescott, Wash. Member National White Indian Run- ner Duck Club. 3-4

INDIAN RUNNER DUCKS, Fawn and White. White egg strain. Eggs, 15, \$1.25; 50, \$3.00. Loren Truex, Wakarusa, Indiana. 9-12

FAWN AND WHITE INDIAN RUNNER DUCK EGGS, (Cook's White Egg Strain). Heavy layers. Drake to six ducks assuring fertility. Selected eggs, 13, \$2.00; 26, \$3.50. J. Thompson, 224 North 4th St., Mount Vernon, Illinois. 3-4

INDIAN RUNNER DUCKS, Fawn and White and English Penciled. Fine flock, bred to lay. Eggs from my six pens. Write for my circular. W. J. Meglitsch, Box 41, Harvel, Ill. 3-4

IMPERIAL PEKIN, ROUEN, Indian Run- ner, White and Color Muscovy, Buff Orp- ington, Cayuga, and Wild Mallard ducks. Stock and eggs in season. Order early. Stanley Produce Co., Stanley, Iowa. 3-4

INDIAN RUNNER DUCK eggs. White and Fawn. (Harshbarger Strain). Heavy white egg strain. Also Buff Orpingtons, (Cook Strain). Hen eggs from prize win- ners. Write wants. H. H. Weller, Tioxa, Ill. 3-4

FIRST PRIZE CHAMPION BUFF ORP- INGTON ducks Illinois State Show. \$2.00 per 12. White Runners. Stock scored 95 1/2 to 97. Eggs, 12 for \$4.00. Catalogue free. Fred Oertel, Brighton, Ill., Box O. 3-4

WHITE INDIAN RUNNERS, with up- right racy carriage. Prize winners. Great layers large white eggs, 13, \$3.00; 100, \$18.00. Circular on feeding and raising ducklings free. B. F. Morgan, Independ- ence, Ind. 3-4

INDIAN RUNNERS, Standard color. Lay- ers of large, pure white eggs, \$1.25 and \$2.00 per 13 eggs. E. P. Miller, Junction City, Kas. 3-3

FAMOUS EAGLE FARM Indian Runners. Eggs, \$1.00 per 15. N. R. Gullion, Sparta, Ky. 3-2

FISHEL'S STRAIN WHITE Indian Run- ner ducks. Eggs 12 for two dollars. South- ern raised, lay earlier, are hardier; Fawn and White one dollar for fifteen. National Duck Farm, Letohatchee, Ala. 3-4

MAMMOTH PEKINS, (Rankin), very large. Eggs, \$1.25 per 12; 100, \$6. Buff Orpington ducks, (Dunrobin). Eggs, \$2 per 12; 50, \$6. C. McFerren, Belleville, Ohio. 3-4

ENGLISH PENCILED INDIAN RUN- NERS, (Walton Strain). Great layers, pure white eggs. Score 92 1/2-94, (Klein). Book- ing a limited number sittings. 13 eggs, \$3.00; 26 eggs, \$5.00. P. W. Whitlock, Mt. Vernon, Ill. 3-4

GOLDEN, FAWN, WHITE Indiana Run- ner ducks, (Harshbarger Strain). Eggs, Pen 1, \$2.00, 15; utility, \$1.50, 15. S. C. Rhode Island Red eggs, \$1.00, 15. Mrs. J. W. Long, Newton Falls, Ohio. 3-4

FAWN, WHITE AND PENCILED Run- ner Ducks. Bred to lay. Winners at Pitts- burg, Columbus and Youngstown. Eggs, \$1.50 to \$5 per sitting. R. F. Lower, Columbiana, Ohio, R. D. No. 3. 3-4

INDIAN RUNNER DUCKS, Harshbarger, Newell and Wingert Strains. Prize win- ners. White egg layers, \$1.00, \$1.50, \$2.00 per 13. C. J. Flemming, Box 173-K, W. Bridgewater, Pa. 3-4

THE DRAKE that won first honors at Des Moines Poultry Show, heads Pen One A of Bradley's English Penciled Runner ducks. Bradley's Poultry Farm, Mystic, Iowa. 2-3

WHITE INDIAN RUNNERS, Spencer strain. The best money can buy. No brass- lines, absolutely white. Standard size and good carriage. Eggs, \$3.00 per 12; \$10.00 per 50. Abbie Stover, Fredonia, Kan. 3-4

HARSHBARGER STRAIN Fawn and White Runner ducks. White eggs, \$1.25 and \$1.50, 13. Booklet free. Modern Hen- nery, Box 7, Myersville, Md. 2-4

INES WHITE EGG STRAIN INDIAN RUNNER DUCKS. Layers of beautiful white eggs. Sitting of 12, \$1.50; per 100, \$8.00. Satisfaction guaranteed. Oak Park Poultry Farm, K-4, Winfield, Tenn. 2-4

PURE SPENCER STRAIN White Indian Runner Ducks, S. C. Black Orpingtons. Eggs and stock. Prices right. Satisfaction guaranteed. A. R. Williams, R. F. D. No. 4, Winchester, Ind. 2-4

COOK'S BUFF ORPINGTON DUCKS won 1st, 3rd young drake; 2nd, 3rd, 4th, 5th young duck at Chicago last show. S. C. Buff Orpingtons, 1st, 3rd hens Elgin show, 1913. E. H. Cook, Huntley, Ill. 2-4

LIGHT FAWN AND WHITE, Harshbarg- er blue ribbon strain. Guaranteed layers of pure white eggs. 250 egg record. Blue ribbon winners in every state and territory. Booking orders, spring delivery. Circular, 2c stamp; all about them. Mrs. Wm. Harshbarger, Waveland, Indiana. 12-8

MAMMOTH PEKIN and White Indian Runner ducks. Eggs from full blood stock. Write for prices. Wm. Allen, Farina, Ill. 1-4

WHITE RUNNERS. Racy bodies, fine head points. \$3 per sitting. Mammoth Pekins, farm range; eggs, \$5 per hundred. Selected pen ducks from 8 to 11 pounds, \$2 per 11. R. C. Brown Leghorns, prize win- ners, eggs, \$3 per 15. Cockerels for sale. Carl Farthing, Salem, Ill. 1-12

DUCKS, Fawn and White Runners, Harshbarger Golden Fawn, white egg strain. None better. Eggs, \$1.50 per 15 straight. Paul Moore, 2123 Hill Street, Louisville, Kentucky. 2-8

BUFF ORPINGTON DUCK eggs, \$1.50 per 15; \$4.50 per 50. Alex J. Fix, Monroe, Mich. 2-4

FARMERS BUFF.

FARMERS BUFF. My new breed. Experimented with this breed 11 years. Good layers, hardy, prolific and beautiful. First season eggs are offered. Write Shady Nook Farm, Dover, Pa. 2-3

GAMES.

EGGS, \$1.50 PER 13. Black, Red and Silver Duckwings. Pitt Games. Stamp for circular. Clark Price, Rochester, Mich. 3-2

GET THE BEST GAMES. (Gleezens Irishman). Eggs \$3 per sitting. Richard Ostrom, Ashtabula, Ohio. 1-4

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MAMMOTH TOULOUSE GEESE eggs 20c each. Mrs. E. A. Thomas, Mt. Sterling, Ohio. 2-3

MAMMOTH TOULOUSE GEESE eggs for sale. 25c each. Am booking orders now. Get yours in early. Beautiful stock. Roy Crandall, Albion, N. Y. 2-4

LARGE WHITE EMBDEN GEESE, pair, \$5.00; trio, \$7.00. Peacock, \$7.00. Sola Porter, Browning, Mo. 1-4

GUINEAS.

PEARL GUINEAS. Eggs, \$1.00 per 15; \$2.00 per 36. J. L. Hoak, R. 30, Spencer-ville, Ohio. 4-2

PEARL GUINEAS. Stock and eggs for sale. Stamp for circular. George D. Wayne, Route 3, Medaryville, Ind. 4-3

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HAMBURGS, Silver and Spangled. Always a winner cock in first pen, never beaten five shows. Barnett Bros. Waynes-town, Ind. 3-4

SILVER SPANGLED HAMBURGS. Great winter layers. Eggs from choice mating containing my prize winners, scoring 92 and better, \$2.00 per 15; \$3.50 per 30. Satisfaction guaranteed. Louis Stein, Vergennes, Ill. 2-4

SILVER SPANGLED HAMBURGS. Prize winners. Eggs, \$1.50 sitting; \$4.00 for 50; \$3.00 per 100. Baby chicks, 15c each; \$7.00 for 50; \$12, 100. Rev. C. O. Myers, White Heath, Ill. 1-4

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FINE DARK typical Houdans. Five pens producers of prize winners at big shows, Madison Square and others. Stock and eggs. 40 selected cockerels. Cohocton Houdan Yards, Painted Post, N. Y. A. H. Wood. 3-2

HOUDANS! Eggs and chicks guaranteed. Mating list free. John C. Meyer, R. 4, Oconto Falls, Wis. 2-4

HOUDANS, McAvoy Strain. Eggs, \$1.25; stock reasonable. H. A. Aune, Baldwin Wis. 2-6

HOUDAN COCKERELS for sale, \$2.00 each. Eggs in season. Burtlyn Fox, Goshen, Ind. 1-4

FAULTLESS HOUDANS, McAvoy Strain. Best layers and most prolific strain of fowls bred. Eggs from my select pen, \$5.00 per sitting. Good birds for sale. F. M. Griffith, Wayne, Nebraska. 2-3

McAVOY STRAIN "FAULTLESS" HOUDANS. Eggs, \$2.50 per 15; \$4.00 per 30. Trap-nested. Bred 21 years for heavy egg production. N. Mack, Loyal, Wis. 3-3

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LAKENVELDERS. Won five first Chicago 1912. Send for circular. Frank Myers, Freeport, Ill. 3-3

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EGGS FROM EXTRA big boned high scoring Black Langshans Greenish, glossy black color, black eyes. Mrs. Kate Alder, Rayville, Mo. 4-1

BLACK LANGSHAN EGGS for hatching, \$1 per sitting; \$5.00 per hundred. Mary Hamilton, Route 26, Union City, Ind. 4-2

WHITE LANGSHAN EGGS from great laying strain, reasonable. J. R. Shimmmin, R. 5, Monmouth, Ill. 4-3

WHITE LANGSHANS. Eggs from high scoring flock, \$6 per 100; \$3.50 per 50; \$1.25 per 15. G. H. Null, R. 3, Maryville, Mo. 4-1

WHITE LANGSHANS. Farmer's friends. Handsome as Orpingtons and noted for health and winter laying. Stock for sale. Eggs, \$1 per 15; \$5 per 100. R. H. Moore, Nellie, Ohio. 3-4

BLACK LANGSHANS. Eggs for hatching, \$1.50 sitting; \$5.00 per 100. Show and utility. A. W. Ash, Lafayette, Ind., R. No. 8. 2-4

EXTRA BIG BONED, greenish glossy, black eyed Black Langshans. Scored 92 to 96. Cockerels, \$5; eggs, 15c. H. Osterfoss, Hedrick, Iowa. 3-4

BLACK LANGSHAN cockerels and eggs. Blue Ribbon winners. Correspondence solicited. George Huston, Farina, Ill. 2-4

BLACK LANGSHANS, large thrifty trap-nested stock; best winter layers. Eggs, \$1.25 per 15. H. Floyd Cory, Box K, Colfax, Ind. 2-4

BLACK LANGSHAN EGGS for hatching. Fred Crawford, Martinsburg, West Virginia. 2-4

BLACK LANGSHANS. Eggs, \$1 sitting; \$5, 100. Fine laying strain. Golden Gate Farm, Lafayette, Ind. 2-4

BIG BLACK LANGSHANS cockerels scoring 90 to 95. Eggs for hatching from pen stock scoring 93 to 96 and range stock scoring 90 to 94. Satisfaction guaranteed. Price right. A. H. Koch, De Soto, Iowa. 2-4

BLACK LANGSHANS. Eggs from prize winning stock. Price reasonable. Also White Cochins Bantam eggs. E. H. Lambertson, Defiance, Ohio. 3-3

SHENK'S LANGSHANS win, weigh, lay, and pay. Bargains in cockerels and pullets. Laid all the winter and laying now. 15 eggs, \$1.50; 30, \$2.75. Free catalogue. Clarence Shenk, Luray, Va. 3-4

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BABY CHICKS. Hatching eggs any number, dozen or thousands. Large orders filled promptly. Chicks that live, grow and lay. (Wyckoff-Blanchard, Young strains). We have egg record breeding stock records 240 to 248 eggs year. We guarantee safe delivery and satisfaction. Eight years business never had one bird returned. Have any number choice breeding and laying hens or pullets, cocks and cockerels, bred from record pens. Stamp for catalog. Craven Poultry Place, Canton, Pa. 2-4

BEAUTY STRAIN R. C. and S. C. Brown Leghorn cockerels for sale. Very fine birds. Eggs in season. Burtlyn Fox, Goshen, Ind. 1-4

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SINGLE COMB WHITE AND BROWN Leghorns. Choice stock, good as the best. Eggs, \$1.50 for 15; \$2.50 for 30. Good hatch guaranteed. Ella Cline, Cincinnati, Iowa. 3-4

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S. C. BUFF LEGHORNS. Winners of five ribbons from six entries Pottsville Show Dec. 1912. Eggs, \$2.50 per 15. H. F. Hinkle, Pottsville, Pa. 3-3

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GLENDALE FARM thoroughbred Single Comb White Leghorns. Bred to lay. Hatching eggs from yearling hens, (not pullets). Early maturing, range raised, fresh air housed. Fertility guaranteed. Booklet Glendale Farm, Box A 43, Elkins, W. Va. 4-1

EGGS FOR HATCHING from hardy northern grown, Single Comb White Leghorns, at farmer's prices. Catalog free. Maplegrove Farm, Smithville, N. Y. 3-4

EGGS THAT WILL HATCH from pure bred, farm raised, Single Comb Brown Leghorns. Heavy laying strain. \$1.00 per 15; \$2.50 per 45; \$4.00 per 100. Will F. Ellerman, Versailles, Indiana. 3-4

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S. C. WHITE LEGHORNS. Large, vigorous, free range. Bred especially for winter eggs. Eggs, \$1.50 per 15; \$6.00 per 100. Infertile ones replaced free. Stock for sale. J. E. Ricksecker, R. D. 4, Canal Dover, Ohio 3-4

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NINE CENTS EACH for White Leghorn chicks hatched in Mammoth Candee Incubator from our excellent breeding stock. Safe arrival guaranteed. Eggs five cents. Free circular. Novova Farm, Silver Springs, Md. 3-4

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SINGLE AND ROSE COMB White Leghorns. Winners Elgin, Springfield, Janesville, Onalaska. Scoring to 96. Eggs, \$1, \$2, \$3, 15. Baby chicks. Mating list free. Harry Aiken, Chaseburg, Wis. 3-4

ROSE COMB WHITE Leghorns (Elephant strain). Always winners. Range eggs, 15, \$1.50; 100, \$5.00. Circular. Rogers Ranch, Pleasanton, Iowa. 2-1

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WOODROWS POULTRY FARM. Oskaloosa, Iowa, 1000 S. C. White Leghorn selected breeders from prize winning stock. Eggs, \$5.00 per 100; \$40.00 per 1,000. Orders filled day received. 3-6

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\$3.50 PER HUNDRED eggs from 211 egg Single Comb Brown Leghorn hens. Fertility guaranteed. World's leading layers. Price smasher catalog. K. K. Wlsday, Seville, Ohio. 1-6

WINNERS AT ST. LOUIS and O'Fallon, 1912. S. C. W. Leghorns scoring up to 96 1/2. Youngs strain in their purity. Eggs, \$3.00 per 15. H. W. Goodman, Rentchler, Ill. 1-4

LEGHORNS, White and Brown. 15 eggs, Parcel Post paid, \$1.20; 100, \$4.00; 100 chicks, \$9.00. Safe delivery guaranteed. Catalog. Leghorn Farms, Lancaster, Pa. 2-4

EGGS FROM MY HEAVY laying strain of Single Comb White Leghorns, \$1.00 per 15; \$3.00 per 50; \$5.00 per 100. Mrs. August Bartels, Elmhurst, Ill., Route 1. 2-4

ROSE COMB BROWN LEGHORNS. Eggs dollar sitting. Francis Battelger, Lowellville, Ohio. 2-4

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ROSE COMB WHITE LEGHORNS exclusively 15 eggs, \$1.00. Ella Ament, New Albany, Pa. 2-4

EGGS FROM TRAP-NESTED S. C. W. Leghorns. Large, vigorous stock, \$3.00 per sitting. T. F. McHale, Olyphant, Pa. 2-3

SINGLE COMB WHITE LEGHORNS. Strong chicks, eggs, any number from record year round layers, big white eggs. Farm range, large, vigorous, handsome breeders. Wyckoff strain. Guarantee safe arrival, 90 per cent fertility. Low prices. Circulars. Write wants. R. T. Ewing, Atlantic, Pa. 2-4

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\$5.00 FOR 100 SELECTED EGGS, Single Comb White Leghorns, bred to lay. Large pure bred stock. Best strains. Will hatch strong chicks. C. A. Stevens, Box 7, Ransomville, N. Y. 2-4

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FOR SALE. Eggs from Single Comb White, Brown, Black, Buff and Rose Comb White and Brown Leghorns. A few pullets for sale. John Klunzinger, Fowlerville, Mich. 2-3

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BEACHAM'S SINGLE COMB WHITE LEGHORNS are bred for heavy laying and exhibition quality. Eggs for hatching, \$1.50 per 15. Send for mating list. T. D. Beacham, Wesson, Miss., Box 191. 2-4

S. C. BUFF LEGHORNS from my Kansas City, Indianapolis, Indiana State, Richmond, Columbus, Ohio, Louisville, winners. Eggs, \$2, \$3, \$5 per 15; utility, \$1 per 15 or \$5 per 100. E. E. Cartwright, Box B, Richmond, Ind. 2-4

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(WYCKOFF-BLANCHARD) Single Comb White Leghorns. Large eggs 15, 75c; 50, \$2.25; 100, \$4.00. Fertility guaranteed. Spring orders booked now. Prospect Hill Farm, Glenelg, Illinois. 2-4

AT WATERTOWN, Oconomowac, and the big Madison show, I won 12 first, 9 seconds, 9 thirds, 5 fourths, also 6 silver cups on White Leghorns. Cockerels, \$2.00 up. Write for mating list. Albert Zler, Watertown, Wis. 2-3

WYCKOFF SINGLE COMB WHITE LEGHORNS. Cockerels, \$3; eggs, \$1.50 for 15. E. B. Mosser, Hendricks, W. Va. 2-4

BEST AND CHEAPEST White Leghorn eggs ever offered. Meadowbrook Farm, Box K, Hixson, Tenn. 2-4

TRAP-NESTED S. C. WHITE LEGHORNS. Lakewood layers, the big kind. Trap-nested years for size and laying. Eggs, 100, \$5.00; 50, \$3.00; 15, \$1.00. Circular free. G. S. Cooke, Huron, Ohio 2-3

SINGLE COMB WHITE Leghorns, bred from heavy layers, mated to cockerels scoring 93, bred from Young and Easing stock. Eggs, \$1.00 per 15; \$1.75 per 30; \$2.50 per 50. Orrie Elrod, Indianola, Iowa. 4-3

50,000 Leghorns, all varieties, stock, eggs, day-olds, poultry, collie, hare. Catalogue, stamp. Failing Poultry Farm, La Fargeville, N. Y. 4-4

ROSE COMB BROWN LEGHORNS. Eggs from cockerel mated pen, headed by prize winning male, \$2.00 per 15; utility stock, \$1.00 per 15; \$1.50 per 30 eggs. Hilbert Siegler, Box 57, Bangor, Wis. 2-3

S. C. W. LEGHORNS. Exhibition stock, \$1.00, \$2.00 and \$3.00 per 15. Pen 3 and Brown Leghorns, \$5.00 per 100. Chas. J. Rauch, Jenera, Ohio. 4-2

SINGLE COMB BUFF LEGHORNS. Day old chicks and eggs for sale. Send for price list. T. J. Juday, New Paris, Indiana. 2-4

S. C. WHITE LEGHORNS. Hardy, northern bred. Eggs, fifteen, \$1.50. Baby chicks \$12.00 the 100. C. H. Harger, Orchardview Poultry Farm, Benzonia, Mich. 4-1

SINGLE COMB WHITE LEGHORNS, Rose Comb Reds. Record layers. Eggs, 5c; chicks, 10c each, up. Circular. Albert Dally, Frankfort, Ohio. 1-4

S. C. BUFF LEGHORNS, Yardman and farmer's great utility fowl. Producers of large white eggs. Fawn and White Indian Runner ducks, (Cook Strain). Excellent layers pure white eggs. Eggs, \$1 per 14; \$3 per 50; \$5 per 100. Mrs. Flora Johnson, Orient, Ohio. 3-3

EGGS FOR HATCHING Rose Comb Brown Leghorns, well mated. Heavy laying strain pens. \$2.00 per 15; *range, \$1.00 per 15; \$5.00 per 100. Choice Holland turkey, \$2.50 per 11. Rouen ducks, \$1.50 per 13. Frank Shetler, Golconda, Ill. 3-3

HIGHLINE POULTRY FARM Single Comb White Leghorns. Baby chicks, \$10.00 per 100. Eggs for hatching, 15, \$1.00; 100, \$5.00. Safe delivery guaranteed. O. L. Peyton, Pisgah, Iowa. 3-4

S. C. BROWN LEGHORNS Eggs for hatching, \$1.00, 15. Satisfaction guaranteed. Guy Giles, Route 3, Skowhegan, Maine. 3-4

WYCKOFF-LAKEWOOD S. C. White Leghorns. Farm raised. Baby chicks, twelve dollars per hundred. Hatching eggs, (95 per cent fertility guaranteed) one dollar per fifteen; five dollars per hundred. E. A. Suttles, Blanchester, Ohio. 3-4

FARM RAISED Single Comb Brown Leghorns, laid all winter. Eggs, \$1.00, 15; \$5.00, 100. Eda Staples, Lathrop, Mo. 3-2

SINGLE COMB WHITE LEGHORNS. Winners wherever shown. Eggs for hatching, birds scoring 94 to 96 3-4. Satisfaction guaranteed. Write for circular. George W. Klein, Defiance, Ohio. 3-3

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(WYCKOFF-BLANCHARD) S. C. White Leghorns. 20 years with these strains. Hatching eggs, day old chicks, great specialties. Largest orders filled promptly, fully guaranteed. Very high grade breeding stock on approval. Finest males possible. Furnished foundation stock for Corn-ing plant, Bound Brook, N. J. Circulars. C. N. Reynolds, Canton, Pa. 1-4

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ROSE COMB BROWN LEGHORNS exclusively for 16 years. Prize winners wherever exhibited. Eggs, \$3.50, 100. Baby chicks, 100, \$12.00; 50, \$7.00; 25, \$4.00. Mrs. S. J. Belding, Northboro, Ia. 3-4

HINES STRAIN SINGLE COMB BROWN LEGHORNS. Layers of beautiful large white eggs. Sitting of 15, \$1.50; 100, \$5.00. Choice hens, \$1.50 each. Oak Park Poultry Farm, K-4, Winfield, Tenn. 2-4

S. C. WHITE LEGHORN eggs and chicks from trap-nested pedigreed stock which produced the winners in the Connecticut Egg Laying Contest. Chicks, \$12 per 100; eggs, \$1.25 per 15; \$6 per 100. Book orders now. L. E. Keyser, Smithboro, N. Y. 2-2

S. C. WHITE LEGHORNS, (Young's strain). Eggs, \$1.00 per 15. M. H. Arthur, Riverview, A. A. Co., Maryland 2-4

ROSE COMB BROWN LEGHORNS, Kulp's 242 egg strain. Bred for size, quality, vigor, egg production. Eggs from high scoring farm range stock. 15, \$1.00; 100, \$4.00. R. H. DeVault, Bloomfield, Iowa. 3-4

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S. C. BLACK LEGHORNS. Unequaled as winter layers. Eggs from pen headed by first cockerel Akron, \$2 per 15. La Master Bros. Route 21, Akron, Ohio. 3-3

SINGLE COMB WHITE LEGHORNS. Utility first, last and all the time. Eggs for hatching, \$1.50 per 15; 100, \$7.00; 1,000, \$60.00. Lynden Poultry Yards, H. Oordt, Prop. Lynden, Wash. 3-4

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R. C. WHITE LEGHORN eggs for hatching. Lowest prices and fertility guaranteed. C. W. DeWitt, Troy, Pa. 2-2

FOR SALE. Pen White Leghorns (cock-ereel and six pullets). Good layers, beautiful birds, \$10. Leghorn eggs \$1 per sitting. Pen White Orpingtons (Philo stock), cock and three hens, \$15. Orpington eggs, \$2 per sitting. Mrs. J. T. Kelton, Thrall, Texas. 4-2

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SINGLE COMB BUFF LEGHORNS. Eggs guaranteed, 15, \$1.00; 100, \$5.00. George Miller, South Wayne, Defiance, Ohio. 4-1

SINGLE COMB BUFF LEGHORN eggs, 15, \$1.50; 50, \$4.00; 100, \$7.00. Ferndale Poultry Farm, Goodview, Virginia. 4-3

ONLY ONE AND TWO YEAR range-bred Single Comb White Leghorns, that lay throughout the past winter are mated this year. Eggs, \$1.00 per 15. Kimbrough Leghorn Farm, Orland, Ill. 4-4

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ROSE COMB BROWN LEGHORN eggs for hatching. Heavy laying strain, healthy, vigorous stock. \$1.50 and \$2.00 per sitting; \$8.00 and \$10.00 per hundred. Satisfaction guaranteed. Ward W. Dasey, Frankford, Delaware. 4-4

SINGLE COMB WHITE LEGHORNS. Selected eggs for hatching, \$4.00 per hundred; 75c per 15. Range raised. Chas. Henry, Atlantic, Penna. 4-3

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SINGLE COMB BUFF LEGHORN eggs, \$1.25 per 15; \$5.00 per 100. Pullets, \$1.00 each. Rouen duck eggs, \$1.00 per 11. Toulouse Geese eggs, Golden Pheasant male birds. Arthur Worthington, R. 7, Manitowac, Wis. 4-2

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S. C. WHITE LEGHORNS, headed first prize cockerel Ft. Wayne Show, 1913. Stock and eggs. Send for mating list. Oak Grove Poultry Farm, Kimmell, Ind. 3-4

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ROSE COMB BLACK MINORCAS won all firsts Toledo show last two years. Mating list free. J. S. Ball, Station A, Toledo, Ohio. 4-3

FOR SALE, ROSE COMB BLACK MINORCA EGGS, 15 for one dollar. Good layers, big white eggs. D. H. Sharp, Agent L. N. R. R., Sebree, Kentucky. 3-4

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SINGLE COMB BLACK MINORCAS, Bred from best blood in America. Eggs, 15, \$1.00; 100, \$5.00. Special, \$1.50. Frank Gross, Alhambra, Ill. 3-3

SINGLE COMB BLACK MINORCAS, Northup-Pape Strains. Prize winners, heavy layers. Eggs for hatching. Get mating list. Satisfaction guaranteed. E. A. Merriam, Gaysport, Ohio. 3-3

SINGLE COMB BLACK MINORCAS, (Northup) and (Pape) Strains. Eggs and stock for sale. Price list free. H. H. Lachelt, Markesan, Wis. 3-4

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S. C. BLACK MINORCAS. Stock and eggs. Breeder 10 years. Nearly clean sweep State Fair 1912. Also 2nd pullet, 2nd pen at State Show 1913. Mating list. Eggs, best pen, \$5.00 sitting. Baby chicks, 50c. Every bird in first pen a prize winner. John D. Dirksen, North 3rd St., Springfield, Ill. 3-4

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S. C. WHITE ORPINGTONS won firsts Searcy, Ark., Pine Bluff, Arkansas, Arkansas State Fair, Hot Springs, Ark. in 1912. Eggs, Pen No. 1, \$2.00; No. 2, \$1.00. J. W. Peebles, Searcy, Ark. 1-6

ORPINGTON EGGS. Foundation stock Kellerstrass hundred dollar pen, male direct from Kellerstrass, fifteen eggs, two dollars. Also Kellerstrass stock mated with Cook strain, fifteen eggs, one dollar. Orders booked to ship when wanted. Orpington cockerels two fifty. Roland McKean, Mulberry Grove, Ill. 1-4

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WHITE ORPINGTONS, Kellerstrass direct. Silver cup winners. Bred for exhibition and heavy egg production. Eggs, 15, \$1; 100, \$6. Circular free. Fertility guaranteed. James H. Kiefer, Dept. K, Millersburg, Pa. 1-4

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WHITE ORPINGTONS, Kellerstrass and Philo strains. Eggs three and five dollars per 15. Barred Rock eggs, \$1.50 and \$3.00 per 15. G. E. Teasdale, Newburg, Mo. 1-4

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SINGLE COMB BUFF ORPINGTONS, Cook and Bridgewater stock direct. Pens and free range stock. No scrubs kept and all unhealthy fowls killed. Eggs for hatching, \$1 to \$5. Stock for sale. Price subject of correspondence. Elizabeth H. Marshall, Morven Farm, Markham, Va. 4-4

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HAWTHORN FARM, Williamsville, N. Y., Buff Orpingtons again lead at Buffalo, winning club cup for best exhibit. Stock noted for size and egg production. Eggs, \$7 per 100; \$1.50 to \$5 per 15. White and Buff chicks, 20 cents. 3-2

KELLERSTRASS WHITE ORPINGTONS exclusively. Eggs from pen No. 1, \$2.00 per 15; No. 2, \$1.50; No. 3, \$1.25. Safe shipment and fertility guaranteed. A. W. Fisher, De Soto, Iowa. 3-4

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WHITE ORPINGTONS, (Kellerstrass), mated to 11 lb cockerel, very white Eggs, \$1.25 per 15; 100, \$7.00. C. McFerren, Bellville, Ohio. 3-4

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KELLERSTRASS WHITE ORPINGTONS. Eggs from Pen No. 1, headed by cockerel from Kellerstrass Farm 1913, \$2 per 15; Pen No. 2, \$1.50 for 15. W. O. Byler, Bucklin, Mo. 3-4

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BUFF ORPINGTON EGGS from first class birds, \$1.00 per 15. P. E. Gregoire, Newton, William Coon, Ames, Iowa. 4-4

HAMMETT ORPINGTON FARM, Kellerstrass Single Comb Crystal White Orpingtons. Eggs for hatching. Reasonable prices. Mansfield, Ohio.

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BUFF ORPINGTONS! Eggs and chicks from carefully selected hens with good egg records. Even buff color. Baby chicks, 15 cents each; eggs, \$1.50 per sitting. Geo. H. Smith, College Mound, Mo. 1-12

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S. C. BUFF ORPINGTONS (Cook and Frazier strains). Winners at the country shows. Bred for winning and laying purposes. Eggs, \$1, \$2 and \$3 per 15. Roy Snyder, Pleasant Valley, Pa. 2-4

BUFF ORPINGTONS. Elegant stock Standard bred, trap-nested for winter laying. Winter laying is the only kind that's paying. Eggs, \$1.50 and \$2.00 per 15. Guaranteed. N. H. Mendall & Son, Bellevue, Ky. 2-4

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EGGS. S. C. Buff Orpingtons, Rhode Island Reds, White Leghorns, White Cochins Bantams, 15. \$1.00. White Runner ducks, 12, \$2.00. Mammoth Bronze Turkeys, 25c each. H. Fitzkam, Ste. Genevieve, Mo. 2-4

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ROSE COMB WHITE ORPINGTONS exclusively. "America's best". Boston, Philadelphia, Hagerstown, Allentown, Williamsport winners. Eggs reasonable. Circulars, fowls; 2nd pen chicks; 2nd and 3rd cock-Wm. Seidel, Washingtonville, Pa. 2-4

S. C. BUFF ORPINGTONS. 1st pen ereils; 3rd pullet Iowa State Fair; 2nd pen chicks, 3rd hen, 4th pullet Iowa Poultry show, Des Moines. Eggs, \$2.00 sitting. L. W. Harkins, Menlo, Ia. 2-3

TRAP-NESTED, RANGE RAISED, standard bred S. C. W. Orpingtons. Eggs, \$1.50 per sitting up. White Guinea eggs, \$1.00 per 17. H. A. Millard, Oregonia, Ohio, R. No. 1. 12-6

KELLERSTRASS WHITE ORPINGTONS. Our birds have won 23 premiums this season. Ten firsts. Stock for sale. Eggs for hatching, cheap. Write for mating list to F. E. Payne, Stephenville, Texas. 3-4

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SINGLE COMB BUFF ORPINGTON stock. Eggs, \$1.50 and \$2.50. Write to Carl Stalling, R. 2, Chanute, Kan. 2-4

SINGLE COMB WHITE ORPINGTON stock. Eggs, \$2.00. Write to Carl Stalling, R. 2, Chanute, Kan. 2-4

SINGLE COMB WHITE ORPINGTONS, eggs for sale, \$1.50 per 13; \$10.00 per 100. Fine pure white birds, the Alba strain. Roy Crandall, Albion, N. Y. 2-4

PHILO PEDIGREED and Kellerstrass White Orpingtons. Eggs for sale, \$2.50 and \$3.00 per 15. Fertility guaranteed. Isaac Cassel, Geddes, S. D. 2-3

WILLOW BROOK FARM, E. B. Bergen, Harlingen, New Jersey. If you want show birds book order now for eggs. I have S. C. White Orpingtons, direct from Wm. Cook and Sons, the finest you wish to see. My pens are mated up with best I could buy. My \$100.00 pen, \$2.50; \$200.00 pen, \$3.50; \$300.00 pen, \$5.00, and \$500.00 pen \$10.00 for 15 eggs. Also have three choice pens Sheppard's S. C. Anconas direct. Pen 1, \$5.00; pen 2, \$3.50; pen 3, \$2.00 for 15 eggs. 2-4

QUALITY WHITE ORPINGTONS EXCLUSIVELY. Trap-nested winter layers. Only paying kind. Eggs, \$3.00 per fifteen. Limited number baby chicks. Send for mating list. Crystal-O Farm, Box K, Batavia, Illinois. 2-4

CRYSTAL WHITE ORPINGTONS. Eggs for sale from strictly high grade stock. Satisfaction guaranteed and all inquiries promptly answered. Mrs. Chas. E. Fuller, R. No. 5, Northfield, Minn. 2-4

"GOLDEN ROD FARM," home of the Blue Ribbon Strain S. C. Buff Orpingtons. 12 firsts, 15 seconds, 6 shows, 1912. Winners at Peoria. Catalogue, Charles Musterd, Lewistown, Illinois. 12-7

EGGS FROM HIGH SCORING prize winning S. C. White and Black Orpingtons, \$2.00 per 15. A. Myers, Wayne City, Illinois. 2-4

BUFF ORPINGTONS.

WILLARD'S CHAMPION BUFF ORPINGTONS. Three hundred birds for sale. Incubator eggs, \$8, special matings, \$3 to fifteen dollars sitting. Catalog free. Willard Farm, Linden, Mich. 2-3

PHEASANTS.

PHEASANTS worth \$4.00 a pound, easily raised. Investigate this rich industry. Complete book, natural colors, raising pheasants, wild game, 75c copy. Illustrated catalogue, 350 varieties, 25c. Eggs for hatching. Exchanges made. U. S. Pheasantry, Poughkeepsie, N. Y. 3-4

5 VARIETIES OF Pheasants, Wild Geese and Brant Wild Ducks. All the leading varieties of chickens. Eggs and stock list free. G. H. Harris, Taylorville, Ill., R. R. 5. 2-4

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I OFFER GUARANTEED MATED HOMERS in any quantity, at \$1.00 pair, and challenge squab companies or dealers to produce better stock at twice this price. Beautiful White Homers, \$1.50 pair. Get my prices on Runts, Carneaux Maltese Hens, and save dollars. Charles B. Gilbert, 346 N. American Street, Philadelphia, Penn. 4-4

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WHITE ROCKS, eggs from high scoring birds, \$2 sitting; two sittings, \$3. Also English Red Caps, \$3 sitting; two sittings, \$5. Mrs. R. Rozeboom, 2910 Gilead Avenue, Zion City, Illinois. 2-4

FISHEL AND OWEN FARMS White Rocks. Reared on free range, orchard, field, clover. Pure white, full size, vigorous. Eggs, \$2 and \$3 sitting. John J. Newton, Salt Lake City, Utah. 3-4

TRUE BLUE STRAIN BARRED ROCKS Eggs from grand sweepstake and Indianapolis winner. Prices low. C. M. Moffett, Box K, Bainbridge, Ind. 2-4

REGAL PARTRIDGE PLYMOUTH ROCKS, "The trap-nested pedigreed strain." are great layers and win their share of prizes. At Quincy, 1st and 3rd cockerel, 1st and 2nd pullet and gold leg band special. At Tipton, 1st and 4th cockerel, 1st, 3rd and 5th pullet and 2nd pen. At the big Indianapolis show, 3rd breeding pen and 4th pullet. Some good breeding stock for sale. Eggs in season. Mating list in February. L. R. Oakes, Tipton, Ind. 1-4

BUFF PLYMOUTH ROCKS, Gold Nugget strain. Eggs, \$2.00 per 15 delivered. Large birds, great layers. John W. Morgan, Marletta, Ohio. 2-4

BUFF ROCKS, 20 years specialist. Winners wherever shown. Home of the Buffs. Eggs from same pen as we use, \$2 per 15. F. S. Zwick, R. D. 3, Seymour, Conn. 3-4

MY BARRED ROCKS won 5 ribbons (two firsts) on 7 entries in a class of 125. Eggs from this stock, \$3.00 per 15; \$5.00 per 25. Wm. Wisler, Douglassville, Pa. 2-4

WHITE PLYMOUTH ROCK eggs \$5 per 100, from my prize winning and heavy winter laying stock. Circular free. Phillip Condon, Route 15, West Chester, Ohio. 2-4

DUDLEY'S WHITE ROCKS always win. Catalog free. C-1715 S. Seventh St., Des Moines, Iowa. 1-3

BARRED ROCKS. Our hobby is shape and color. 1st cock, 1st cockerel, 1st pullet in the hottest competition. Cockerels shipped on approval, \$2.00 to \$5.00. 30 eggs, \$3.00; 15, \$2.00. Standard bred. Poultry Farm, Pimento, Ind. 2-3

WHITE ROCKS EXCLUSIVELY. (Fisbel). Eggs from fine laying, farm raised, large, snow white, choice stock, \$2.00 per 30; \$3.00 per 50. Satisfaction guaranteed. W. H. Dougherty, Route 2, Sellersburg, Ind. 4-1

HIGH CLASS WHITE ROCKS. Eggs from six choice matings. \$3.00 per 15; \$5.00 per 30. Order early. Address, Ralph A. Racine, Johnson, N. Y. 3-4

WHITE ROCK EGGS FOR SALE. From prize winning stock. Large fine birds, \$2.00 per 15. Mrs. Timothy White, Washington, Ill. 1-4

LOYD'S PRIZE WINNING PARTRIDGE PLYMOUTH ROCKS. Big winners at the big shows. High class stock for sale. Eggs after February first. Catalog free. C. J. and Frank Loyd, Greensburg, Ind. 1-4

BARRED ROCK EGGS. The famous "Ringlet" and "Bradley" strains. Both matings. Beautiful barring, large and vigorous, great layers. Satisfactory results guaranteed. Prices very reasonable. Write us. Batsch and Moore, Dunkirk, Indiana. 1-4

FOR SALE. Aristocrat strain Barred Rocks. Have won at all leading shows. Laying qualities unsurpassed. 100 head first class breeding hens. 200 fine snappy Barred cockerels. W. G. Gilmore, Farmland, Ind. 1-4

PARKS' 200 EGG BARRED ROCKS. Pens headed by sons of 217, 238, 242 egg hens. Hens with sworn records 217, 225, 237, 238, 246, 247 eggs. Eggs for hatching. Circular free. Frederick Matteson, 3348 Woodley Lane, Washington, D. C. 1-4

McKEE WHITE ROCKS and Buff C. Bantams are winners and layers and show birds. Large cockerels and some fine Bantams for sale at reasonable prices. Wm. M. McKee, Farmland, Ind. 1-4

EGGS AND STOCK from high scoring Bradley Barred Rocks, both matings. Write Toledo Sensel, Carlisle, Illinois. 3-4

BRED TO LAY Barred Rocks. Year around layers. Eggs, \$1.00, 15; \$5.00, 100. Experiment Farm, W. E. Hartz, Bloomfield, Mo. 3-3

BARRED PLYMOUTH ROCKS Thirty year's experience as breeder and fancier. Egg circular can be had for the asking, tells all about my matings. A. B. Shaner, Lanark, Ill. 3-4

BRED FOR BUSINESS. Ten years with Buff Rocks. Free range, vigorous stock, persistent layers. Stock shipped on approval. Eggs, \$1.00 per 15. John E. Heeren, German Valley, Ill. 3-4

CHICAGO WHITE ROCKS. Do you want to introduce new blood from Chicago winners direct? Birds demonstrated their class in competition. Eggs, chicks, mating list. E. Lemieux, 4539 Eberly Ave., Chicago, Ill. 3-4

BARRED ROCKS, Bradley and Thompson strain, both matings. Eggs for sale. Winners wherever shown. C. Sandahl, Melrose, Iowa. 3-4

PRIZE WINNING Fishel White Rocks. Eggs, \$2, 15. Harry Aiken, Chaseburg, Wis. 3-4

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BRADLEY BROS. strain Barred Rocks. Large boned, fine shape and barring. Eggs, \$1 for 15; \$1.75 for 30; \$5 for 100; \$8 for 200. Satisfaction guaranteed. Mrs. Henry Confer, Lena, Illinois. 3-4

WHITE ROCKS. Prize winners. Five fine mated pens. Get mating list free. E. P. Miller, Junction City, Kan. 3-2

BARRED PLYMOUTH ROCK EGGS. Fifteen for \$1; 30 for \$1.75; 100, \$5.00. Stock scoring to 93 1/2. Grand in size. Males weigh 10 to 12 lbs. Blue Ribbon winners. My customers are not disappointed when chicks are grown. 18 years a breeder. Hawkins, Thompson and Bradley strains. Guarantee good hatch and safe delivery. Catalogue free. Address, S. V. Latham, Woodward, Iowa. 3-2

EGGS FROM THOMPSON'S Imperial "Ringlets" Barred Plymouth Rocks. Both pullet and cockerel matings. \$1.50 and \$3.00 per 15. Day old chicks from best matings. W. F. Wright, Spirit Lake, Iowa. 3-4

WHITE AND BARRED ROCK eggs for hatching, any number Burket's Poultry Farm, Frenchtown, New Jersey, Route 4. 3-2

PARTRIDGE PLYMOUTH ROCKS, Missouri, Illinois, Michigan State winners. Bred to lay. Pennsylvania customer writes, "The seven pullets laid 149 eggs in a month, before they were eight months old." Eggs in season. Write for prices. Fred Landgraf, Marissa, Ill. 3-4

BARRED ROCKS. Extra large, vigorous, prolific layers. Beautifully marked. Money makers. Eggs, \$2.00 per 15. Circular free. F. E. Payne, Hedgesville, West Va. 3-4

EGGS FROM MY FARM RAISED Barred Rocks. Good layers, \$1.25 per 15, post-paid. Rob Carr, McClure, Ohio. 3-4

WHITE PLYMOUTH ROCK hatching eggs. "White Queen's" year record is 257 eggs, 90 in 92 successive days. Our breeders average 180 eggs. Send stamp for handsome circular. R. C. Caldwell, Box 1054, Lyndon, Ross Co., Ohio. 3-3

BARRED ROCK EGGS. Eggs from choice matings, \$2, \$3, \$4 sitting of 15 eggs; \$1 per sitting of 15 or \$5 per 100 from utility flock. Mrs. J. W. Waterbury, Prairie du Sac, Wis. 3-3

WHITE ROCKS, Bourbon Red Turkeys, Pekin ducks. Write me your wants and get prices. Shady Brook Farm, Moulton, Iowa. 3-4

THOMPSON'S IMPERIAL RINGLET BARRED PLYMOUTH ROCKS. Stock direct from E. B. Thompson this season, 1913. Eggs two dollars per sitting. Send your order early. Fred H. White, Bucklin, Missouri. 3-4

U. R. FISHEL'S "Best in the World" strain White Rocks. Prize winners and great winter layers. Stock direct. 15 eggs, \$1.00. Orders booked. Lee R. Keen, Route 4, Lafayette, Indiana. 3-4

RANGE, stay white Rock eggs, 100, \$4.50. WhitePlume Farm, Waterloo, Ia. 4-3

WRITE ALDIES ELLIS, RED LION, Pa., for stay white White Rocks. Eggs from first pen headed by best cock in Red Lion Show, \$3 per sitting of 15; second pen, \$2; utility, \$1.00. Satisfaction guaranteed. Eggs replaced or money refunded. Orders \$5.00 up prepaid. Write for prices on larger orders. 4-3

BARRED ROCKS, \$2 per sitting. Lido M. Goldsmith, Ellenville, N. Y. 4-3

BARRED PLYMOUTH ROCKS, Imperial Ringlet strain, exclusively. Eggs, \$1.00 and \$2.00 per 15. Stock from eggs that cost \$15 per sitting, direct from Thompson. J. F. Laible, Newark, New York. 4-4

EGGS FROM A PEN of Thompson's Imperial Ringlet Barred Rocks, pullet mating, \$2.50 for fifteen. From large, bred-to-lay Barred Rocks, \$1.50 for fifteen. Mrs. William Coon, Ames, Iowa. 4-4

PARKS 200 EGG STRAIN of bred-to-lay Barred Rocks, exclusively. Eggs, \$2.00 per 15. Write me. Arthur Oakes, Joppa, Ill. 4-1

SILVER CUP for best five birds in show of eight hundred at Marissa last December. My record White Rocks will give you something for your money. Eggs, fifteen for two dollars. Your inquiry will have careful attention. J. W. Morse, Marissa, Ill. 4-1

"BICKERDIKE" WHITE ROCKS. Cockerels, scoring 91 1/2 to 94 1-4, \$3.00 to \$5.00; cock, 90 3-4, \$3.00; utility cockerels, \$2.00; hens, pullets, \$1.00; eggs, 15, \$2.50. Baby chicks from best matings, 25c each. Mrs. Robt. Young, Palestine, Ill. 4-4

BARRED PLYMOUTH ROCKS. Exhibition cockerel matings. Best stock obtainable. (Bright, Bradley, Thompson, Owen Farms). Best in middle states. Write for mating list for eggs. J. B. McKenzie, M. D., Box 17, Wilmington, Ohio. 3-4

JOHNSTON'S "RINGBAR'S" Barred Rocks. Champions Indianapolis. Quality show for years. Eggs from prize matings, \$5.00 per 15. Utility eggs, \$3.00 per 30. S. B. Johnston Co., Route 14, Fairland, Ind. 4-4

KNOX COUNTY POULTRY YARDS. The home of the Barred Plymouth Rock; nothing but the best. Price, \$2.00 per sitting of 15. Eggs carefully packed. Lee Dellinger, Vincennes, Ind. 6-4

BECHTEL'S "SUPERB" BARRED ROCKS. Showed twelve birds at Goshen, won twelve ribbons. Pullet or cockerel mating. Eggs, \$2.00 per 15; \$6.00 per 100. Baby chicks, \$2.50 per 15. Half prices after June 1st. Satisfaction guaranteed. Write Rufus Bechtel, Elkhart, Ind. 4-4

WHITE PLYMOUTH ROCKS. Vigorous day-old chicks from my heavy winter laying and prize winning stock. The price is 10 cents each in amounts from 25 up. Philip Condon, Route 15, West Chester, Ohio. 4-4

WHITE ROCK EGGS. Fishel and Blok-erike strain. Ed Clauson, Mead, Neb. 4-4

BARRED ROCKS. Eggs, \$1.50 to \$3.00 per 15. J. A. Herman, Odell, Neb. 3-4

COLUMBIAN ROCKS.

COLUMBIAN ROCKS. High quality, low prices. Four ribbons on four entries at Chicago. Eggs from best pens, \$3 per 15; \$5 per 30. W. R. Craun, Butler, Ind. 3-4

COLUMBIAN PLYMOUTH ROCKS. My original big boned, quick growing, egg producing strain. Eggs, \$3.00 to \$10.00. Circulars. F. M. Clemans, Mechanicsburg, Ohio. 3-3

BARRED ROCKS.

BARRED ROCK and Rhode Island Red eggs, \$1.50, 15; \$5, 100. E. R. Heisel, Brunswick, Mo. 1-4

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WHITE CRESTED BLACK POLISH. Stock and eggs. Hatching eggs, \$2.00 and \$3.00 per sitting. F. Kuechenmelster, 4538 Cullom Ave., Chicago, Ill. 3-3

WHITE CRESTED BLACK POLISH (Snow Ball Strain). The most beautiful bird on earth. Also Faultless Houdans, English Red Caps. A few young cockerels to spare. Eggs, \$2.00 for 15; \$3.50 for 30, either variety. Mark Cutts, Dundee, Minn. 2-4

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S. C. REDS. Beautiful dark red. Eggs, \$1.50 per 15; \$5.00 per 100. Utility pullets, \$1.00; \$10 dozen. G. A. Harper, Batchtown, Ill. 3-4

R. C. REDS. Eggs, 75c per sitting; \$4.00 per ten dozen. Mrs. J. P. Olesen, Humbolt, Iowa, R. D. 1. 1-4

S. C. RHODE ISLAND RED cockerels and pullets from \$1.90 to \$3.00. Eggs in season. Frank McMahon, Portage, Wis. 2-4

Eggs from a heavy winter laying strain of Single Comb Reds, \$1.50 per 15; \$6.00 per 100. Mrs. Ella Whitwood, Hudson, Ill. 2-4

ROSE COMB REDS. Range 60c a sitting; \$3.50 a hundred; pen, \$1.00 a sitting. G. Kitterer, Concordia, Mo. 2-4

SINGLE COMB REDS. First cock, cockerel, hen, single pullet, pen, trio, Buchanan, 1912. Hen hatched, range raised. 15 eggs, \$1.50. Mrs. H. C. Mergan, Buchanan, Mich. 2-4

TOMPKIN'S SINGLE COMB RHODE Island Reds that are dark and even colored, with long back, low tall Good layers, good fertility. Eggs, \$2.00 per 15. Miss Hattie Gottrick, Knoxville, Ill. 2-4

I BRED THE ORIGINAL "Tuttle Strain" Rose Comb Rhode Island Reds. Stock for sale. Eggs for hatching and baby chicks for sale after March first. C. Wilson, Norwood Park, Ill. 2-13

R. C. RED EGGS from prize winning stock. Line bred, Tuttle strain. Have won the blue at all leading shows. \$2.00 per sitting fifteen; \$12.00 hundred. Frank Daugherty, Metcalf, Ill. 2-4

ROSE COMB REDS, Sibley Strain. Windings at Mankato, 1912, under Tucker. First and second pullet; second, third and fourth cockerel; fourth cock. Red special; also A. P. A. diploma (North West Branch). Eggs, \$1.25 per 15; \$6.00 per 100. Mrs. Ann Kern, R. 8, Mankato, Minn. 2-4

ROSE COMB REDS exclusively. Heavy winter laying strain from deep, rich red birds of good shape. Stock all sold. Eggs, \$2.00 and \$1.50 per 15. Mrs. George Haseltine, Austin, Minn. 2-3

ROSE COMB RHODE ISLAND REDS. Bred to lay. Fine shape and color. Eggs, \$1.50 to \$3.00 per 25. Mating list. Pleasant Valley Poultry Farm, Ludington, Mich. O. E. Hawley, Proprietor 2-4

SINGLE COMB REDS, Tompkins strain. Three pens, fine color and shape. Eggs, \$2.50, \$3.00, \$5.00. E. C. Harris, Marietta, Ohio. 2-4

ROSE COMB REDS Rich, even color. Typical shape. Strong, healthy, prolific layers. Won color special last Quincy show. Write for mating list. I will treat you right. Charles Thornhill, Quincy, Illinois. 2-4

REDS THAT ARE RED from non-fading, prize winning strain. Eggs, \$1.00 sitting; 100, \$5.00. Baby chicks, 15c each. Willis Slate, South Windham, Conn. 2-4

SPRAGUE'S, THE OLDEST RED BREEDER IN ILLINOIS. Stock best money and experience can produce. Eggs, one-third what others charge for same quality. Circulars free. P. H. Sprague, Maywood, Ill. 1-4

KING QUALITY Single Comb Reds. We are booking eggs and chick orders from our Grand Rapids prize winners. Order early. Few cockerels. Geo. McPherson, 925 Sigsbee St., Grand Rapids, Mich. 1-4

AMERICAN BEAUTY STRAIN Rhode Island Reds. Eggs guaranteed. Meadowbrook Farm, Box K, Hixson, Tenn. 2-4

ROSE COMB RHODE ISLAND REDS. Trap-nested, individual records, 242 and 207 eggs. Prize winners at Pittsburg, McDonald, Dennison and Wheeling shows. Eggs, \$1.50 for 15 and up. Write W. L. Laughlin, No. 4 High, Jewett, Ohio. 2-4

RED MAN, RAY'S ROSE COMB REDS are fine large, high scoring birds, rich in color. Grand pens mated for eggs. Catalogue free. Satisfaction guaranteed. Red Feather Poultry Yards, Albion, Indiana. 2-4

R. COMB REDS that stay red. Stock and eggs in season. Write for prices. Satisfaction guaranteed. S. O. Decker, Defiance, Ohio, Route 12. 2-4

ROSE COMB RED COCKERELS for sale, \$2.00 to \$5.00. Eggs in season, \$1.50 for 15; \$2.50 for 30. D. E. eDan, 613, 9th St., Sheldon, Iowa. 2-4

SINGLE COMB RED EGGS. Stock good type and color. 15 eggs, \$2.00; 50, \$4.00; 100, \$6.00. Burr Lighthill, Oakwood, Ohio. 2-4

FRED L. SMITH, Plymouth, Ill., breeder of Single Comb Rhode Island Red chickens. Heavy laying strain. Write for mating list and prices. 2-4

SUNNYCREST POULTRY FARM. Single Comb Rhode Island Red eggs, \$2.50 per 15; \$12.00, 100; utility, \$1.00 per 15; \$5.00, 100. Fine color, fine winter layers. R. S. Hart, Lyons, Neb. 3-4

R. C. RHODE ISLAND REDS. Big boned, deep red. Red eyes, long body. Scored 90 to 94. Cockerels, \$5. Eggs, 15c. Highland Poultry Farm, Hedrick, Iowa. 3-4

SINGLE COMB RHODE ISLAND REDS, Tompkin's strain. Bred for size, quality, vigor, egg production, beautiful rich red color. Eggs, 15, \$1.50; 100, \$8.00. Also cockerels. R. H. DeVault, Bloomfield, Iowa. 3-4

FOLGER'S S. C. REDS were not defeated in four shows. Have shape and color. Eggs, \$2.00 up. Day old chicks, 15c up. Send for mating list. Lee Folger, Batavia, N. Y. 2-4

ROSE COMB REDS, Buschmann Strain direct. Fine stock for sale. Eggs for hatching. Mating list upon request. E. A. Jordan, Monaca, Pa. 4-1

RHODE ISLAND REDS. Good winter layers. Eggs, \$4.00 per hundred. Paul O'Hearn, Malrose, Wis. 3-3

S. C. REDS, Tompkins laying strain. Fine size, color, shape. Eggs for hatching. Mrs. Z. T. Biggerstaff, Edgerton, Mo. 3-3

SINGLE COMB RHODE ISLAND REDS. Pen of females, scoring from 90 1/2 to 94 1-4, and cockerel scoring 93 1-4. All scored in shows. Prize winners. Eggs five dollars per fifteen. James Wade, Weldon, Iowa. 3-4

LONG'S SINGLE COMB REDS. Result of careful breeding for laying strain. For Reds that lay, write for my mating list and prices for eggs. G. H. Long, De Soto, Iowa. 3-3

FORTY-ONE EGGS IN FORTY-ONE DAYS is the record of "Juno" in pen One A of Bradley's prolific winter laying Rose Comb Rhode Island Reds. Bradley's Poultry Farm, Mystic, Iowa. 2-3

S. C. RED pullets \$2.00 to \$5.00. Baby chicks 25c to \$1.00 each. 6 grand pens, eggs, \$1.50 to \$7.00 per 15. Fawn and White Indian Runner duck eggs, \$2.50 per 11. Mrs. Frank Spurling, Lovington, Ill., Box 49. 3-4

SINGLE COMB REDS, Tompkins Strain. Line bred eight years. Score 92 3-4 to 94 in my pens. Not the mealy kind. Guaranteed to produce winners. Arthur Neidhardt, Ablon, Indiana. 3-4

ROSE COMB REDS that win in show room and pay on the farm. Strong, vigorous, long bodied, rich colored birds. Mating lists ready. C. B. Hanna, Box B, Edworth, Iowa. 2-4

"SUNRISE REDS," Eggs from two pens of prize winning Single Comb Reds at \$3 per sitting. Splendid utility eggs at \$1.50. Cockerels for sale. Harvey R. Vanderslice, Boyertown, Pa. 2-4

S. C. REDS. Eggs from line-bred birds, from strongest blood lines of prize winners and heaviest laying strains to be found, at live and let live prices. Mating list free. E. E. Monts, R. 41, Virden, Illinois. 2-4

S. C. RHODE ISLAND REDS. From blue ribbon winners; very fine birds. Eggs give good satisfaction for fertility. Eggs from \$1.50 to \$3.00 per 15. J. C. Keltner, Mazon, Ill. 3-4

"REDLAYERS" ROSE COMB REDS. Developed by several years careful selection and breeding. Sittings, \$3.00 and \$2.00 per 15. Real utility eggs \$4.00 per 100. All Magic Egg Tested and guaranteed. List free. Mrs. M. E. Smith, Box 86, Kirkwood, Ill. 3-3

S. C. RHODE ISLAND REDS. Heavy winter layers. Deep red. Pullets, 75c. Eggs, \$1.00 per 15. Mr. J. C. Loewer, Worden, Ill. 4-1

R. C. RHODE ISLAND REDS, S. C. Black Minorcas, Silver Spangled Hamburgs. Eggs, \$1.50, \$2.00, \$2.50 per 15. Chicks for sale. Geo. Roehm, 81 Fitch St., Oneida, N. Y. 4-1

S. C. REDS (Tompkins). Eggs \$1.50 per 15; \$4 per 50; \$7.50 per 100. Edw. Schoepel, Ellis Grove, Ills. 4-1

ROSE COMB REDS. Strong, healthy stock, farm raised. Eggs, 15, 75c. Mrs. B. H. Libby, Biggsville, Ill. 4-3

ROSE COMB REDS. King Philip strain. Eggs from rugged, rich red birds at reasonable prices. F. Kennedy, Wingree Park, Madison, Wisconsin. 4-1

MOORE'S BRED-TO-LAY Single Comb Reds. Heavy fall and winter layers. 15 eggs, \$2.00; 50, \$6.00; 100, \$10.00. 80 per cent fertility guaranteed. Write for special offer. Charles Moore, Bethesda, Md. 2-3

ROSE COMB REDS, the laying kind. Eggs, \$2 per sitting. Selected day old chicks, 25c each. Mrs. Chas. F. Goldsmith, Ellenville, N. Y., Box 651. 4-3

SINGLE COMB RHODE ISLAND REDS. Day old chicks and eggs for sale. Price list ready. T. J. Juday, New Paris, Indiana. 2-4

ROSE COMB REDS EXCLUSIVELY. Buschmann Strain. Extra good color and good winter layers. Eggs, \$1.00 and \$2.00 per 15. Mrs. C. L. Hansen, Malone, Iowa. 2-4

SINGLE COMB RHODE ISLAND Reds, cherry red. Buff Orpingtons, rich buff. On separate places. Bred to lay and hatch strong chicks. Eggs, \$1.50, 15; \$2.50, 30. A. M. Potter, De Soto, Iowa. 4-1

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KNOX RHODE ISLAND WHITES. Winners at New York, Chicago and Pittsburg. Eggs from \$2.00 to \$10.00 per 15. Booking orders now. Write for catalogue. Knox Poultry Farm, Pulaski, Pa. 2-4

RHODE ISLAND WHITES, America's best. Leading winnings. Unsurpassed as layers. America's coming utility breed. Eggs from finest matings. Save disappointment, book orders now. Circular free. Crescent Poultry Farm, Champaign, Ill. 2-4

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WHITE FACED Black Spanish. Heavy laying strain. Eggs, 15 for \$2.50. L. H. Rogers, R. 2, Charleston, W. Va. 2-3

TURKEYS

WHITE HOLLAND and Bourbon Red turkeys. Eggs for sale. R. R. Needham, Miami, Indiana. 4-4

GENUINE BOURBON REDS. Rich deep red. Farm range, vigorous stock. Eggs, \$3.00 per 10. Light Fawn Indian Runner ducks, white egg strain, \$2.00 per 13. Mrs. Elmer Crooks, Waveland, Indiana. 1-4

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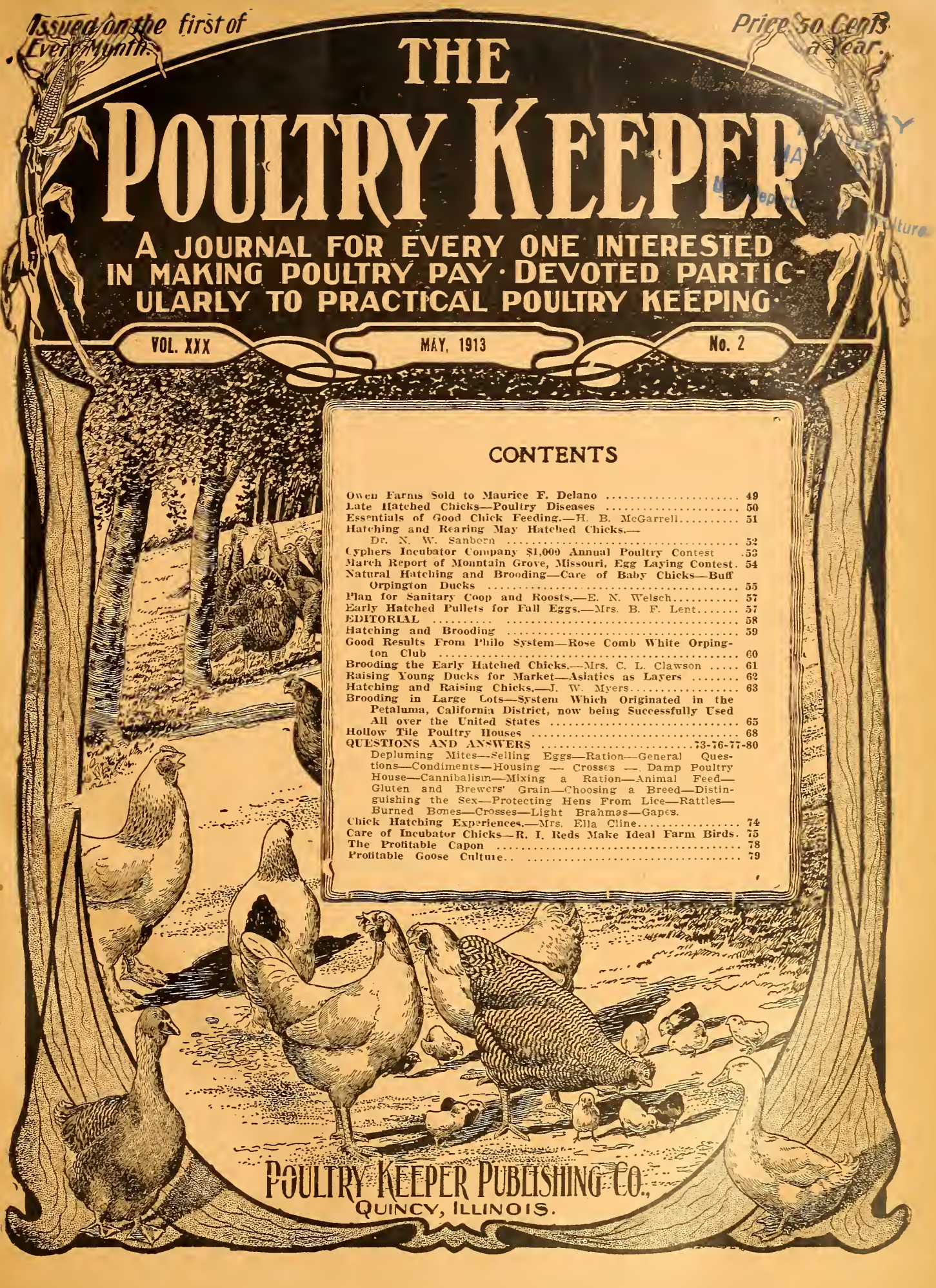
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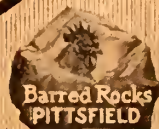
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THE

POULTRY



JOURNAL FOR
EVERYONE
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KEEPER

IN MAKING
POULTRY
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No. 2.

**WILLIAM BARRY OWEN RETIRES
FROM BUSINESS—OWEN FARMS
SOLD TO MAURICE F.
DELANO.**

Having been identified with the poultry business for a number of years and having had the confidence of the people generally, I feel it my duty, as well as my pleasure, to tell the poultry fanciers of the United States my reasons for retiring from the poultry business; to thank them for the warm support and patronage which they have extended to me in the past, and to say a few words about Maurice F. Delano, who has succeeded to Owen Farms' business.

A number of years ago when I retired from active business it was after **years of the hardest work of my life.** I was at that time very much run down in health and far from feeling able to do the kind of work and the quantity of it that I had been doing in the past. Retiring and coming to Vineyard Haven, which was my native home, I took up the breeding of poultry which was, as I have said many times in the press before, a hobby of my youth and because I loved thoroughbred poultry and took great pleasure in breeding the best that could be produced. Little did I think at the time I entered upon the work how fast it was going to grow and that Owen Farms was destined to build up flocks in the most prominent varieties of poultry that were second to none in the country, and that a business would flow from it as great and perhaps greater than any fancy poultry business has ever attained. Our last year's business was over \$80,000 cash in the mail.

Unfortunately, however, the enthusiasm for the business grew and before I knew it I had put so much time, thought and hard work into it that, instead of serving as I wanted it to serve, as a pastime and pleasure, it came to be work beyond my strength. I therefore have had to face the situation and with great regret make up my mind that I must retire from active work. Perhaps the pleasantest hours of my whole life I shall recall as the hours spent in the development of the fancy poultry business of Owen Farms. And I want to take occasion right here to thank the thousands upon thousands

of people all over the United States who have entrusted us with their money and to whom we have tried our utmost to render the very best of service, complete return for their expenditure with us, and to win from them that most cherished of all expressions, "I am satisfied."

I herein announce to all those friends



A Pair of Quality White Orpingtons in Yards of J. C. Beare, Orpington Specialist, Ft. Gage, Ill.

and to all interested in Owen Farms that I have sold my complete flocks of all birds just exactly as they have been mated this year and just as they are at the present time to Maurice F. Delano.

Maurice F. Delano needs no introduction to those who are at all interested in fancy poultry. He has been the manager of Owen Farms since its inception. He has been a judge of every large show nearly in the United States. Has been serving as an officer of nearly all prominent special club organizations. Has the reputation of being without a peer as a poultryman, honest, enthusiastic and tireless in his endeavor to satisfy every one with whom he deals. You can well know how gratified and proud I am to pass over Owen Farms' business to such a man.

I am also further pleased to announce that Maurice F. Delano has leased the entire facilities of Owen Farms, including all of their houses, yards, brooders, and in fact every individual portion of

their equipment, and that the business will be conducted with the same birds, the same farms and the same advantages that Owen Farms have ever possessed. I am glad to state that during the whole existence of Owen Farms William Barry Owen's policy has been Maurice F. Delano's policy, and that Maurice F. Delano's policy in his management and running of the business has been William Barry Owen's policy. I cannot say this too enthusiastically or too forcibly. The consequence is that the policy of making a great and good business founded up absolute fairness and justice to all will be carried on I am sure by Maurice F. Delano with perfect continuity.

I am also authorized to state that Frank H. Davey, who has been with Owen Farm so long, who was once the head of Greystone Farms at Yonkers, and than whom the world knows no better poultryman, judge or man, will continue with Maurice F. Delano as his superintendent, and Mr. Delano will also retain practically all of the other members of Owen Farms force.

I am also authorized to say for the new proprietor that he will be more than glad to receive a word from any and all customers of Owen Farms during the past, and also to say that any Owen Farms' customers can write to him fully, frankly and freely concerning anything they may have in mind, and they will have the same generous, courteous consideration and treatment that I believe they have hitherto always received.

I sign myself still yours for more and better poultry.

Wm. Barry Owens,
Vineyard Haven, Mass., April 10,
1913.

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants it except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

LATE HATCHED CHICKS.

By J. E. Willmarth, Amtiyville, N. Y.

Possibly this may seem a little early to talk about the late hatched chick, for April and May are considered by many to be the best hatching months, but with the improved incubators and brooders of the present day the tendency is towards the earlier hatched chicks, for there are many advantages in these, the chief of which is that the pullets lay earlier. Fall and early winter eggs are what bring big prices. Then these early chicks get a good size before the hot weather strikes them. All this applies to the American and similar breeds. Breeders of Leghorns and fowls of a similar class find May one of their best months, for earlier pullets will lay during late summer, then molt, and it is hard to get them going again until the season of high prices is past.

Unless one has all the chicks out that he can handle, we would not advise overlooking the possibilities of the May and June hatched chicks. With proper attention these later hatched fellows will pretty near catch the earlier birds. We cannot raise a lot of early chicks and then try to raise later ones with them or even on the same ground. Where late chicks run with the earlier ones, the former are continually picking at the little fellows. The large chicks pick all the choicest bits of food, drive them away from the water fountains and food hoppers, in short, keep the little fellows worried all the time and often will not let them get enough to eat. Even when one can remove the larger chicks from the yard or run and give the smaller ones full benefit, the earlier ones have scratched over the ground, probably picking all the 'life' out of it, and poisoned it more or less. Give the late chicks an equal chance and they will do fully as well as the earlier ones and will be far less trouble to raise. Especially is this true with hens for mothers, for they can be set most anywhere where it is not too hot, or better still given their liberty to run with chicks. Place such broods on fresh ground, that is ground that has had no other chickens running on it since it was last cultivated. Ground that has supported a flock of chicks can be removed easily by plowing or spading it and planting oats and letting it get an inch or so high. Turning the ground over buries the droppings which act as a fertilizer and at the same time are absorbed. Earth is one of the greatest purifiers, and even turning over a plot of ground will sweeten it considerably but some growing matter greatly helps as by process of nature it takes up these manures and converts them into a healthy food of considerable value.

Fresh food and water are other important essentials. Mashies quickly sour in warm weather, cracked and whole grains will mold, so care must be taken to mix only as much mash as will be eaten each day and feed of no kind should be fed in such great quantities that part is left. Give what will be eaten up quickly. By giving the chicks just enough so that they are al-

ways ready for a little more you will get them to eat more and thus get better growth on them, than if you feed so much that a little is before them all the time. This also applies to hopper feeding, not that this method has many advantages and much can be said in its favor, but by hand feeding you can get stock to eat considerable more than if you keep food before them all the time in hoppers. So where one wishes to get maximum growth hand feeding is best if properly done and the whole secret lies in just giving them a little less than what they want.

The water question is very important in warm weather. Stale water is bad water, but it is not always convenient to renew the water several times a day. This can be helped by placing the water vessel in a cool spot and also having the vessel rather large for a considerable body of water will keep in better condition longer than a small body but one is apt to be tempted not to renew often enough where vessels are large, for he thinks that the chicks have plenty of water. In fact we know of some who use small size fountains for then when they are empty they will refill them where they would not bother with a larger vessel that had some water in it.

When one has hens in a small coop with the chicks, try facing the coop towards the north in hot weather. This makes it much cooler for the hen and gives the chicks a shady spot in front of the coop. Then most of our rains come from a southerly direction, so that they are kept from beating in when coop is facing north.

Give the late chicks a good chance and push them along and in the fall they will come pretty near reaching the earlier ones in size and laying. June hatched chicks will generally lay by the holidays and many of the earlier ones do no better than this.

POULTRY DISEASES.

While everyone at this time of the year is busy with the incubator, sitting hens and brooders, it is well to stop and consider the many accidents, diseases, etc., that will in some cases effect the baby chicks during their time of development and after maturity.

There is no disease but has its cause and to effect a cure we must first remove the cause. Starting with the newly hatched chick, bowel trouble, known as White Diarrhoea, is generally the first trouble with baby chicks. Page after page has been written upon this subject, some writers claiming the disease comes from the low vitality of the breeding stock, others saying the trouble is in the incubator not being properly disinfected before placing eggs in the machine. I have used hens and incubators and I am satisfied the main cause is lack of heat in the brooder. Take chicks with the hen, did you ever notice many chicks pestered up with bowel trouble? I have never had any such cases when chicks were with the hen, providing the hen is not given too many chicks to hover while the

weather is yet cold. Prevent the cause of bowel trouble and you need no cure. Get your brooder in perfect working order and get the heat to 95 degrees when chicks are put into it; no regulator is necessary on the brooder. The chicks themselves are the best judge. When too warm, they move away from hover and when too cold, they huddle.

Feed is the next important item and if you feed a good grain chick food you will never have any bowel trouble. Dry bran in hoppers, chick grit and pure water in automatic fountains solve the problem. Watch for lice; don't be sure the chicks and brooder are free of lice. Have another look as to a remedy for diarrhoea. Nothing much can be done. Boiled rice is good and a little lime water to drink. If lice are found on heads of chicks care must be used in applying grease. Just a small amount should be put on head and throat. When chicks get older a good insect powder can be used and will not harm the chicks.

The next thing to trouble the chick is gapes. If you use new ground each year or grow some green stuff on the old ground you will prevent gapes to a great extent. If you have chicks with gapes, remove those affected and try to cure, using a fine hair to try to dislodge the worms in windpipe. Raw bacon, if they will eat it, is good, also garlic chopped up finely and mixed with bread crumbs or bran and very slightly moistened. Disinfect the ground by applying lime and then keep the chicks off until after a rain then spade and plant lettuce, oats or some other quick growing seed.

Keep your chicks growing. Avoid indigestion and liver trouble by feeding green food. Lettuce is very good and also sprouted oats. Grow the frame first then the feathers. If feathers grow too long in wings so they extend too far, clip the feathers close to base. It is hard on the chick to grow feathers and sometimes the body seems to decrease in size while the feather keep on growing. Make them exercise by scratching for small seeds in cut alfalfa or chaff from barn loft.

I have now written about all that is necessary to take your chicks through the most trying times of their lives to continue to write in one article of all the diseases peculiar to fowls as it would take up too much space so in the next number I will continue this article on diseases of poultry.

Joe Elpers.

Indiana.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

ESSENTIALS OF GOOD FEEDING WITH CHICKS.

The first thing the poultry fancier should do when he starts his plant or renews his stock is to be sure his chicks or eggs come from good healthy stock. For, without healthy, vigorous breeders, all his work will be thrown away. Whether he hatches by hens or incubators, is immaterial. I think 100 chicks is the limit with a brooder, no matter how large and with only 50 to 75 more good chicks will be raised. I do not feed the chicks until they are 36 hours old. I use a well balanced chick food. The wet mash foods are apt to be overfed and what remains sours and causes bowel trouble. The first feeds are given on the bare floor with a little grit sprinkled over it and a dish of fresh water close by. After the third or fourth day I take finely cut clover or alfalfa and scatter it two or three inches deep in their pens and put dry food enough in it to last several days. One cannot overfeed with the dry chick food in litter. After the first week, meat or fish scrap is necessary if the chick food does not contain it, also plenty of green food. Sprouted oats, lawn clippings or early rye are good greens. As soon as possible, the chicks are let run out on the ground where they pick their green food and get plenty of exercise. At six to eight weeks of age the chicks are taken out of the brooder and put in small colony coops and scattered out

on the range. They are then all hopper fed with a mixture of grains in one hopper and a dry mash in the other and given fresh water twice daily in hot weather.

Skimmed milk is one of the best of chick foods, but if fed too liberally it will be liable to physic young chicks. The best way to feed it is to curdle it and run off the water and just feed the curd. There is an acid in skimmed milk that affects chicks when given to them whole. I have grown broilers on dry grain and milk that weighed 3 lbs. at 9 weeks old.

When the chicks are nine weeks old they should have roosts in the colony houses as they will soon get in the habit of roosting. If they are left on the floor too long they are liable to have crooked breast bones.

I prefer keeping the pullets in the open air colony houses until it is time to put them in the laying house. They feather closer and when cold weather comes they are prepared for it, and will do better laying. Many people think if they feed their chicks once a day and let them hunt for the rest they will grow up some way and when winter comes they give them a little extra to make them lay and then wonder why they don't get any eggs. They never stop to think that a chicken to be a good layer, must be fed from the time it is hatched, with the idea of making it grow up to be a strong, healthy bird, and this is what makes good layers.

A poultryman's aim ought to be to have extreme cleanliness in every way as cleanliness is next to money in the poultry business. Nearly all of the poultry diseases originate in the filth of droppings boards and litter. Nothing will kill off little chicks as quickly as filth. If you will put about one drop of lard on the head of each chick when it is put into the brooder, or under the hen, it will not be troubled with head lice. Give them hard coal ashes to dust in. Road dust is too filthy and young chicks will eat it. Coal ashes contain nothing injurious to chicks.

I have found that hatching with incubators is a very simple matter if one follows directions, and the old hen also knows her business. If you wish to succeed use plenty of good food and common sense and you will succeed some day.

H. B. McGarrell,

New York.

The best favor you can do Poultry Keeper is to tell your poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special club offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.



HATCHING AND REARING MAY AND JUNE CHICKS.

Dr. N. W. Sanborn, Holden, Mass.

THE best hatches of the season come in the months of May and June. Everything is favorable to hatching. It is not so easy to rear the June chicks as to get them out of the eggs. The breeding stock should be at their best in April and May when you are saving the eggs for hatching. The birds can get out of doors; grass and clover are starting in the yards and fields, and it is the natural time of reproduction.

In these months we do not have to contend with the below freezing nights of March and April, we get less sudden changes of temperature and the number of pleasant days is larger.

Early hatching must be done largely with incubators. Broody hens are few and uncertain. When we come to the late spring months we generally have more "broodies" than we desire. Many of these hens can be well employed in hatching the late chicks and in brooding the chicks. The use of artificial methods in the warm months calls for more attention to supplying moisture to the machine and furnishing shade to the chicks.

Late Machine Hatching.

I like to handle the incubators in May and June. Free ventilation is easy, the door and windows being open wide much of the time. There is no stuffy air to run through the machine, no lamp fumes to poison, no need of rapid work in the turning of the eggs. This is quite a contrast to my first hatch of last year, when my machine stood frozen into three inches of ice, some water on the top of that at times, and one morning the thermometer on the wall near the machine registered twenty-three degrees. I get more variations in the machine in warm than in cold weather. The temperature of the cellar changes more between day and night, but it does not appear to effect the quantity and quality of the hatch. More airing of the eggs can be practiced in the mild summer temperature and in some warm June days the machine doors are open wide half an hour at a time. The eggs used in the late winter hatches are older than we prefer, many of them being seven to fourteen days. In late spring the hens are laying so rapidly that it takes only a few days to get the whole number of eggs needed to fill my machine. Fresher eggs, all the same age, helps get good hatches and strong chicks. The variety of food that is possible in May and June increases the value of the eggs we entrust to the machine or hen.

The winter hatches are carried on with the light and sunshine coming into south windows. The spring work is done with the south windows shaded and the light and air coming in on the east. I do not like the running up of the temperature of the incubator cellar that follows the pouring in of sunshine through the front windows. So these are partly closed until the middle of April and a board shutter

stood up to keep out the light and warmth. All through the mild days the east door is opened more or less according to the wind and heat or cold.

With the Hens.

Hatching with the hen at this season of the year gives good hatches. Of course there is much difference in the sitting qualities of hens and they do not always "make good." Much of the uneasiness of them is due to something that the owner neglected to take into account. Testing of the eggs before sitting is commonly neglected, so that too many thin shelled eggs are set and broken. Let a hen get the taste of a broken egg in her nest and she will be an unsatisfactory sitter. I have been into poultry houses and found sitting hens "roosting" on the edge of the nest, away from the eggs. In several instances I have taken her apart, as did the owner, when I got him to run his fingers into the nest material and let the red crawlers get onto him. Sitting hens should not be asked to do their work in the regular hen pen, no matter how free it is of lice and mites. They are entitled to a clean nest in a clean house, good eggs and a quiet place. The secluded barn cellar, a cool coop out in the orchard, a barrel behind some farm building, will give the sitting hen in June the conditions needed for incubation. A common, market bushel box makes the best thing I know to hold the hen, the nest material, the eggs for hatching. This box has sides so low that the hen will not break the eggs as she gets into the box. It is large enough to hold abundant nest material, to be airy enough for best results and can be had for a few cents. It is easily carried about, can even be stacked up several tiers in height, and makes a good home for the little chicks till a week old.

Earth or sod makes the best foundation for the nest. Shape it somewhat, then put in some fine hay, put in the eggs, and it is ready for the hen. Hens that would fail to get a good hatch in March with thirteen eggs may do well with fifteen eggs in May and June. I would not, however, advise over thirteen eggs at any season of the year. In March you will get more chicks, hens all considered, from twelve eggs than from more.

Get the nest complete and the eggs in it along late in the afternoon. When it is dark, hunt up the broody hen, take her from her nest without the use of a lantern, dust her thoroughly with some insect powder, and take to the nest of eggs for hatching. Place her on the eggs, in the dark, and go off and leave her. An hour later go back and finding her settled down on the eggs, leave her well shut in and the nest darkened, for two nights. If I set a hen on a Monday evening I do not let her off for feed and water till Wednesday morning. Then she is given the chance to leave the nest, finding water and feed right at hand. In case

she does not come off promptly I remove her. I stay near this first morning, to see that she eats, that she drinks and that her bowels move. The eggs are counted and anything wrong about the nest is corrected. When the hen has returned to the nest, or has been induced to go back to the eggs, she is shut in as before, till the next day. There is much satisfaction in knowing that the hen must remain on the nest till let off the following day. No hen can get on the wrong nest, two hens cannot claim the same nest and the eggs are not likely to get cold because of absence of the hen at some wrong hour.

Selection of Hatching Eggs.

With the full egg basket of late spring time we can select the hatching eggs with more care than earlier in the year. Whether we set a single hen or a mammoth incubator we should select the eggs. When we pick out a sitting of eggs for a hen we try to have them all uniform in every particular. Why are we not just as careful in the picking out of eggs for the machine? It is a fact that we do not have nearly as uniform a lot of eggs in the incubator as when set under a hen. When we have a sitting of eggs come by express, or parcel post, we expect them to look alike. When we have a hundred eggs come, we have no where near as great expectations. If we would select the eggs for the machine with the same care as the eggs for a single hen we should get far better hatches. Our hatching eggs should be fair, uniform and alike in shell and age. Reject the very large, the small or the rough shelled ones. The sense of touch will tell you much in the handling of the eggs in the basket.

Twenty-one days soon pass and you find a bunch of chicks to provide for. Whether hatched with hen or not, go through the chicks and kill all doubtful ones. You want to retain the vigorous ones, the big and active ones, while all those that have failed to close up the opening through which the yolk passed in should be killed. It is a sign of weakness if not of disease to find the chick not well "buttoned up!" If the hen has had the proper amount of warmth, if the incubator has been run at the desired temperature, the chicks will be all out and dry by the evening of the twenty-first day. Chicks that come out after being incubated fully three weeks are doubtful of value.

Not long ago I had an early hatch from eggs of somewhat doubtful value. The chicks varied much in looks when a day old. I divided them into two classes according to the buttoning-up idea. The Normal chicks were about equal in number to the other lot. There were nearly fifty-five chicks in each lot, and each one was given a good brooder. Heat, litter, feed and water were the same. Of the good chicks three failed to do well. Of the other lot, the un-buttoned ones, twenty-seven went to the bad before two weeks of age. The chick that is all right and that is well hatched, can be picked out according to this simple suggestion of mine. Take some notice of this when

your next hatch comes off. If you can do it, experiment along the lines I have given.

The Chicks.

These late hatched chicks need more green food than those that came off in February and March. They also need more out door exercise and fresh air. On sunny days let them out of the coop and out of the brooder, on to the short, fresh grass of the yard. Let them have all they will eat of this growing grass and also feed them cut grass or green clover as well. I used to think that if my chicks could eat all the grass they wished it was enough. Today I know that I can raise better chicks when I supply, ready cut, an added supply of green food. In the brooders I feed all they will eat from the floor, and sprinkle plenty more on the top of the hover. The grass on the top of the hover will dry, curl up, work off onto the floor, and be eaten, too. The chicks with the caged hen eat the clover and the hen will get back to normal laying more quickly because of the green food you give her.

I prefer the green food to any that has been dried. Small chicks do not take kindly to the dry fiber in hay and clover hay, the fiber being too hard to digest. In the fresh stage it is much more easily handled by the digestive organs of the little chick.

Whether you brood by hen or artificial method have the chicks out in the field or yard, near shade. June and July are often hot and dry and the chicks will need shade at noonday. The coop or brooder will be decidedly warm when it is in the full rays of the sun. If hawks or cats bother you will have to use small yards of inch wire netting. When I have to have these, and I do at times, I make the sides of the yard or two foot inch netting and the top of two inch common hen yard wire. A roll of the two feet, inch mesh, netting comes in handy in chicken work. Every bunch of chicks needs a small yard at first to get them used to going in and out of the right coop. When "home" becomes well known to them you can take away the wire and allow free range.

So far as the matter of warmth with the hen is concerned, she will attend to that. The brooder temperature need not be so high as in early spring. Brooders that I run at 105 degrees in March, under the hover, I do not intend to go over 95 degrees in June. There is little danger in the warm days of the brooders cooling off too much at night with ordinary lamp flame. With good oil, good lamp, good brooder, you can fill the lamp every four days, scrape the wick every two days and by hopper feeding make easy work of it.

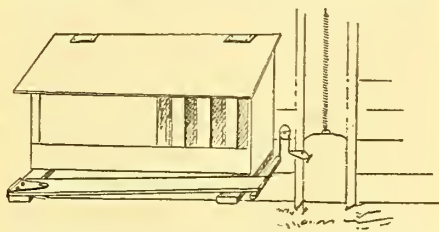
Milk makes the best of animal food for summer chicks. So long as it is clean, it may be used sweet or sour. I prefer to mix it with ground grain and feed in that form, to avoid the sticking of the down or feathers of the

chicks. Next to milk I would put a high grade of fish scrap, and last of all meat scrap. Ten to twelve per cent animal food—solid matter—is about right for the chicks.

Culling is more important in summer chicks than in the early ones. They do not stand the attacks of lice and mites so well as in March weather. Vermin multiply rapidly in hot days and before you realize it the chicks are really ill. No poultryman can raise summer chicks unless he keeps red mites under and keeps lice within bounds. Because you hatch in machines and raise in brooders, never be sure that your chicks are free from vermin. I have seen this confidence fail. So long as the English sparrows are around you are never sure that they do not pass along starters in the form of lice or mites. This sparrow is dirty, filthy and loaded with vermin. Try to keep him from living on your feed and making a home on your premises.

AUTOMATIC COOP DOOR.

Let the hens open your coop door at the crack o' day. Door is hung on a spiral spring and caught by a button connected by cord through small galvanized pulley to mash feed platform.



The first fowl on the platform in the morning releases the tripper and the doors fly up. Then you keep on sleeping the sleep of the just.

E. A. DeWolfe. Massachusetts.

REPORTS OF SUCCESSFUL POULTRY GROWERS—\$1,000 ANNUAL PRIZE CONTEST.

The publishers of poultry papers are periodically asked the question, "Can I Make a Living With Poultry?" The question comes from all sorts of people and naturally is a hard one to answer because of this variance. Realizing this condition the Cyphers Incubator Company, have conducted a contest recently offering a total of \$1,000 in \$3 prizes ranging from \$200 down to \$5. The first prize of \$200 was won by Frederick H. Bates, of Hanover, Massachusetts.

Seven years ago Mr. Bates was connected with one of the Boston daily newspapers and gave up a good city position to take his family to a 25 acre farm about twenty miles south of Boston. This step was decided upon after visiting various poultry farms taking up the Saturday afternoon holidays for a period of two years. A feature of the South Shore district is the growing of capons so this was made the basis of Mr. Bates' beginning. Light Brahmas being chosen as the breed to insure large, heavy weight capons. These were supplied direct

to the consumer, thus cutting out the middle man and keeping all the profit.

A strict account was kept of every source of revenue and every item of expense, the idea being to make the business pay out, producing all feed on the farm, as far as possible and selling direct to the consumer, the poultry and eggs. Quality goods were the only product sold and there were no dissatisfied customers. While the duties were constant, it was found to make it a success, the business must be made to produce a revenue all of the time because of the constant expenses to be met.

Not only has the business paid out, but it has paid off a mortgage of \$1,500 on the farm, the farm has been greatly improved and shows a nice profit each year. The small feathers are carefully cured and made into sofa pillows, which are readily disposed of to the department stores in Boston. Every detail of the work was arranged to save expense or to produce revenue and while the hours are long and the duties strenuous, the owner of the farm finds himself established in his own business, independent of the storms of city life and is his own boss.

In addition to the article by Mr. Bates, the Cyphers Incubator Co. have incorporated in their book report of the contest, the accounts given by other contestants, some of them boys and girls and others women. The book comprises 176 pages, well illustrated, showing pictures of many of the contestants and their poultry plants. It is intended to have the contest carried on again this year and succeeding years and the reports will form some of the most interesting reading the novice in poultry work can get hold of. It will also serve to correct the ideas of those skeptical about the possibilities of poultry growing.

The Cyphers Company have been noted for producing quality printing to advertise their business and the report of this contest is a further proof of their willingness to go to any expense to further the poultry business. We are requested to announce that a free copy of the book may be had by writing the Cyphers Incubator Company, Dept. 23, Buffalo, New York. When you write, simply ask for a copy of their book covering the 1912 poultry growers' contest and the book will be sent to you promptly. That poultry growing is not a matter of geography, seems to be proven by the contest as there are reports from parties located all the way from Maine to Florida and from California to Texas. There is something in the book to interest almost any kind of a poultry grower and the Editor of Poultry Keeper sincerely hopes that our readers will be anxious to send for copies of the book as soon as this notice is read. Everything about poultry growing has been systematically and thoroughly covered by the reports of those actively engaged in the work and for real information the book is a fund of facts and a work of reference which will be preserved by all who are fortunate enough to get a copy of it.

MARCH REPORT OF NATIONAL EGG LAYING CONTEST.

Black Langshans Make Record for the Month—White Leghorns From England Still Lead for the Entire Time—Twelve Pens Lay Over 200 Eggs Each in 31 Days—One Hen Lays 29 Eggs in 28 Days—The Canadian Method of Feeding Laying Hens—Timely and Important Suggestion as to Rearing Chicks.

THE race is becoming much more interesting. The majority of the hens have settled down to business and nearly every pen is making a very creditable showing, some doing much better than others, of course. The total record for the month was 12,889 eggs, which runs the grand total for the four and a half months up to 34,525 eggs. No remarkably high records have been made thus far, but the general average is much better than last year. The English pen of S. C. White Leghorns is 129 eggs in advance of the next highest pen. From the results obtained thus far at this place and at Storrs, Conn., and from our own knowledge of conditions, we believe the English breeders have been studying the question of breeding for egg production much more than have the breeders of this country. This is one of the objects of this contest. We hope to stimulate some such interest in this country. Notwithstanding the views of some of our leading authorities to the contrary, we believe if the fowls have been properly bred, if given reasonably good care and reasonably good feed, they will produce a greater number of eggs than another pen of fowls of the same variety which have been carelessly and promiscuously bred, even though this last mentioned pen may get as good or perhaps better feed than the first named pen. Our observations and investigations thus far bear out these facts.

One Buff Orpington pullet, No. 647, laid 29 eggs in 28 consecutive days this month, laying 2 eggs in one day. She then went broody for the second time this season. Broody hens now begin to trouble us. Six hens, one White Wyandotte, one Buff Plymouth Rock, one Black Langshan, two White Orpingtons, and one Buff Orpington, each laid 30 eggs in the 31 days. One hen which made a high record last year has only laid 2 eggs this year. Another high record hen is also making a good record the second year. A pen of Black Langshans, No. 57, from Missouri, won the silver cup for the best record for March by laying 248 eggs in the 31 days. Three out of the 12 highest pen records for March were made by Black Langshans, 2 were White Wyandottes and 2 were Silver Wyandottes.

The twelve highest pen records for the first four and a half months of the contest are as follows, three pens out of the twelve highest having tied:

Pen No.	Eggs.
2 S. C. White Leghorns, England	890
23 Silver Wyandottes, Illinois	761
57 Black Langshans, Missouri	736
19 Silver Wyandottes, Iowa	711
33 Barred Plymouth Rocks, Ill.	668
58 Buff Orpingtons, Missouri	640

49 Black Langshans, Missouri	637
30 Buff Wyandottes, Vermont	633
20 White Wyandottes, Arkansas	627
24 White Wyandottes, New Jersey	627
56 White Orpingtons, Kentucky	627
43 S. C. Rhode Island Reds, Florida	620

Nineteen pens of ten hens each laid more than 200 eggs per pen during the month. The twelve highest pen records for March were as follows:

Pen No.	Eggs.
57 Black Langshans, Missouri	248
2 S. C. White Leghorns, England	234
56 White Orpingtons, Kentucky	233
49 Black Langshans, Missouri	224
27 Silver Wyandottes, Missouri	223
47 Buff Plymouth Rocks, Missouri	222
46 R. C. Rhode Island Reds, Ind.	220
23 Silver Wyandottes, Illinois	220
11 Black Minorcas, Iowa	219
39 Barred Plymouth Rocks, Iowa	219
9 S. C. Brown Leghorns, Missouri	218
53 Black Langshans, Indiana	216

During the first 136 days of this year's contest, the leading pen has laid more eggs than the two leading pens of last year's contest laid in the first 151 days. The leading hen this year has laid 113 eggs in the first 136 days of the contest, and the leading hen last year laid 116 eggs in the first 151 days. The individuals and pens are each making better records this year than last. The twelve leading hens have made the following records for the first 136 days:

Hen No.	Eggs.
66 S. C. White Leghorn, England	113
860 Buff Wyandotte, Vermont	108
735 Black Langshan, Missouri	104
600 Buff Wyandotte, Missouri	103
656 White Wyandotte, Arkansas	103
2076 Buff Orpington, Missouri	103
709 Buff Plymouth Rock, Mo.	102
68 S. C. White Leghorn, England	102
601 Silver Wyandotte, Iowa	101
62 S. C. White Leghorn, England	101
2158 Buff Orpington, Missouri	101
65 S. C. White Leghorn, England	100

The Feeding Test.

We are now beginning to hatch a few chicks from these pens to determine, if possible, if the different methods have any noticeable influence on the percentage of fertility of the eggs, the hatchability of the same and on the livability of the chicks. We have made birds of the same age and breeding in all pens.

In the pen where the same kind of feed has been kept before the pen of five White Leghorns and five Buff Orpingtons, and are allowed to eat as much or as little of each kind of food as they desired, the results have been as follows:

They have laid more eggs than any other of the ten feeding test pens and

have eaten the following:

77 lbs. oats, principally rolled oats.
66 lbs. wheat.
60 lbs. corn, principally cracked corn.
36 lbs. millet.
24 lbs. sunflower seed.
18 lbs. kaffir corn.
12 lbs. cane seed.
10 lbs. oyster shell.
189 lbs. water.
130 lbs. buttermilk.

They are allowed to help themselves to either and drink a little more water than buttermilk.

They have eaten but little of anything else than the feeds mentioned above and but very little ground feed of any kind. They have eaten twice as much cracked corn as whole corn. The hens in this pen do not seem to be any fatter than the hens in the other pens. They are in just good laying condition thus far.

Pen No. 64—The Canadian Method of Feeding Laying Hens.

This is one of the most simple methods of feeding hens. Thus far it has proven to be one of the most satisfactory and the hens are making a good egg record.

In winter months the grain mixture is composed of two-thirds corn and one third wheat, thrown into the straw litter. In summer one third corn and two-thirds wheat; in the spring and fall months, equal parts corn and wheat. We feed about a pint to ten hens in the morning and perhaps a little more at night. Rolled oats are fed from a hopper. The hens are also supplied with grit, shell, charcoal, and some wholesome green food. They are given nothing to drink except buttermilk. In our opinion, this is a very well balanced ration for any farmer to use. It is about as simple as you can make it and still get the best results.

Care of Growing Stock.

Do not fall into the all too common habit of thinking that after a chick is past the first three weeks; it will raise itself. If a chick is to develop into a healthy, vigorous cockerel, or a strong, active pullet that will shell out the eggs next winter, it must have the best of feed and care throughout the entire growing period.

Do not over-crowd. Many of the ills and much of the mortality among growing chicks is due to over crowding. The brooder or coop should furnish ample room for the little fellows to stretch themselves out at night without coming in contact with each other. Plenty of fresh air should be admitted at all times in such a way that there will be no draughts causing the chicks to huddle together.

Fight lice and mites. Like the poor, these little pests are always with us, and a continual warfare must be waged to keep them from exacting a heavy toll of dead, dwarfed and stunted chicks. Watch for head lice. Greasing lightly the heads of all chicks over two weeks old with a mixture of kerosene and lard, equal parts, will serve either as a preventative or cure. Also grease lightly under the wings. Be careful not to use too much grease and oil. Application should be repeated in about two weeks if chicks are badly

infested. For mites paint or spray brooding quarters with a mixture of eight parts kerosene to one part crude carbolic acid. This will also serve as a good disinfectant.

Provide pure water. The importance of an abundance of fresh, cool, pure water, cannot be over-estimated. Filthy drinking water is one of the most common causes of disease, and lack of water a too common cause of unsatisfactory growth. All drinking vessels should be scalded at least once a week. In cool, damp weather sufficient permanganate of potassium to give the water a deep reddish tinge will assist in preventing colds and bowel trouble.

Good food properly fed. Good feed and plenty of it, easily accessible at all times, is one of the most important "secrets" of successfully producing the best birds either for market, laying or exhibition and breeding purposes. After chicks are six weeks old, if they are on free range, they should have free access to a hopper containing equal parts by weight of cracked corn and cracked wheat. If they are confined to runs in which there is no green food, they should be given, daily, lettuce, sprouted oats or lawn clippings. The grain mixture above mentioned should be sifted and fed in a deep litter of cut clover or alfalfa, or chaff from a barn mow, or finely cut straw, so as to induce plenty of exercise. Plenty of clean sharp grit should be provided, and a hopper containing the following mixture kept before them at all times. The proportions given are by measure:

- 3 parts bran.
- 4 parts corn meal.
- 4 parts shorts or middlings.
- 2 parts fine meat scraps.
- 1 part fine charcoal.

Do not forget that "Eternal vigilance is the price of success" in the poultry business.

T. E. Quisenberry, Director,
Mountain Grove, Mo.

BACK TO NATURE HATCHING AND BROODING.

Just now when the failures of 1912 are so far passed and the season of 1913 here with the brightest outlook the poultry industry has ever known, is it any wonder we can scarcely wait to get ready a natural hen incubator and put in the very first biddies that are inclined to be broody?

This incubator consisting of ten compartments with one hen and fifteen eggs in each place should hatch as many chicks as the average two hundred egg machines and with much less care and anxious thought for with the lamp, there is always more or less danger of over heating or chilling to say nothing of the fire damage that may occur.

On first entering the poultry business and starting with the flock on hand of mixed stock, largely Leghorns, I found I could not get one of twenty hens to sit, so purchased a wooden hen and while raising those birds was very successful with the machine, I gradually changed to thoroughbred White

Wyandottes and at the end of the second year sold all mixed birds and now have White Wyandottes only. These are sitters and good ones at that. They will sit anywhere providing they are well fed and watered and given a little room to exercise. The birds are large and easily care for fifteen eggs each.

The seasons that I use the artificial incubator I set it the same time as one lot of hens, then when they hatch, put a drop of melted lard on the top of each chick's head and give twenty chicks to each hen. For me there is no brooder that can equal the trap-nested Wyandotte hen. They are quiet and not afraid of me because of the frequent handling after she starts to lay. Her heat is always just right and she never allows the birds to pile up and smother, nor stand out in the rain until ready to die. The very few times I have reared brooder chicks, say fifty at a time, they proved more work, care and loss of sleep than three hundred placed with fifteen hens, and many of them caring for them without the loss of one.

I have tried almost every kind and shape of brood coop and find for this location where we must protect against rain and cold and an occasional wind (not like our Texas brother writes about) but one of South Dakota's north western breezes; we like the box coop two feet by four feet and two feet high with top in one piece hinged on one side. This makes the coop not only easy to clean out but later to get to the birds for sorting or studying them. I have had galvanized coops where I must lie flat on the ground to be able to get the birds out of the coop. Our box coops have a little door about one foot square in the lower left hand side and a similar opening in the opposite end, covered with netting. In cold or rainy weather I have no trouble leaving them shut in sometimes two or three days when the sun comes out, out comes the white feathery balls ready to scratch, eat and grow.

Mrs. E. M. Knutson.

South Dakota.

CARE OF BABY CHICKS.

After removing chicks to brooder, same being thoroughly cleaned, disinfected, aired and warmed to 95 degrees, with clean sand or sweet and carefully dried clover chaff on both floors, darken the windows and keep them quiet for at least twenty four hours; thirty-six hours is better. Never feed or water till forty-eight hours old.

For one hundred chicks I used eight or ten hard boiled eggs ground finely, shell and all, mixed with a very little salt, pepper and one teaspoonful of powdered charcoal. Only one feed first day and slightly warmed water at noon, remove as soon as they cease drinking.

Second day, ground eggs prepared as above in morning; at ten o'clock warm water; at noon, warm water, a few dried bread crumbs ground and scattered in sand or clover chaff; at two o'clock water and at four o'clock a little commercial chick feed scattered in litter.

Third day, eggs for breakfast, and warmed water; at noon, green tops of sprouted oats cut very finely, about three tablespoonfuls water; four o'clock water; five o'clock a little bread dried, ground and moistened with sweet milk.

Fourth day, commercial chick feed for breakfast, water; ten-thirty, water; noon, green oat tops cut finely, four spoonfuls; supper, bread, milk and water. The only variation I make in this ration till one month of age is to give more chick feed and increase oat tops at noon. Once a week after first week give light feed of raw onions chopped very finely. Keep plenty of pure fresh water, charcoal, chick grit, dry bone ground finely, also a small hopper filled with bran and a little salt before them all the time. Clean drinking and feeding vessels thoroughly every morning. Clean brooder at least twice a week. I have never lost a chick on this ration, and have raised many hundreds.

Mrs. F. W. Mottner.

Idaho.

BUFF ORPINGTON DUCKS.

The Buff Orpington drake has a long, finely formed head, with rich, lustrous-brown plumage; bill long and broader at the extremity than at the base. The neck is long, slender and neatly curved, with the same lustrous brown plumage as the head. The back is long; the upper part being grayish buff and running into a rich lustrous brown on the lower part of the rump. The body is long, deep and broad. The wings are short and carried closely and smoothly against the sides. In color they are fawn-buff.

The head of the Buff duck, like that of the drake, is long and finely formed, but with grayish-buff plumage and two stripes of tan extending from the beak to behind the eyes. The neck is neatly curved, long and slender and of light buff plumage. The wings are like those of the drake. They lay large, white eggs of uniform size. The Buff Orpington ducks are great table fowls. They are small eaters, eating, I believe, about a third less than the Pekins. They are great layers, wonderful weighers and the prettiest ducks grown.

Mrs. Jennie Biddle.

Indiana.

A GOOD FEBRUARY RECORD.

Editor, Poultry Keeper:

I am sending you the record for ten of my White Plymouth Rock pullets. They laid 197 eggs during the month of February. Their morning feed was equal parts of oats, corn and wheat, fed in a deep litter of oat straw, which kept them busy the greater part of the day. Cabbage was fed for green food and at night they were fed a moist mash of ground corn and oats, using 33 lbs. of oats to 56 lbs. of corn and giving all they would eat. Ten per cent of good beef scrap was also added to the mash.

Ross McMahan.

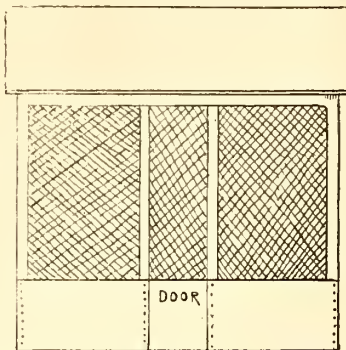
Ohio.

HOW YOU CAN MAKE GOOD IF YOU HANDLE YOUR POULTRY RIGHT.

Any business, to be a success, must be managed in a business way. Poultry is no exception to the general rule, even requiring more planning and foresight than the general run of occupations. In the first place, you should be a born fancier, one who likes the work, as otherwise you will be likely to make a failure of it. There are thousands of mistakes made each year, especially by beginners. Every business has its disadvantages, and in this respect, the poultry business is no exception. A great many people start in the poultry business with the get-rich quick idea. Here is where they are way off. You might invest your money in a gold mine and get rich in one year, but with the poultry business it takes a great deal of time and patience.

Although I realize that it is hard to give advice as how best to start in the poultry business, I would suggest a

ing and mating poultry. He should also study the science of advertising and on this, to a great extent, depends the success. Six lines of advertising rightly worded may sell more stock than a half page adv. telling about things



FRONT

that never happened and that are out of reason. Such experience will prove valuable to any boy in later years, perhaps not in the poultry business but in some manufacturing business.

When you start your boy, let him have full charge and give him all the profits he may make. It is a mistake to expect him to do the work, while you take the profits and a boy under such circumstances, soon loses interest

in the enterprise. Also give him to understand that he is to keep an account of all things and to try to avoid failure. Advise him at times. Help him with his correspondence and do this as an adviser and not a dictator. Start him in a small way and let him expand as circumstances warrant. Don't force him to take a particular breed, but let him have his choice.

for feeding hens and pullets, showing weights or amounts to use. Pullets require a different ration than hens that are laying, so see that they have it. Keep account of the expense of feeding and the eggs gathered each day, also the time put in cleaning houses, etc., and see how well you can keep down the expense. I would have a day to market my eggs and see that they are marketed on that day and the selling not delayed.

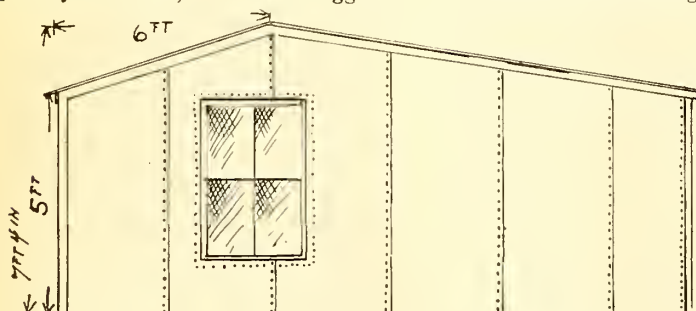
New Hampshire Edward F. Adams, BROODING AND GROWING CHICKS

My experience with incubators has not been a success. I have tried for two or three years and with two different makes of machines, both standard, and I simply cannot hatch more than thirty chicks out of every hundred eggs, so concluded to let someone else run the machines and let me raise the chicks, which I can do.

I have three or four coops, something on the Philo order, in which I raise my chicks. These coops are about three by six feet, with a partition through the middle, a glass in one end and one inch mesh wire at the other. In these coops I put my brooder boxes. These are made of ten pound cracker boxes as I find they are about the right size for twenty-five little chicks, which are as many as should be put in a brooder box at one time. I make the brooders in the following way: I take the top off of the box and put two cleats, one at each end, about half way up or perhaps a little more, then make a frame of lath, by taking two pieces the length of the box, inside measurement, and three pieces the length of the width of the box. On this frame (the under side) I tack outing flannel loosely, laying a small pleat or two to allow it to bag down a little. The third piece of lath is of no use except to serve as a handle to the frame so as to pick it up easier. I also make two pillows of outing flannel or any soft cloth and fill with cotton or alfalfa chaff to lay on top of the frame, when my little chicks are ready to put into the coops. I keep them in a basket in the house until all are hatched and dry and fluffy. I put plenty of alfalfa chaff in the bottom of the coop, also in the bottom of the brooder box. This I make in the form of a nest and have it high enough so that their backs touch the hover. When my chicks are in their nest I place the hover frame on and put a pillow on top. If it is very cold I put two pillows on and draw the chaff up closely and the chicks are as contented as they can be and they soon learn to come out and how they do make the chaff fly when they get to scratching. I do not feed them until they are thirty-six hours old but give them a little water to drink. I begin by feeding bread crumbs and keep some bran before them all the time. As they get older I mix shorts and chopped corn with some beef scraps and feed them this until they get large enough to eat wheat. As the chicks grow and get larger, I place a small wire run at one end of the coop and let them run out and you ought to see them grow.

Nebraska.

F. C. H.



SIDE

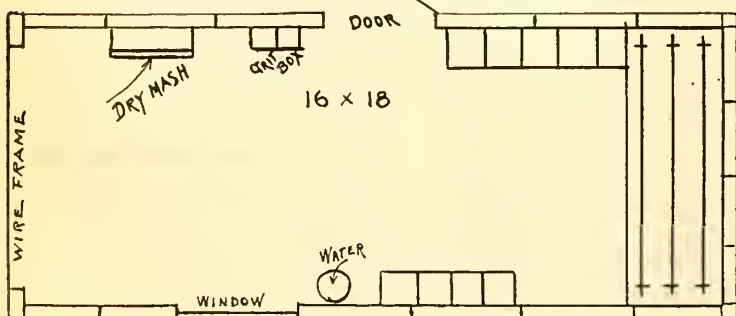
E. E. Adam's Open Front House.

start with a trio and have it understood that the owner of the birds must be the head of the business. It is an easy matter to interest almost any boy in poultry raising. Once get him interested and he will have no idle minutes, but will spend his spare time reading poultry literature or working with the poultry. Most boys who embark in the poultry business

are benefited in more ways than one. Not only is his time well spent, but his mind is well occupied and he should be given a chance to show the latent qualities in him. He at once becomes interested in business methods as he receives a schooling that other businesses cannot give, having his models to study and to try to improve on. He also studies the best methods of breed-

variety and give them the best care and attention he knows how. Remember that persistent work and systematic breeding are important essentials to his success.

The best houses are those known as open front houses and I am sending some plans for same. See that your hens do not want for any of the necessities of life. Have regular formulas



Interior Arrangement of E. E. Adam's House.

are benefited in more ways than one. Not only is his time well spent, but his mind is well occupied and he should be given a chance to show the latent qualities in him. He at once becomes interested in business methods as he receives a schooling that other businesses cannot give, having his models to study and to try to improve on. He also studies the best methods of breed-

SANITARY COOP AND ROOSTS.

I have three of these coops in the same field and have had good results from my hens which are quality White Plymouth Rocks. The roosts are of 2x2 inch yellow pine with holes bored for pipe to go through. The oil cup roosts I have in my houses are fine to keep down lice and mites and may be something new to readers of Poultry Keeper. The droppings board extends eight inches beyond the roosts on all sides. The roost pipes fasten to the roof with nuts. The pipes are of 3/8 inch material and the cups need filling once a week, with ordinary lamp oil.

E. N. Welsch,

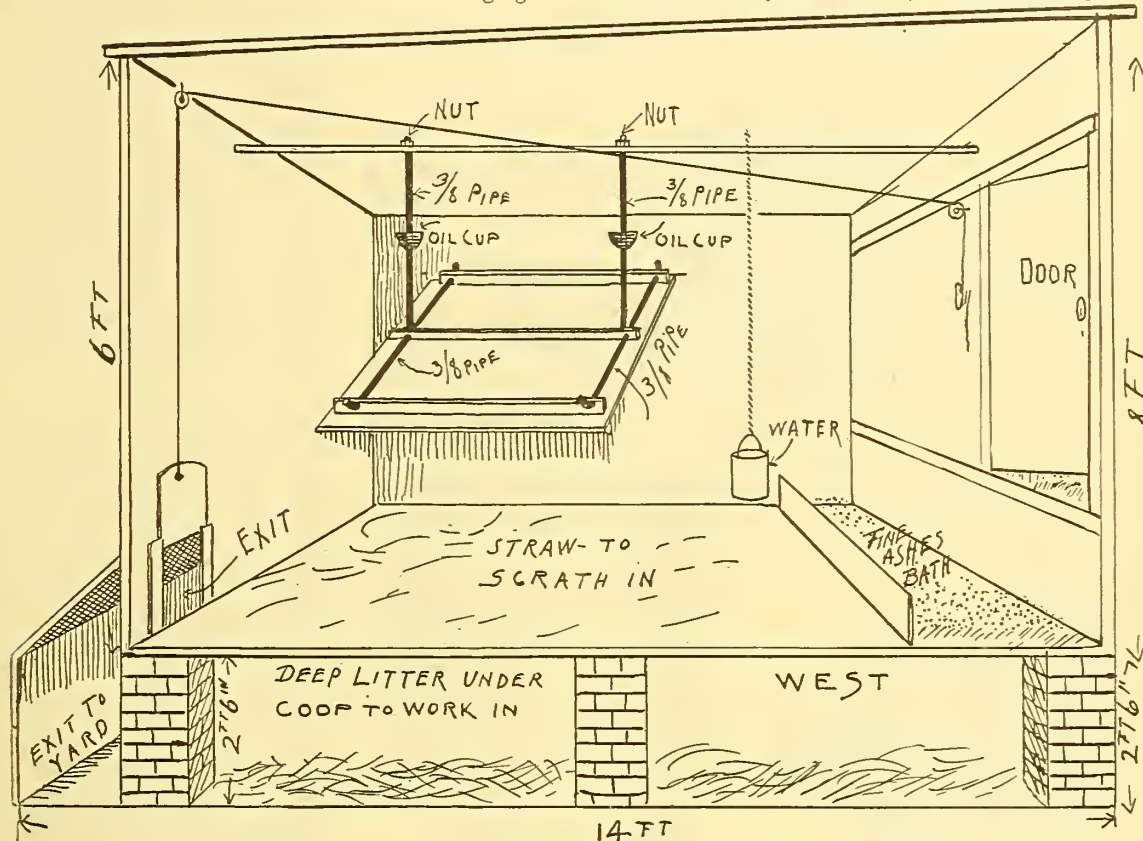
Ohio.

They have done well and I have not lost one of them.

I set my incubator with eighty eggs. I tested out eight and got forty-six chicks. They hatched during the first week of February and it turned very cold and I had trouble in keeping the temperature just right. The incubator was in a room without fire with the weather below zero, so it was not very warm in that room. Finally I moved the incubator into the dining room where we always had a fire. I believe I would have had a better hatch had I moved the machine sooner, but considered the hatch fair for that time of the year. The eggs were brought in from the country and might have been chilled bringing them in or before they

for eight years and never missed more than two days at a time without getting eggs until last fall. My two hens were molting and the pullets were not old enough to lay. The hens had laid heavily, but quit in September, and I did not get an egg till November 15th. Illinois. Mrs. B. F. Lent,

The famous Owen Farms at Vineyard Haven, Massachusetts, has recently changed hands and now has become the property of the former manager, Maurice F. Delano, who will now conduct the business in his own name. The early hatching has been so successful this season that before the first of May Mr. Delano had in the neighborhood of 7,000 chicks in sight, thus let-



E. N. Welsch's Double Deck Poultry House.

EARLY HATCHED PULLETS FOR FALL EGGS.

Last year I had poor luck with my poultry, and concluded to close out for a year as feed was so high and so poor. Grain of all kinds was poor. I had eaten or sold all of my hens but two, but also had thirteen fine pullets. My husband asked me where all the chickens were and I told him I was going to quit for a year. He told me not to do it as it gave me amusement and kept me out of mischief. Well I certainly stay close enough to my chickens to keep me out of all sorts of things.

My chickens are Rhode Island Reds. The pullets started to lay on November 15th at five and one-half months of age and by the first of December all of them were laying and most of them are still at it. Some of them have been broody and I set two of them on twenty-seven eggs and got sixteen chicks.

were gathered. I have never been able to get big hatches like some people but manage to raise 97 per cent of the chicks I do hatch, which I consider good and it suits me better than having a big hatch and losing half of them.

We always get so many good things out of the Poultry Keeper. Am always ready for it. Some reader promised to give directions for making a cheap oats sprouter, which I wish he would do. Green food for winter is an importance matter and some of us keep so few hens that we cannot afford to buy the expensive machines we might use for best results. I fed chickweed to my hens last winter, but it is frequently covered with snow so that we cannot get at it. Cull apples and cabbage leaves were also used to help out.

Some of my neighbors did not get any eggs all winter long. That would discourage me and cause me to quit the business quickly. I have kept hens

ting him make a special offer at reduced prices for eggs wanted by customers for late hatching as per his announcement in this month's adv. He also will sell five quality pens in each of his varieties. Mr. Delano has had extensive experience in the fancy poultry business and his connection the past few years with the Owen Farms, followed by his purchase of this business from Mr. Owen ought to insure him lots of success. The Editor of Poultry Keeper sincerely trusts that our readers will not be slow to take advantage of these special offers made this month by Mr. Delano.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

POULTRY KEEPER

ISSUED THE FIRST OF EACH MONTH
A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
(Incorporated) QUINCY, ILLINOIS.

Subscription Price: Fifty Cents a year; Single Copies, 5c.

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Change of Address—When this is desired, be sure to give old and new Post Office addresses.

All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising Rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

F. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

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MAY, 1913

No. 2

The severe rains of late March upset the plans of many of our readers. Some of them lost all their flocks by drowning, others saved the birds only to have them become ill from extreme exposure. Many who were not in the flooded districts had their troubles, too. Booked orders for eggs were not filled, booked orders for eggs were countermanded, because of upset conditions. More than one fancier will see no profits this year because of the weather conditions of early spring. A lot of people will lose their courage and drop out of poultry keeping. The "hill country" will appeal stronger to folks than ever before—and poultry keepers will make more of the upland than ever. How we all like to take chances! Such a flood may never come in your day and ours again, but we shall not rest easy again when the clouds gather and the rain comes down as in March of 1913.

Is it true that flocks that give a high degree of egg fertility in winter months show a decided drop in March? We have had several such statements this spring as explaining poor hatches in early April. We have looked into several of these statements in the letters that have come to us, and we also get the opinion of many that this low wave of poor fertility is generally followed by better hatching in May and June. We would like to get such facts as any of our readers can give as relates to this whole matter. If any one has a series of several years to draw from, facts that have been kept in writing all the time, we would appreciate the getting of them.

Are the egg contests giving the results that we have wanted? Are we satisfied with the facts as they have appeared in print? Shall we take what is offered, make the best of it, or demand that more real practical results be obtained? Have the fanciers spoiled their flocks for egg production? We do not think so, but we want rugged facts to settle the matter. Does the shape of the birds have anything to

do with size and numbers of eggs? Is there an egg type, and if so what is it?

The buying of "baby" or "day-old" chicks is now common. Prices range from ten to twenty-five dollars per 100 for common chicks, up to fifty and seventy-five dollars for those of better fancy breeding. As a rule it is the owner of more ordinary stock who takes up the selling of day-old chicks. The real fancier has been slow to add this branch to his business. Men of much reputation have hard work to fill eggs-for-hatching orders as wanted without taking up the selling of live chicks. Custom hatching is working out better than we had expected. Mammoth hatchers have been put in at many central points and are turning out chicks from the owner's eggs as well as those of customers. We have watched the attempts of a few of these large hatching plants and they seem to be succeeding. Some of them have put in additional machines the past winter. One farm, nearby, that has been running one hatcher of nine thousand egg capacity for two years, has put in another of the same size. It has been easier to hatch and ship the baby chicks than to brood them successfully. We think more folks fail in raising chicks than in hatching them. Other people have thought so too and are buying pullets when past the danger line, at about nine weeks of age, and handling them. Then there will always be the few folks that want table eggs but cannot raise chicks of any age. These are forced to buy their layers in the autumn. The man who gets the most satisfaction out of poultry is the one who can do all the various things connected with the work from the producing of the eggs to the raising and maturing of the stock. There will always be the place for the custom hatcher, for the plant to produce eggs for hatching and stock for breeding, but the every-day man and woman will still produce their own eggs and hatch them for themselves. The world is large, the needs various, folks do not all agree, and it is well that we have all these

new methods to help out the needs of poultrymen.

Have any of our readers used ground beans in the feeding of hens or chicks? Beans average over twenty per cent protein and if suitable for poultry should prove useful. One of the members of our staff is trying out five hundred pounds ground beans in the dry mash. There are two matters to be considered in the use of beans. The first is the question of whether beans make good hen food. The second is whether any disease will follow the use of a product that is likely to have some mold germs in it. Beans of the quality fit to sell for house use cost too much for feeding poultry. Table beans were worth wholesale on April 5th from \$2.60 to \$3.20 per bushel. Broken beans, wrinkled beans, discolored beans, beans not used for human food because of a vegetable germ life that is common to them, are the source of the ground beans that we refer to. Ground beans make a product that is dry, dusty, heavy, and not fully tested. We would like to get at real facts that our subscribers may be able to supply us from practical experiments. Unless we are more sure of our position we must refrain from suggesting where ground beans can be had. Do not ask us, but if you wish to try it seek for it near home.

The election of the new officers to the A. P. A. is now on. There has been much effort, time and money spent by some of the candidates. We do not see why so many folks desire these offices. There is little money in the salaries, the honor is not great when you consider the fault finding that so surely follows any work and the time limit is short. Often the man who seeks the place is not the best one. Sometimes the man that seems to be working for office does not really want it, and the voter needs to consider all sides of the matter before casting his ballot. In a few weeks we shall know the result of the election and then we can quiet down to home affairs for another year. The statements made to date seem to indicate that the next meeting will be held at Atlantic City, N. J., some time in August. Always room at Atlantic City for more people!

GOOD RESULTS WITH POULTEY.

Editor, Poultry Keeper:

Last year I wrote you of my 23 chicks hatched in May and every bird lived. The pullets began to lay at five months and did splendidly. They were Barred Rocks. I have now added a yard of White Orpingtons and another of White Leghorns, keeping a limited number of each. The coop of six Leghorn pullets gave us an egg a day for each pullet until the litter was out. The Orpingtons have done the same, an egg a day for each pullet since we penned them. I use Cycle hatchers.

Mrs. J. T. Kelton,
Texas.

HATCHING AND BROODING.

I do all my hatching with incubators. One cannot handle even a small poultry business without one or more incubators as with hens you cannot sit them until they are ready, but you can set an incubator when you are ready. If you do not have a special incubator house to put your incubators in the year 'round, they should be put in storage in some dry place when not in use, but for hatching, I have never found a better place than in the cellar. The temperature is so even that it is easy to regulate the machines and I usually get a 90 per cent hatch or thereabout from untested eggs. I take every precaution to see that I am placing reasonably fertile eggs in my incubators, but do not test after eggs are once in the machines. I have heard a great many arguments about testing. Some say it should be done and give what they think are good reasons. Whether such reasons have ever been proven of any force, I do not know. Others say testing should not be done, because it is not natural. The men never tests out the infertile or unhatchable eggs. Although I do not test out the infertile eggs, I know it to be a fact that some hens do. I have set hens at different times and have watched them closely and in several instances have come upon them pushing an egg to one corner of the nest and breaking it. I have examined such eggs and have found them infertile. Not only once, but on several occasions. I have seen this done and I have wondered if eggs usually found broken in nests were not mostly infertile eggs and purposely broken. Of course in some cases, eggs are accidentally broken in the nests. In the cases above mentioned, every egg remaining in the nests at the end of three weeks brought forth a chick. I know only what I saw and any one who hatches with hens might do well to watch closely. I have strayed somewhat from my subject but think it is worth it.

When the hatch comes off I place all strong chicks on brooders; not too many in a brooder, and put in a mug of hot water covered with cloth to keep the water from burning the chicks. When they want to get warm they hover around the jug and there is little danger of the chicks smothering.

I do not feed the chicks until they are 24 hours old. Some hatches do not require feeding as soon as others. I use my judgment about that. I watch the chicks closely for a week or two as they require feeding often and will have to be taught to go into the brooder. Before they have learned, they will let you know each time when they want to go in.

After they have reached the age of three weeks, if they are fed regularly with good, pure food, plenty of fresh water, with vessels and quarters kept clean and otherwise given proper attention, you cannot help but have good luck. At least, I have good luck and the foregoing is the way I handle my chicks.

A. G. Kester,

Wisconsin.

Two Secrets of Success

BETTER BROODING and NUTRINE CHICK SALTS



RAISING THE CHICKS YOU HATCH is the Main Secret of Success in Poultry-Keeping. Many breeders do not know how many chicks they lose because they die one by one. It's easier to hatch chicks than to raise them. Read page 68 of our Big Free Catalogue. It gives the experience of men who raise nearly every chick—raise them strong and big and hearty—the kind that win at shows, and pay to grow for layers and market.

NUTRINE CHICK SALTS is a food—not a medicine. It provides bone, sinews, feathers and aids digestion. It furnishes the necessary earth salts that are not found in sufficient quantity in corn, wheat, etc. It helps puny, weak chicks grow strong, and keeps the strong ones growing faster and feathering to perfection. Read about it in our Free Catalogue.

2 lb. package 50c (65c postpaid); 5 lb. package \$1.00 (\$1.25 postpaid.) (We pay freight if ordered with Incubator or Brooder.) It costs about 5c a week for 50 chicks.

The Separate Parts of **Essex-Model Portable Hover**. Can be used in any House, Coop, Box or Home-made Brooder. Best and Cheapest. Only \$7.50. See full description in catalogue.

SHALL BUY MORE HOVERS

I have been using six of your Hovers all season, and find them so satisfactory shall probably buy more. I like the idea of being able to get at the chicks so easily.

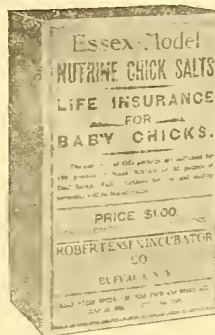
HARRY H. PIKE

BEST AND CHEAPEST

The Portable Hovers I received from you are the best I have ever used. I have not lost any chicks since I have used them. They are the best and cheapest I ever had in my 20 years of experience.

J. B. WOOD

Supt. for E. E. Lorillard



NO WHITE DIARRHOEA —RAISED 1000

Ashtabula, Ohio

Robert Essex Co.,

Our success is in a large measure due to the use of Nutrine Chick Salts. We are marketing broilers which have always had access to Nutrine Salts. With nearly a thousand chicks, ducklings and goslings, on hand, we have yet to find our first case of leg weakness or white diarrhoea. Barring accidents, we are raising practically every chick well hatched, in spite of heavy forcing. **REDBROOK POULTRY FARM**

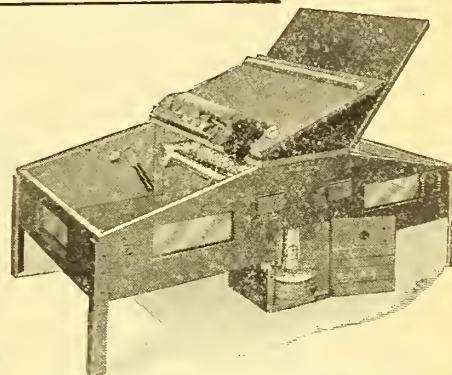
America's Largest Line of Incubators and Brooders

19 Styles and Sizes, \$2.25 to \$48

There is no Hover on earth so good and cheap as our \$7.50 Portable Hover, and no Brooder to equal our Double New Homestead Brooder at the price. Buying a Brooder is even more important than buying an Incubator. We offer you the largest choice of Incubators and Brooders, at prices to suit your pocket.

Did you get our **FREE CATALOGUE**? If not, write for it, and read the **Five Chapters on Poultry Raising** written by Robert Essex; see the **30 Photos of the Latest Houses on Experiment Stations**; also the illustrations and descriptions of the **Greatest Line of Incubators and Brooders** made anywhere, by anybody. The Most Superior Machines at low prices. Address nearest office.

Robert Essex
Incubator Company
7 Henry Street, Buffalo, N.Y.
67 Barclay St., New York City



Essex-Model Double New Homestead Brooder. Two Brooders at price of one. Can be used as one big brooder by removing partition. Only \$10.00.

BEANS FOR POULTRY FOOD.

Editor, Poultry Keeper:

In your March issue, I read a paragraph about beans for food for laying hens and thought I would send in my experience with the same. Having quite a few beans that were too small for selling and having no way of using them, I tried them on the hens, first feeding them just as they are, but the hens would not look at them. Next I tried them cooked to a mush and fed warm. They would eat just a small portion of them. At last I struck it by cooking them until just soft, but not cooking them to a mush and mixing them with a little ground feed. The

hens ate it readily. After a few days I left out the ground feed and fed the beans clear and the hens will eat them as well as they will corn. The beans seem to have all the elements that go to make the egg and the increase in the egg production will pay all the beans cost and good interest. I consider beans one of the best of foods for laying hens and they are worth at least \$1.50 per bushel for feed. Ground beans I have never tried but believe if you can get the hens to eat them, they would be ahead of whole beans as food.

Vern Thompson,

Michigan.

Baby Chicks


SINGLE COMB WHITE LEGHORNS, ROSE AND SINGLE COMB REDS.

Our eggs are now running from 90 per cent to 95 per cent fertile, which is positive proof that our hens are in prime condition and are fed right. Baby chicks from such eggs are sure to be large and vigorous, and when you can buy such chicks, at the following prices, you better order quick.

Leghorns—25 for \$3.25; 50 for \$6; 100, \$11.00; 1000, \$100.00.
Reds—25 for \$4.00; 50, \$7.50; 100, \$14.00; 1000, \$120.00.

Order direct from this ad. We guarantee prompt delivery, safe arrival, and full count, or write us for further information. **SIMPLEX FARM.** No. 343 Fourth St., Grand Rapids, Mich.

LICE ROB YOUR HENS OF VITALITY THEY ROB YOU OF EGGS




DR. LEGEAR'S LICE KILLER

is an excellent and perfectly safe remedy for the killing of lice, mites, and all vermin on poultry and all live stock. It is a fine powder, put up in large sifting-top cans, and is very easily applied. To use it on poultry, catch the bird by the feet with the head downwards and sprinkle it freely into the feathers, especially under the wings and about the vent.

Large Cans 25c at Druggists and Dealers everywhere. We are sole manufacturers of Dr. LeGear's Famous Stock and Poultry Remedies. Send for Stock and Poultry Book—its free.

Dr. L. D. LeGear Medicine Co.
Howard St. St. Louis, Mo.



No More LICE!



No sir, no more lice and we mean it. The lice problem won't worry you if you will do as the leading successful poultrymen have done for 30 years. Stop experimenting—get

The Old Reliable
LAMBERT'S Death To Lice

and your lice troubles will be no more. Safe, sure, quick, easy to apply. Will not injure hens, eggs, chicks, or soil plumage. Sold in 10c, 25c, 50c and \$1.00 sizes. Send 2c for latest copy of Lambert's "POCKET BOOK OF POINTERS".

O.K. Stock Food Co., 504 Traders Bldg., Chicago

A 200 EGG INCUBATOR ONLY \$3.00

The most difficult problem of all poultry raisers has been entirely overcome by a German poultry specialist operating in this country, through his simple Natural Hen Incubator, which uses the hen herself. The problem of getting as strong and healthy chicks as the hen herself could ever hatch has confronted incubator manufacturers, practically ever since the first incubator was manufactured.

No manufacturer has ever been able to claim such a feature on his incubator, until Mr. Siems put his system on the market several years ago, which has won tremendous popularity among poultry raisers.

One of the most startling features of the Natural Hen Incubator is the fact a 200 egg size costs only \$3. The same size incubator in almost any other make would cost from four to ten times this price. Its remarkable advantages and its low price, and the fact that thousands of them have been sold, gives great promise for revolutionizing the entire poultry industry.

The system patented by Mr. Siems is astoundingly simple, even though it offers the poultry raiser far more advantages than have ever been found heretofore.

The Natural Hen Incubator has proven a success in every way. It does away with lamps, oil expense and trouble, hot death dealing fumes, uncertainty of temperature, and the possibility of losing the entire hatch by allowing heat to go out.

In the Natural Hen Incubator, where Mrs. Hen is the controlling feature, she is kept strictly on the job until the entire hatch is produced, and it is safe to say that her work with the Natural Hen Incubator has a much higher degree of certainty than she has ever been able to claim where she worked independently and alone. The uniform hatching produces a larger percentage of chicks.

The advertisements of The Natural Hen Incubator have appeared in this paper from time to time, and for the benefit of our readers we can say, by all means send for their catalog if you are in the least way interested in poultry raising.

The address of the Natural Hen Incubator Company is Station H. Department One, Los Angeles, California

BEST RESULTS FROM THE PHILO SYSTEM.

Editor, Poultry Keeper:

I notice that Mrs. Delia E. Jordan would like information as to the care and raising of Leghorn chicks. I had sixty Leghorn chicks about two years ago. I put them in a Philo brooder and fed them all dry food, cracked wheat and corn, baby chick food, rolled oats and corn bread, with good clean water and clean sand. I sent and got a Philo Book which tells how to care for chicks and also how to make the Philo Brooding coops. I raised four hundred chicks in Philo coops last year. With care and cleanliness, anyone can have success. I always raise red peppers and sunflowers for my laying hens and the chicks are never bothered with bowel trouble. I make red pepper tea and mix in the corn meal before baking. I mix the meal with eggs and sour milk just the same as I would for the home table. I do not think one can have success with any number of chickens and allow filth to accumulate in the coops. Lice and mites are apt to be on all chickens but will not cause disease unless one gets careless about cleaning the coops and yards. I manage to keep my hens busy and have had eggs to sell all the past winter. For my use, I find no way quite so good as the Philo System which any one can get by sending to E. R. Philo, Elmira, N. Y.

Mrs. W. A. Downey,
Indiana.

We are in receipt of the 1913 mating list of the Famous Regal Strain of White Wyandottes, owned by John S. Martin, Box 408, Port Dover, Ontario, Canada. The demand for this strain was very heavy last season and Mr. Martin has a number of extra pens for this season, including 30 special matings of fancy, exhibition birds, and 16 pens of utility stock. He also has a number of fine breeding and exhibition birds which he will sell for immediate use. Mr. Martin is an extensive breeder of White Wyandottes and his extensive yards will enable him to fill any order promptly. He will be glad to send a copy of his mating list free of charge to any inquirer.


DAY-OLD CHICKS

Healthy, vigorous, from heavy laying stock. Guaranteed satisfactory. Place orders NOW.

Hatching Eggs
Breeding Stock

S. C. W. Leghorns, White and Barred Rocks. All eggs and stock **GUARANTEED.** Write for big new catalog: "Tywacana Quality." It gives as much information of value to poultrymen. It's FREE.

TYWACANA FARMS POULTRY CO.
A. E. Wright, Supt.
Box 57, Farmingdale, Long Island, N. Y.



Plain truth is, you will have no lousy hens if you paint the inside of your henhouse with

AVENARIUS CARBOLINEUM
(Registered)
once a year. It's guaranteed. Write for circulars and testimonials.
Carbolineum Wood Preserving Co.
Dept. 54, Milwaukee, Wis.


Beware of Imitations



45 Varieties Land and Water Fowls

Send for free illustrated catalog, which tells you much you should know. Stock and eggs at all times.


S. A. HUMMEL, Box 50, Freeport, Ill.



25 PAT. APPLIED FOR

Aluminum only; two sizes; adjustable to fit any fowl. Held by double lock. Can't lose off. Postpaid 12-15c; 25-29c; 50-35c; 100-60c. Initials 10c per 100 extra, 50 or less 5c. Also Pigeon Bands.

T. CADWALLADER, Box 1208, Salem, Ohio.



BROODING THE EARLY HATCHED CHICKS.

The only way to get fall laying pullets is to hatch in February, March and April and the only way to do this is to have incubators and brooders. I have used both kinds of brooders and much prefer the fireless. I think the chicks are much healthier. We made several fireless brooders, using large dry goods boxes, the larger boxes made the best brooders. If you cannot get large boxes, take two smaller ones and put them together. Take out the fronts and make the front a foot higher than the back. Nail a six inch board at the top and bottom in front. Tack one inch mesh wire netting and muslin over this. Make a board roof and cover with some good roofing that will not leak. Hinge it on and make a board partition to slip in the brooder coop. This is to be used while the chicks are very small and on cold, windy days. Have litter in one end and dirt in the other. Get some small boxes at the grocers, 18 or 20 inches square. Some larger will not hurt but it is better to have them small. Use one in each of the brooder coops you make out of the larger boxes. Cut a small opening in the side of box for chicks to run out into the larger brooder and fill the box half full of nice fine litter and make a little round nest just large enough to hold thirty little chicks. Take a piece of bed blanket the size of the box and tack or sew three inch strips of same, one inch apart. After the strips are sewed on, take shears and make fringe of them. Then tack this blanket to strips of wood that will just fit in the box, so that the blanket with fringe will hang down over the chicks' backs. A couple of nails driven in the end of the box will hold it up. I have raised hundreds of chickens in these home-made brooders and they are as healthy and happy as can be. Last year people came a good many miles to see my little Buff Orpingtons in just such a brooder and it was a great wonder to them as to how the chicks kept warm and healthy when the weather was so cold.

The only way to have high priced eggs is to have them in the winter and the only way to get eggs in winter is to get early hatched pullets, by hatching and rearing by artificial means.

Mrs. C. L. Clawson,

Illinois.

A GREAT OFFER ON S. C. WHITE ORPINGTONS.

My flock of young chicks being so early and large at this time, and my incubators still doing full duty, I have concluded to give lovers of the S. C. White Orpingtons the chance of their lives to get winning stock for next fall and winter shows, and will furnish 100 to 150 five-week old to nine-week old chicks, to be shipped between May first and May tenth, these birds all from prize winning stock. Cockerels, \$3 each; pullets, \$2 each. Orders will be booked and filled in order received, and when the number has been sold,

those sending orders too late will have their money returned.

You might ask, gentlemen, how I can afford to do this after paying the prices I have for my stock, but I thought it would be a good advertisement, for by next fall those having bought young chicks would see the quality and the orders then received would make up for what I am losing now. Am I right?

Select what you desire out of the above.

Yours truly,
F. B. Donisthorpe,

Geneva, Nebraska.

Reference: The Citizens State Bank of Geneva, Neb.; Geneva State Bank of Geneva, Neb.

INCUBATOR WORK A PLEASURE.

Poultry Keeper Publishing Company, Quincy, Ill.

Gentlemen:—Enclosed please find one dollar for ten, number two Acme Incubator Lamp Wicks. Your wicks certainly make incubator work a pleasure.

Very truly yours,
Thos. M. Shepherd.

No Guess Work With a "Tycos"



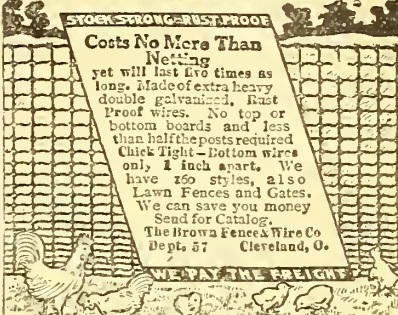
It does the essential thing with perfect correctness—it registers the temperature in the egg chamber just as it is. A "Tycos" Incubator Thermometer makes no mistakes; it is always accurate. You have to break a "Tycos" to destroy its accuracy. It is "aged" and tested before sold. That is why every "Tycos" is dependable. Send for Free Booklet, "Incubator Facts". "Tycos" Incubator Thermometers, each \$0.75. Incubator Hygrometers, each \$1.50.

Taylor Instrument Companies Rochester N. Y.

BROWN POULTRY FENCE

Costs No More Than Netting

yet will last five times as long. Made of extra heavy double galvanized, Rust Proof wires. No top or bottom boards and less than half the posts required. Chick Tight—Bottom wires only, 1 inch apart. We have 260 styles, also Lawn Fences and Gates. We can save you money. Send for Catalog. The Brown Fence & Wire Co. Dept. 57 Cleveland, O.



UNPRECEDENTED BARGAIN

"M. M. S." Poultry and Garden Fencing

Popular among Poultry Raisers and Farmers all over the country—A big seller—Made in standard or close spacing; sizes 12 to 34 inches wide. Needs no top or bottom rails—Not a netting but a poultry fence. All horizontal bars run straight through the fabric. Every foot in height reinforced by a two strand cable. Takes only about one-half the posts that ordinary Poultry Netting does. All No. 19 Galvanized wire—strong and durable.

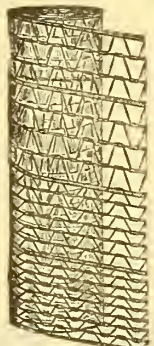
SAVE 30% to 50%

We bought several thousand rolls of this celebrated fencing at less than actual cost to manufacture, and are offering it to our friends at 30% to 50% below usual retail prices.

10 rods (165 feet) in roll—from 70¢ a roll up
36 inch—\$1.60 per roll — 48 inch—\$1.95 per roll

It's going like "hot cakes"—Don't wait. Send in your order before its all gone. Prompt shipments guaranteed. Write for free catalog, illustrating and describing big bargains in all kinds of merchandise.

A. J. CHILD & SONS MERC. CO., 510 No. Main Street, St. Louis, Mo.



White Leghorn Baby Chicks

Carefully hatched from pure strain, heavy-laying, vigorous stock. The kind of chicks that thrive and grow to healthy maturity. Every one inspected—carefully packed.

Safe Arrival and Entire Satisfaction Absolutely Guaranteed

Michigan Farm day-old chicks are of finest quality because they are bred and hatched on a modern, well-managed plant. 60,000 egg capacity mammoth incubators. All cellars, brooders, ranges and houses are faultless in construction and efficiency. They are built right and managed properly. Michigan Farm Breeding Stock embodies highest quality of thorough breeding and healthy vigor.

WE ALWAYS SATISFY EVERY CUSTOMER

Denver, Colo.
April 11, 1913.

Michigan Poultry Farm,
Lansing, Mich.
Gentlemen:—

We received chicks today and are pleased to say they all arrived in first class shape without one exception. Not one was the least bit dumpy.

Very truly yours,
(Signed) W. E. RICE.

Prices on Chicks	
\$4 25 per	25
8 00 per	50
15 00 per	100
75.00 per	500
135.00 per	1,000

Immediate shipment if desired. Orders for 500 or more booked by wire or phone at our expense if confirmed by mail.

Our catalog will save you money on chicks and breeders. Send for a copy today. It is free.

MICHIGAN POULTRY FARM LANSING, MICH.



RAISING YOUNG DUCKS FOR MARKET.

To begin with, I will say that poor health drove me to try raising young ducks for the market. I could not do hard labor and decided to buy an incubator and brooder and purchase eggs to sit. From my experience I found that although feed was high, which I had to buy, and I had very poor hatches, I could raise them at a cost of 8c per lb. to the age of six weeks and they averaged 3 lbs. each. I sold to my home dealer at 16c per lb. By adding the labor to the cost I made it double itself in value.

I kept them in a small pen and fed equal parts by measure of bran, shorts and meal, to which I added 5 per cent sand and made into a mash by adding water. I kept this with plenty of fresh water deep enough for them to wash their heads in, before them all the time. My worst trouble was in hatching the eggs. I managed the incubator the same way as for hen eggs and got only about a 55 per cent hatch of duck eggs and about 83 per cent with hen eggs. The person I got the duck eggs of said they hatched well for her.

I am going to try my luck with the Pekin ducks again this spring and am thinking of shipping my ducks. I am a reader of Poultry Keeper and would like to hear from others who have tried raising ducks, especially those who hatch them in incubators.

Geo. W. Clark,

Illinois.

WHAT THE ASIATIC BREEDS CAN DO.

Editor, Poultry Keeper:

I am sending you an egg record for 18 Light Brahma pullets for the month of March, 1913.

March 1-14	March 17-16
" 2-11	" 18-14
" 3-14	" 19-18
" 4-13	" 20-11
" 5-13	" 21-14
" 6-15	" 22-17
" 7- 8	" 23-17
" 8-15	" 24-16
" 9-16	" 25-14
" 10-13	" 26-11
" 11-15	" 27-16
" 12-15	" 28-13
" 13-15	" 29-15
" 14-13	" 30-12
" 15-15	" 31-18
" 16-14	Total.....441

As these pullets began laying in the fall and have laid steadily all winter, I think this a real good record.

J. F. Garrison,

Illinois.

RECORD FOR FIFTY R. I. REDS.

The following is a record for December, January and February for 36 pullets and 14 hens or 50 in all. They are R. C. Rhode Island Reds.

December	471
January	865
February	817

C. L. Marker,

Pennsylvania.

MAY CHICKS ARE BEST



The month that the flowers come into bloom seems to be the best month to hatch the exhibition chicks for the winter shows. My five winning cockerels in the open and pen classes at the last Boston Show were all hatched during the last week of May and the beginning of June. The weather is warm, vegetation springing up, and fertility runs high and the chicks are strong and vigorous. Why not choose this month to become acquainted with Regal White Wyandottes? I guarantee a good hatch.

Mr. R. K. Baker, of Waseca, Sask., writes me as follows:

"We got fourteen nice chicks from the fifteen eggs you sent us. We consider this hard to beat as the eggs had been shipped almost two thousand miles by rail and were six or seven days on the road, being changed from one road to another several times. They were certainly well fertilized and packed!"

Such a hatch would not be possible with any other than the Regal Strain. Eggs for hatching from twenty beautiful exhibition matings, \$5 per 15; \$9 per 30; \$12 per 45; \$24 per 100. Dorcas sittings at same price during May.

Utility eggs, \$9 per 100. Send four cents in stamps for the Regal White Wyandotte Book. Catalogue and Mating List free. JOHN S. MARTIN, BOX 408, PORT DOVER, ONT.

DIRECT FROM MILL TO FOWLS.
YOUR CHICKS WILL THRIVE and Grow Like Weeds on

H-P Chick Starter and H-P Growing Mash

They are a correct combination of animal and vegetable protein. There are none like them. Our Poultryman's GUIDE on FOOD, HEALTH and DISEASE, gives all particulars. Forty-four pages of practical, reliable information, on all phases of Poultry Culture. Price 25c and worth many times the money, but sent FREE to YOU for the names of two poultry raisers besides your own. Write for it today.

KNOLLENBERG MILLING CO., Dept. A. Quincy, Ill.



J. T. FRENCH Barred Rocks

Winners at Cleveland, Toledo, Chicago, and other leading shows.

36 Prizes in one season.

EGGS from the Best Matings I ever owned, \$3.00 and \$5.00 per 15. 6 hens and a cockerel for sale. Price, \$12.00.

Finely Illustrated Mating List. 838 W. GROVE PLACE, TOLEDO, OHIO.

All Steel Triple Wall Double Air Space INCUBATOR



It bears the label of the Fire Underwriters which insures durability and protection. It is built entirely of metal, with the exception of the pressed fibre inner lining. Double air space on all sides, top and bottom. Send for our catalog showing the most complete line of Poultry Supplies in the United States.

Macomb Poultry Supply Co. Box B. Macomb, Ill.

Buff Wyandottes

THE GREAT GENERAL PURPOSE BREED. STOCK AT REASONABLE PRICES. EGGS, best matings, \$3.00 per 15; second matings, \$1.50 per 15. Let me try to please you. Send for circulars, containing best lot of Testimonials put out by any Breeder. Ten years a Breeder of Buff Wyandottes.

J. E. WILLMARTH,

AMITYVILLE, N. Y.

Originator "High Quality" Strain.

FOR HATCHING EGGS! EGGS! EGGS! GLOVERNOOKS

White Holland Turkeys—White African Guineas—White Embden Geese—White Japanese Silkies—Imperial Pekin Ducks. Great bargains in Great Birds. Great Layers, Great Hatchers, Great Non-Related Stock. Mention Poultry Keeper. MISS FRANCIS E. WHEELER, CHAZY, NEW YORK.

HATCHING AND RAISING CHICKENS.

In raising chickens the first thing to consider is the breed, as some breeds are best for laying and others best for their meat. We raise White Wyandottes, as we want a general purpose fowl. I have raised Leghorns and must say they can't be beaten for eggs and the young cockerels make the finest fries when they weigh about two pounds, but when we sell old hens they don't weigh much, so we are raising larger fowls and think we have found our ideal. Select what breed suits you best and don't try to raise something you don't like. Don't raise mongrels for they eat as much as thoroughbreds and don't pay as well.

I don't like penning chickens for eggs if it can be avoided as I don't think the eggs are as fertile as where the hens have free range. Where only one breed is kept I think it best to sell all culls then let the rest do as they please. I never save eggs for hatching over ten days as so many culls out as infertile if the eggs are kept too long. I try to set about four old hens at the same time I set my Old Trusty Incubator, then when they hatch I dust the old hens with louse powder and put them and the baby chicks in a little house about eight feet long by four feet wide and it is just high enough to get into to take care of the chickens. It is divided in the middle by poultry wire to keep all the old hens from sit-

ting on one corner. It has two small doors in the south and a large canvas window that I can open or close, and a medium size glass window in the west. It is made rat proof as rats are our worst enemies.

Don't feed before chicks are twenty-four hours old. I give cornbread for the first feed; also save the infertile incubator eggs, boil hard then crumble finely and feed to the chicks. I usually feed the old hens all the shelled corn they can eat quickly, as I take them off. I feed the little chicks about four times a day all they will eat. There is little danger of feeding too much when old hens are with them as old hens always seem hungry and usually clean up all there is left. I always feed all the grit they want and give fresh water every time I feed them and let them drink; then throw the water that is left out.

I cover the floor of their houses with litter from the barn floor as they like to pick and scratch in it and it makes the house easier cleaned. I turn out on the ground when about four days old if it is warm enough. I think cold, dark houses and lack of exercise the worst causes of white diarrhoea. I grease the chicks when about a week old with melted lard with a few drops of kerosene added, putting a little grease on top of the head. I find this much surer than louse powder and there is no danger if used carefully.

After they are about two weeks old

I feed all the cracked corn they will eat, and think where they have free range of the orchard and meadows so they can catch lots of bugs and have all the grass they want this makes a pretty good ration for them until they are grown.

Illinois. J. W. Myers,
**THE IMPROVED ALUMINUM
CHAMPION LEG BAND.
PRICES REDUCED.**

The Champion Leg Band is the oldest and most popular band on the market. It is made in one piece, in

25 PAT APPLIED FOR

two sizes, adjustable to fit any fowl. This band always stays securely where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the broad part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend the two lugs over the loose end as shown in cut. Cut off surplus with scissors.



Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state that you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

Maurice F. Delano

SUCCESSOR TO

OWEN FARMS

SALUTATORY

The most important sale ever made in the Fancy Poultry World has just been completed and I am now the fortunate **SOLE OWNER** of the entire **OWEN FARMS** flocks without reserve and including every mating exactly as made for 1913. On Page 61 in this issue you will find an announcement from Mr. Owen that will give you his reasons for selling. My reasons for buying are self-evident. It is the proudest day of my life to succeed to the Owen Farms business and become owner of the flocks which I have managed during the past eight years. And I hereby pledge myself to every past customer of Owen Farms and to every present and future customer of Maurice F. Delano, that I will leave no stone unturned to give each and every one absolute satisfaction and full value for every dollar entrusted to me. It is my ambition to keep up and even enhance the reputation for absolute squareness that was so dear to Mr. Owen's heart and which brought to Owen Farms the largest trade on record in the history of the poultry business.

SPECIALS THIS MONTH.

I have a larger number of chicks April 10th than Owen Farms ever had on that date before, and will need to set fewer eggs in May and June than we have previously required. So have decided to give my customers full advantage of our successful season by reducing the price of eggs from all matings now and not waiting for the usual June 1st.

HALF PRICE ON EGGS.

50c each; \$20.00 per 50; \$37.50 per 100. From the **BEST PENS** in existence.
\$2.50 per 15; \$15.00 per 100. From **GRAND GOOD** Matings.

BUFF, BLACK and WHITE ORPINGTONS, WHITE ROCKS, WHITE WYANDOTTES, and SINGLE COMB REDS.

THIS IS YOUR OPPORTUNITY

SPECIAL STOCK SALE.

Owen Farms listed in their 1913 mating list twenty pens each in Buff and White Orpingtons, White Rocks and White Wyandottes. I will sell five pens in each of these varieties exactly as mated for 1913. I will sell **ALL** of the matings of S. C. Reds and Black Orpingtons exactly as mated. Select from the mating list the pen you want and I will name a price for immediate delivery that you will accept, thus giving you the use of it this season. This sale will close in the first four varieties when five pens of each have been sold. The remaining sixty pens I will retain.

This **OPPORTUNITY** has **NEVER** been yours before.

REMEMBER! These pens are exactly as we mated them for our own use.

In September I expect to issue a complete illustrated catalogue. Until then copies of Owen Farms catalogue and mating list will be gladly mailed you.

TRY THE DELANO WAY AND RECEIVE DELANO TREATMENT AND YOU WILL REMAIN A PERMANENT DELANO CUSTOMER.

Address: **Maurice F. Delano**

127 William Street,
MAURICE F. DELANO, Proprietor.

VINEYARD HAVEN, MASS.
FRANK H. DAVEY, Supt.

Martin's Electric Incubator Alarm

INSURES MORE and BETTER CHICKS with LESS WORK and WORRY by ENABLING YOUR INCUBATOR TO CALL WHEN IT NEEDS ATTENTION. Order from large ad on Page 566 of our March issue, or write for free circular to

Martin Mfg. Co. Box 24-K Broadway, Va.

10 Acre Missouri Poultry Farm, \$200. New A DISCOURAGING HATCHING EXPERIENCE.
bungalow, incubator, brooder, 24 chickens, 100 fruit trees, \$10 down, \$5 monthly. Min-ton Land Co., 810 Olive, St. Louis, Mo.

HENS, SPROUTED OATS, EGGS.
To apply the above formula, get a Double Quick Grain Sprouter of the Close-To-Nature Company, 20 Front St., Colfax, Iowa.

DR. HESS POULTRY PAN-A-CE-A
Makes hens lay more eggs by strengthening digestive organs—helps chicks grow quickly—cures poultry ailments. A penny's worth feeds 20 fowl per day. Free Poultry Book for 2c stamp. DR. HESS & CLARK, Ashland, Ohio.



"If Chicken Chowder won't make your hens lay, they must be roosters." Full particulars and 48 page Poultry Book free for the asking. Purina Mills., 803 So. 8th St., St. Louis, Mo.

EXCELSIOR Simplest, surest hatcher ever built. 36 years experience. Earning \$1,000 profit easily every year for hundreds of others. Solid direct, guaranteed. Book free.—Geo. H. Stahl **INCUBATOR**
208 Elm St., Quincy, Ill.

S. C. WHITE LEGHORNS.
One thousand selected breeders from prize winning stock. Eggs, \$5.00 per 100 or \$40.00 per 1,000. Orders filled the same day received. W. L. Woodrow, Box P. K., Oskaloosa, Iowa

BUY AT FACTORY PRICES.
Rippley's Egg and Chick Boxes, Coops, Brooder Heaters, Cookers, Whitewashers, Sprayers, Carts, Grinders, etc. Catalogue of supplies free. **RIPPLEY MFG. CO.,** Grafton, Ill.

POULTRY LESSONS FREE.
To buyers of Successful **BROODERS INCUBATORS**
Big 1913 Book sent FREE for a postal. Don't buy any incubator till you write to **DES MOINES INCUBATOR CO.,** 47 Second St., Des Moines, Iowa

GET MORE EGGS
Twice as many by feeding green cut bone **MAN'S BONE CUTTER** 10 Days Free Trial. No money in advance. Cat'lg free. F. W. Mann Co., Box 57 Millford, Mass.

4 BUGGY WHEELS (FRIGHT PAID SPECIAL PRICES) \$8.75
With Rubber Tires, \$18.45. Your Wheels Scrubbed, \$10.30. 1 make wheels 3/4 to 4 in. tread. Tops, \$6.50. Shafts, \$2.10. Repair Wheels, \$5.95. Axles \$2.25. Wag on Umbrella free. Buy direct. Ask for Catalog 7 G **PLIT HICKORY WHEEL CO.,** 676 F St., Cincinnati, Ohio

BUCKEYE \$8
Guaranteed to hatch every hatch-able egg. Over 225,000 in use. Send for Catalogue and dealer where you can see one and how it works. **The Buckeye Incubator Co.,** 507 Euclid Avenue Springfield, Ohio.

125-Egg Incubator and Brooder
Freight Paid East of Both for \$10
Hot water, double walls, copper tank—best construction. Write for Free Catalogue. Wisconsin Incubator Co. Box 52 Racine, Wis.

Is there anything new under the poultry sun? I think it's all new, so new that I don't understand it, and by the way, what about the Campines, the new breed that is to be the best of all of the egg laying breeds? I have none of them and at present think my Reds are good enough. I set my incubator the seventh of January. Twenty eggs tested out infertile, or perhaps they were chilled. Then a couple of nights needed and when I saw them again there door because the eggs were too hot. I forgot to close the machine and the room being cold the eggs were thoroughly cooled by morning. I closed the door and raised the lamp flame and the heat got up to where it should be, but the hatch was a day late and I got only thirty six strong chicks. The rest were still alive, but most of them were unable to break the shells. On the third day after hatching I put the thirty-six chicks out in the brooder, then I was taken sick and was confined to my bed for three days. My son tended to the chicks, but he couldn't give them the "mothering" they need and when I saw them again there were only eight left that were strong enough to eat and hustle. I may raise them and there may be four pullets that will lay eggs all winter. However, I am not through yet and have a 150 egg machine going and know they won't dry up as the pipe leaks and there is always a wet spot and moisture on the glass. It is a pleasure to raise chickens as there are so many odd experiences and there is money in the business too, because I have put it there but I am going to try to get some of it back.

Nebraska Poultryman.

AN EASY WAY TO GET RID OF LICE.

When Prof. Lambert, of the Knobe Island Agricultural College, began his experiments to find a dependable method of destroying poultry lice, he undertook a work that has meant a great deal to all poultry keepers. It has been nearly 30 years since he succeeded in finding the best weapon for destroying these pests and now there is hardly a poultryman in America who has not used or heard of Dr. Lambert's "Death-to-Lice."

It is the old reliable stand-by that never fails and does not injure hens, eggs, chicks or soil plumage. The preparation is put up in various size packages, selling for as low as 10c and up to \$1.00. Surely no poultryman can afford to put up with these profit-eating pests when they can be cleaned out so completely and easily by this splendid preparation.

Dr. Lambert's "Death-to-Lice" is sold by most dealers but if your's does not carry it you can obtain it direct from the O. K. Stock Food Co., 504 Traders Bldg., Chicago, Ill. The advertisements of this company appears on page 60.



PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

BROODING IN LARGE LOTS.

In the December issue of Poultry Pointers I wrote at some length as to what I had seen at the Simplex Farm, which was then known as the Husted Poultry Farm, of the work being done with Simplex Brooder Stove.

I had heard so much about what was being done, and had so many doubting Thomases question the truthfulness of the published accounts that I decided an investigation was due our readers. I decided to investigate this very closely, and dropped into the farm unannounced, and what I am about to say is what I saw with my own eyes, and am prepared to more strongly endorse the Simplex Brooder Stove as being the only satisfactory means of raising little chicks.

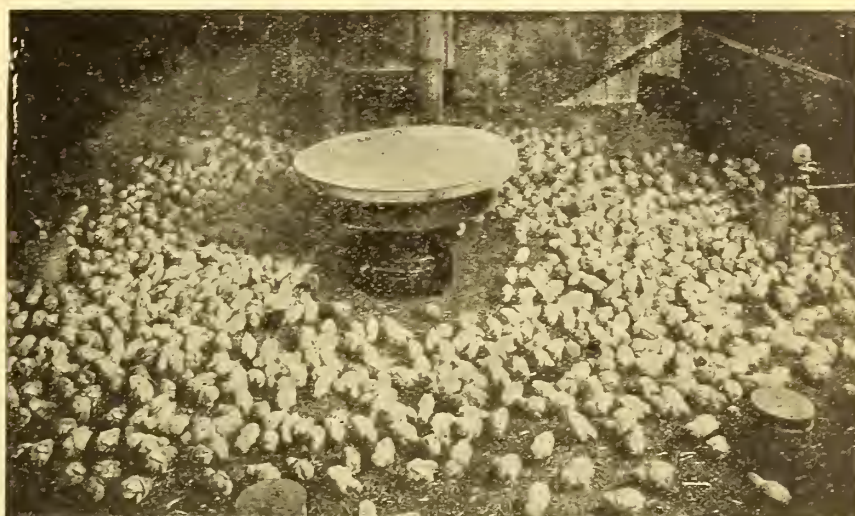
In the first brooder house I saw 1239 chicks in one lot, about one brooder stove. These chicks at the time of my visit were twenty days old. The mortality record, which is kept on the wall, showed a total mortality of 41 chicks out of the astounding number of 1239 being brooded in this manner. Mr. Monroe, the farm manager, informed me that there were 125 chicks in the lot which were very weak when placed in the brooder, as they had come off in a mammoth machine, and not being familiar with the operation of same, the eggs did not have the right amount of moisture, and quite a number of them dried in the shell, hence the necessity of helping them out. These chicks, of course, are weak ones to begin with. Nevertheless, the total mortality being 3 per cent is astounding. When taken into consideration that the eggs were two days late in hatching, and the things concerned, I do not or cannot see why anybody should wish to continue in the old way. To say that it is a wonder is putting it light.

On the day these chicks were seventeens days old Mr. Monroe informed me that there were five of them that went to roost on roosts which were placed across the corner of the brooder room, and stayed there for the night. Since then they are doubling up very fast, and at the age of five weeks, it is a safe bet that 50 per cent of these chicks will be roosting. We are informed that the roosting is the least of the troubles with chicks raised around a brooder stove, as they go to roost early, and there is no trouble or no teaching, they naturally take to the roost. These chicks at the age of twenty days were the size of any Leghorn chicks I ever saw at the age of five or six weeks. In fact if I did not know and did not see the dates and records it would be hard for me to believe. With everything in the condition that it was, I could not help believing what I saw.

This stove is being operated on a consumption of two and one-half gallons of low grade kerosene which is delivered to the farm at a cost of eight cents per gallon, making a total cost of twenty cents per day for fuel to care for 1200 chicks.

I went from there to the office of the Simplex Company and saw Mr. Husted, who showed me a number of letters received from satisfied customers, of which I asked and obtained permission to make electroplates of them, and show them herewith. Such evidence as this should be evidence to every live poultryman that the quicker he gets a brooder stove in operation, the quicker he will begin to triple his profits, save his back from the laborious job of caring for a great many small brooders, and on top of it have that heart-breaking mortality which goes with every small hover.

Mr. Husted informed us that the Simplex Company was arranging to put in use an automobile which will leave the office daily at ten a. m. and two p. m. Patrons who are interested in the brooder stove and wish to see the same in operation can either call at the office or arrange by tele-



phone and the auto will take them to the farm and show them exactly what I saw.

Birmingham, O., March 31, 1913.

Simplex Brooder Stove Co.,
Grand Rapids, Mich.

Gentlemen:—

I have two stoves in operation and they are working like a charm in all kinds of weather that we have had during the last week. One day the wind blew on an average of 80 miles per hour for 12 hours, in fact it did considerable damage to buildings in this locality, but the thermometer didn't vary half a degree through it all. On the night of the 27th inst. it was only 12 degrees above zero outside, but the temperature in the brooder room was just as I left it the previous night, 90 degrees.

I have tried five different brooding systems in as many years and this is the only one that is entirely satisfactory. It is just simply a pleasure to raise chicks with your system. I have lost only 8 chicks out of 500 in three weeks. That seems almost too good to be true, but it is a fact nevertheless. I have been accustomed to losing all the way from 25 to 50 per cent, and

one season I lost 800 in one night on account of gas fumes escaping from the stove of another make.

Yours very truly,

John Suter.

CHICKS ROOST AT TWO WEEKS OLD.

Hot Springs, Ark., March 21, 1913.
Simplex Brooder Stove Co.,
Grand Rapids, Mich.

Dear Sir:—

I received the new regulator you sent me and will say it is all right and works very well, and I think the stove is just the thing to raise chicks as I have had it running a little over two weeks and never saw chicks do so well and I noticed last night that there are a few roosting up on the edge of a box I have for rearing bran in, and when they do that at that age it beats anything I ever saw, and I will say it

is very satisfactory and will let you know later what luck I have.

Yours truly,

R. A. Krotzer.

Have you any poultry raising friends who would be interested in reading the Poultry Keeper? If so, we shall be glad to send them sample copies if you will send in their addresses.

McKee's White Orpington Yards, Watertown, Tenn., Box K., Garvey McKee, Prop., was among the winners in the big prize contest offered by Kellerstrass Farm. This is positive proof that Mr. McKee was competing with the best breeders all over the world. He offers eggs at one-half price balance of season, \$2.50, \$5.00 and \$10.00 per 15. He also has a fine cock bird, imported direct from England, which is absolutely stay white and an extra good breeder, price, \$200.00; also another one at \$500.00. Look up his ad in this issue and write for catalogue. Mr. McKee is preparing to make an importation of Blue Orpingtons for different breeders. If you desire any write at once and mention Poultry Keeper.

\$1.00 POULTRY RAISING BOOK FREE To Everyone Interested in Incubators and Brooders. If you are interested in 60, 120, 175, 240 or 300 egg size. I'll send my Special Low Price Freight Prepaid, Introductory Offer on my Ideal Incubators. Write for book now, Address J. W. MILLER CO., Box 19 Rockford, Ill.

Send Postal For Book

\$5 UP Bone Cutter—No Money Down Try the "Dandy" Bone Cutter 30 days free before you buy. Write for free catalogue. STRATTON MFG. CO., Box 43, Erie, Pa.

Leg Bands Complete line—all styles. Leader adjustable. 12, 16c; 25, 25c; 60, 40c; 100, 60c; 600, \$2.75. Postpaid. Samples free. THE KEYES-DAVIS CO., INC., Dept. 4-582, Hattie Creek, Minn.

Leader

Orpingtons! Send 25c for my book on Orpingtons and Orpington Magazine 1 yr. Cheviot Farms, Milton W. Brown, E. 14, Cincinnati, Ohio.

Adjustable clinch — no better Poultry Bands made. 25 for 20c; 50, 35c; 75, 50c; 100, 65c; 200, \$1.00. No stamps accepted. FRANK CROSS, Manuf'r. Montague, Mass. Box 512.

56 BREEDS Chickens, Ducks, Geese and Turkeys. Hardy, northern raised, pure bred, of finest plumage. Fowls, Eggs and incubators at lowest prices. America's greatest poultry farm. Send for large, fine 19th Annual Catalog and Poultry Book. R. F. NEUBERT, BOX 842 MANKATO, MINN.

Rose Comb Beauty Epworth Strain Rhode Island C. H. Hanna
Champion Red Strain Rhode Island Roy P. K. Edworth, Iowa.
Whites

HUMPHREY The new way to make hens lay. "The Golden Egg" tells all. Free. A Humphrey Bone Cutter on free trial. HUMPHREY Glass St. Factory, Joliet, Ill.

LICE KILLER Liceid, strongest lice killing compound made. Works like magic. Simply put a few drops in nests and hang bottle in coop. Powerful evaporating vapors go into feathers, cracks and crevices. No painting, spraying or dusting. Easy to use. Circular free. Pound bottle prepaid 50c. Moneyback if it fails. Agents wanted W. H. Metzger Co., No. 45 Quincy, Ill.

Get My Price Let me tell you how you can save money when purchasing an incubator and why the Reliable is such a safety and care hatch machine. Get my free catalog. J. W. MILLER, Pres. Reliable Incubator & Brooder Co., Box A-10 Quincy, Ill.

\$7.55 For World's Champion 140 Egg Incubator Brooder \$4.95—Both \$11.50. Freight paid E. of Rockies. Write for book, "Hatching Facts" or send price now to Belle City Incubator Co., Box 145, Racine, Wis.

Eggs From Full Blood Stock Eggs

25 White or Brown Leghorn Eggs.....	\$1.00
13 Barred or White Plymouth Rock Eggs.....	1.00
13 Silver or White Wyandotte Eggs.....	1.00
13 White Orpington Eggs.....	1.50
13 Rhode Island Red Eggs.....	1.00
13 Black Minorca Eggs.....	1.00
10 White Pekin Duck Eggs.....	1.00
10 Indian Runner Duck Eggs.....	1.00
100 Leghorn Eggs, \$5. 100 White Orpington, \$5. Others \$6 per 100. Send 25c extra for each setting and we will ship by Parcel Post, prepaid. Otherwise by Express. Remit by Postal, or Express Order, on St. Louis.	

W. P. CHAMBERLAIN, (The Perfect Chick Feed Man) Dept. 27, KIRKWOOD, St. Louis County, Mo.

HALT! PRACTICAL POULTRY, a regular 500 magazine, one year; my great book on poultry raising; sample of new food and directions how to save all the cost of beef scrap, charcoal, oyster shell, and grit. ALL FOR 25c. U. S. Lybarger, 41 College St., Gambier, O

I Save 50% for All Poultry Men and I Am Busy Night and Day Filling Orders

Here is a Hoover that is a marvel. It is sanitary—perfectly ventilated by our new Buffalo method—heats easily—uses little oil and the flame can be seen without stopping. You must send your order quick. This Hoover has set poultry raisers wild and we will very soon be over sold. Descriptive booklet on request.

Buffalo Handy Hoover \$8 Buffalo Home Hoover \$7

My Real Incubator Bargains—Note My Low Prices
Offer No. 0—50 to 60 Egg Size, Ship. Wt. 85 lbs. \$10.50
Offer No. 1—110 to 120 Egg Size, Ship. Wt. 90 lbs. 14.50
Offer No. 2—220 to 240 Egg Size, Ship. Wt. 130 lbs. 19.00
Offer No. 3—340 to 360 Egg Size, Ship. Wt. 160 lbs. 24.00

CHAS. A. CYPHERS, President Buffalo Incubator Co., 467 Dewitt Street, Buffalo, N. Y.

CAN POULTRY KEEPING BE MADE A SUCCESS?

It depends very largely upon your definition of success. What one calls success another might consider a failure. For ourselves we would answer in the affirmative. We have kept a few chickens for more than twenty years. We have sometimes had large flocks, and sometimes small ones and we have always made them pay their own way and leave a small profit besides.

We think a great injury has been done the poultry business by unscrupulous fellows, who by various means mislead those who have had no experience in the raising of poultry and who are led to believe that all that is published concerning poultry culture is possible for any one to carry out. They read of some one raising a mortgage, or clearing hundreds of dollars in a short time. But alas it does not often turn out just as it is in print. I have read considerable poultry literature and would advise poultrymen to read all the poultry literature their time and means will allow, but do not fail to distinguish between the practical and the impractical; the articles written by those who have had experience and those who have not, and above all use the best "horse senso" you have on hand, and do not expect the poultry business to prosper by methods that would mean failure in any other business.

If some one has made a success with poultry find out just how he did it, then be sure you can meet the conditions by which he succeeded. Compare locations, feed, markets and how much personal attention you can give them. Find out whether you would find a real pleasure in caring for them, or if you are going into it for just what you can get out of it. Assure yourself that you are not afraid of hard work and plenty of it, then go into it with a vim. Now hold steady, not too fast, grow up with it, and into it and in this way it can be made to pay, and in no other. There is that constant care that much be given that is likely to become irksome to those who do not have a real love for the business which, if not done cheerfully, will soon bring disaster.

If you keep poultry as a side line you should consider it a success if you break even, without counting the cost of your own labor, for if you are a

student and lover of nature you will be well paid in health and pleasure derived therefrom. If you have to get your living from it then you have a very different problem on hand; one that will try your very soul at times. Your location will be a very important item. You must have suitable quarters for the care of your poultry. If your location is wet or damp and you can not make it dry without too great cost, then go elsewhere, but do not forget to consider the markets. You must be able to get feed for your poultry at the minimum of cost and be sure that you can get it just when you want it and be able to get your eggs on the market at the very best prices without too great an expense of time and labor. These and a hundred other things enter into the question of making the poultry business a success.

While we believe you can realize on an investment in the poultry business sooner than in any other business, we would also advise that you have some other means of support or income or sufficient means to carry you through the first year or so, for there are so many things that you have been told and are fully expecting that can not in actual practice be done. We have not found a hen, of any variety, that would lay an egg each and every day in the year or even for any considerable length of time. It is easy to figure out what it will cost to keep a hen; it is not so easy to tell just what she will do in return for her keep. If each hen were a regular contributor to the egg basket it would be easier, but then she is not, and all the means resorted to to find the non-layers in a flock will make you sick with their uncertainty. Then there are your "sitters," and "brooders," and cockerels, and young chicks that cut your profits at a fearful pace.

Of course we are not considering the "fancy poultry business." If a man can afford to pay the price for stock and eggs in the "fancy business" he does not need to go into the poultry raising for a living, and if he does not have brains enough to make the investment pay it is of little interest to the practical man who needs what he can make. To be sure we recommend that you get the best stock you can afford without resorting to "showroom" birds. Thoroughbred stock that will not make a satisfactory score for its class will for all practical purposes do to begin with and build up with eggs

purchased from reliable breeders until you have birds that will score the points and then your business is on a good basis for profit when you have built it up yourself and know how it is done. But remember, if you have had no previous experience, you can not do this in six months, nor a year. It will take years to do it.

We hope later in the season to show you photos of our plant with some practical ideas on its construction.

W. W. Burton,

Ohio.

THE FINEST WICK EVER USED.

I am using one of your Acme Incubator Wicks and it is the finest wick I ever tried. The flame stays where you put it, no creeping up after you fill the lamp and no trimming. I want one in my brooder.

G. W. Sheppard,
128 E. Haven Ave.,
Richmond, Ind.

EXPERIENCE WITH RHODE ISLAND REDS.

I always read with interest all individual experiences in the poultry business that come under my notice, and especially in the Poultry Keeper. Perhaps the following one of my own, may interest others. I will give my success with R. I. Reds on a small scale.

I bought sixteen pullets, not the best perhaps, but as good as I could get in this vicinity. They laid early and well. I set my hens in the furnace cellar, which is a very good place early in the season. Of 115 chickens hatched we raised 112, 68 being pullets. In my breeding pens I use old males with young hens. This method insures more pullets. I have tried it successfully several times. I fed the different mixtures of prepared feeds with good results. The pullets matured early and laid well the following winter.

I kept them all the second year and they really laid better than they did the first year. The second year this flock of hens, and a few more older ones, fifteen perhaps, laid 7.32 dozen eggs and the gross amount of poultry and eggs, etc., was \$300, cost of feed \$134, leaving a balance of \$166 or two dollars each, net profit on the flock. Not a remarkable record but fair for this breed of hens, as they are such persistent sitters that they lose much time from broodiness. During the summer I had thirty that were broody at one time, and from fifteen to twenty all of the time. If it was not for this fault the R. I. Reds would be a very good general purpose fowl. I know this breed is a favorite with many and I would like to know how they manage to make them profitable in summer. I find them very good table fowls and they certainly make good mothers. I still have thirty-eight of my original flock. They are laying fairly well although it is their third season. I am breeding Barred Rocks, (Pittsfield Strain), this year, with good success.

Helen A. Winslow,

Maine.

Single Comb Quality Reds

I have mated this season 5 pens of as fine Reds as I have ever seen in one breed... yards, and our patrons this year will produce many blue ribbon winners from the eggs purchased from these pens.

Deep rich red, standard shape and egg producing capacity is our motto in breeding. Mating list now ready.. EGGS, \$1.50 to \$10.00 per 15. We have a few fine cockerels for sale from \$3.00 to \$15.00.

FRANK L. ZIMMERMAN, 105 Princeton Ave., Youngstown, Ohio.

Sanborn Business-Bred Layers

I have my farm so well stocked with egg b red Buff Wyandottes that I am going to offer P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$5; 100 eggs, \$12. Mention P. K. in ordering.

My three books, ordered with eggs, \$1 additional. DR. N. W. SANBORN, R. F. D. 24, HOLDEN, MASS.



SAVES CHICKS, MONEY TIME, WORRY

Either fireless, hot water or electric heated for indoor, outdoor, brooder or brooder house. No fire, no fumes, no smoke, no chilling. Nature's simple way. Send for circular.

SIMPLEX NATURAL HOVER CO., Box 581-A, Coeur D'Alene, Idaho.

ALL BREEDS and VARIETIES of

Land and Water Fowls

FINE STOCK FOR SALE at better prices than found elsewhere. GUARANTEED AS REPRESENTED. SPECIAL PRICE ON SHOW BIRDS. Send egg orders early.

Special bargains on Buff Leghorns, Andalusians, Houdans and White Indian Game, C. I. Games, White Holland and Bronze Turkeys, Geese and Ducks.

WALTER SEIDEL, Northwestern Poultry & Fruit Farm, Box K, ELEEROY, ILL. Send for catalog, free if you mention Poultry Keeper.

Eggs for Hatching



FROM J. W. PARK'S STRAIN OF BRED-TO-LAY BARRED PLYMOUTH ROCKS.

My Barred Rocks are heavy layers and fine big birds. Pedigreed cocks.

EGGS—15 for \$3.00; 30 for \$5.00; 50 for \$8.00; 100 for \$14.00 I pay express on all eggs. No stock for sale. D. M. Hammond, Box P. K., Riverview Poultry Farm, Savanna, Ill.

CHAMBERLAIN'S PERFECT CHICK FEED

The Only Original Dry Chick Feed and the World's Standard.

"Lady Showyou," winner of the National Egg-laying Contest at Mountain Grove, Mo., with a record of 82 eggs in 82 days, and 281 eggs in a year, and recently sold for \$800, was raised on Chamberlain's Perfect Chick Feed.

We have agents all over the U. S., but if our agent is not near you, we can make you special delivery prices on 100 lb. lots, or more.

W. F. Chamberlain Feed Co., 367 N. Commercial st., St. Louis, Mo.

HAS NO EQUAL—NO CORN—NO BOWEL TROUBLE

ORPINGTONS EGGS AT SPECIAL PRICES, FROM 16 YARDS. (Kellerstrass, Cook and Wagner Strains.)

	Exhibition Matings		Utility Matings.		
	Per 15	Per 30	Per 15	Per 30	Per 100
S. C. White Orpingtons.....	\$3.00	\$5.50	\$1.75	\$3.25	\$8.00
S. C. Buff Orpingtons.....	3.00	5.50	1.75	3.25	8.00
S. C. Black Orpingtons.....	3.00	5.50	.....	.....	.....

Trios \$6.00 and up. Baby Chicks, 15c and up. Few cockerels at \$1.50, \$3.50 and \$5.00 each. Going fast. Can please You. Very Special—12 eggs each from pen 1, 2, 3, total 36 eggs, for \$6.00. These are \$10.00, \$5 and \$4 eggs. It's a bargain.

PROGRESSIVE ORPINGTON FARM. J. C. BEARE. Prop.

Order from this ad, to save time. May we send your our booklet. Fort Gage, Ill.

INDIAN RUNNER DUCKS--"QUALITY WINS"

And LONG'S INDIAN RUNNERS are returned the winners. Again "Princess," the undefeated duck for two years, a Guelph, the Madison Square Garden, of Canada, and at the National Exhibition at Toronto. While her mate was winning the same honor. We won on the English Walton Strain at the Des Plaines Valley Poultry Show, held at Joliet, 1913, under the severe cutting of Judge Frank Heck. First adult drake on Prime Wonder, score 95 1/2; first young drake by a son of Prime Wonder, score 95 1-4; first and second adult ducks, Princess and Princess the First, scores 95 1/2 and 94 1/2, respectively.

On Whites first and second young drakes, score 94 1/2 and 94 1-4. Same on young ducks, score 94 1/2 and 93 1/4; also Special for best display.

WE BREED THE BEST FROM THE BEST THAT WILL PRODUCE THE BEST. Are you satisfied without the best? DRAKES, EGGS AND BABY DUCKS.

The breed with a golden future resting on the bed rock of a golden past. May we send you our prices? S. H. LONG, Breeder and Importer, Box P. K., ELWOOD, ILL.

HOLLOW TILE POULTRY HOUSES.

This Cheap and Enduring Material Is Now Being Used in Poultry Farm Construction With Most Excellent Results, Because of Its Fireproof Quality, Its Permanence, Its Economy of Heating and Its Sanitary Properties.

The use of Natco fireproof hollow tile as a building material has, in the past ten years, grown from an almost unknown and experimental stage to a widespread, popular and most satisfactory standard of practice among architects and builders for almost every type of construction.

Recent examples of the use of Natco Hollow Tile—examples that certainly show what tremendous development has taken place in this phase of building progress—are the Woolworth Building and the Grand Central Term-

inal in New York and the City Hall and the Insurance Exchange Building in Chicago. In the Woolworth Building alone were used over 40,000 tons of Natco tile, and other great structures now being planned or erected are using proportionate amounts. Natco Hollow Tile has no equal in many lines of construction, and these lines are constantly being broadened and increased in number.

built by the Canadian Northern Railway at Port Arthur, Ontario, has a capacity of 4,500,000 bushels. The builders of these elevators selected Natco tile primarily because it could be used during the winter months when concrete would not set, but its great strength; its fireproof nature; its convenience in handling and other excellent qualities were also important factors.

Residences in every part of the country are being built of Natco Hollow Tile—house fireproof in construction, clean and cool in summer and warm in winter, because of the hollow insulating nature of the tile, and permanent in their nature. Moreover, the great economy of the tile recommends it to builders of small houses.

It is impossible that so great a development in building practice could have come about without affecting in some degree the rural communities. Such has, indeed, been the case, and

day brings a letter from some enthusiastic owner, praising the economy and the satisfaction he is deriving from his Natco Silo.

The Natco Hollow Tile Poultry House, however, is strictly a new thing, but it is new in form only, for its underlying principles and the method of its construction have been worked out thoroughly from the widespread use of the same material in other types of building. And it can be safely predicted, from past experience, that it will become instantly popular with poultrymen everywhere.

The illustration on this page shows a laying house, constructed of Natco Hollow Tile, near Weymouth Heights, Mass. A glance will show the neat and trim appearance and the apparent ease with which the building was put up. In fact, this is one of the prime advantages of Natco tile in relation to poultry construction—it does not have to be conformed to any set rules of building, but can be manipulated to secure the most varied and numerous effects and to suit individual taste and conditions.

The laying house in the illustration is about 8 by 20 feet outside, with an inside height of 6½ feet. Its cost was but a trifle more than that of a similar size house of good quality lumber, and it needed no skilled labor to construct. No reinforcement is necessary, and the jamb blocks, roof blocks and corners are furnished with the plain wall sections.

This illustration and description, however, are chiefly valuable to the wide-awake poultryman in the fact that they disclose a wide range of possibilities in the construction of poultry houses. The hollow tile, waterproof, damp-proof, sanitary and having within them the dead air spaces that make for coolness in summer and warmth in winter, are ideal for the lining of incubator cellars, the walls of brooders, for colony houses, for laying houses and breeding pens—in fact, for every kind of poultry house where cleanliness, dryness and permanence are desired.

The advantages of Natco Hollow Tile for poultry construction are numerous. Chief among them, of course, is the fireproof nature of these blocks. No insurance is necessary—no fears need ever be entertained on account of fire. Then, there is the fact that Natco tile is absolutely permanent. There is no possibility of decay, and this should be figured in the cost, for it means no depreciation on the investment, as in the case of a wood house that will surely decay in six or eight years. Nor will it be necessary to paint Natco Tile houses. Their outside surfaces are hard burned and have a rich and harmonious color that is extremely attractive. This item of paint alone will more than make up the small difference in first cost over that of a wood structure. If you wish a house that will last a lifetime without needing repairs or paint, build it of Natco Hollow Tile.

The temperature insulating quality of the Natco block has been spoken of,



the use of Natco Hollow Tile has spread throughout many sections of the country—first as a strictly residential building material, later as a good medium for barns and outhouses, then the hollow tile silo, and now—the latest phase of all—the hollow tile poultry house.

The Natco Hollow Tile Silo—known as the Natco Imperishable Silo—is familiar to every up-to-date farmer. Put on the market recently, its popularity has steadily grown, because of its sterling qualities. Each year sees more of them erected, and almost every

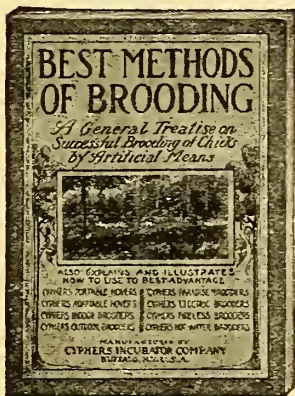
In the vast wheat regions of the Northwest, along the shores of the Great Lakes, the railroads are putting up grain elevators of Natco tile. One

Correct Brooding and Proper Feeding of Chicks

NOW—today—is the *critical time* in your year's poultry work, Reader! *Raising the little chicks is the test*—raising them in *profitable numbers*; chicks that are healthy and lively, that will *grow rapidly*, that will make good layers or breeders, or that will bring *high prices* either as table poultry or as fancy fowls.

It is largely a question of *correct brooding* and PROPER FEEDING—of this there can be no doubt. We are often told that it is *easy enough* to hatch plenty of chickens, but that it is a *hard matter* to raise them. And this is so, *unless* you have the right kind of brooding equipment and feed the right kind of food *in the right way*.

Cyphers Company customers *know* this is true, and we want *every reader* of this advertisement to know it also. To help you with *your work*, Reader—to help you *win success*—we have gone to large expense in publishing



Two Free Booklets

treating solely on these *vitaly important subjects*, and we shall be glad to mail either booklet or *both of them* to you, without obligation, *promptly on request*. Write today. A postal card will do, although we would be glad to get a letter telling us about your poultry plans. Maybe we can *help you out* with some information or advice. Write us freely on any poultry subject.

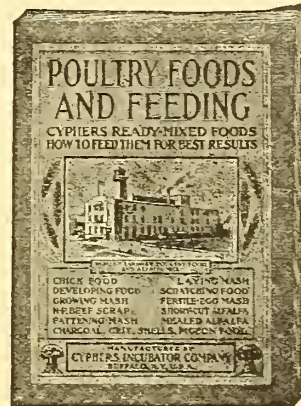
Sample Reports from Customers

Please read the following letters from Cyphers Incubator Company customers whom we have helped to realize greater profits from *correct brooding* and *proper feeding*.

"Always Sorry After Substituting"

R. F. D. No. 4, Vineland, N. J., July 23, 1912.
 Cyphers Incubator Co., Buffalo, N. Y.
 I am pleased to be able to report that I have been using your various Balanced-Ration Poultry Foods for *more than six years*. Have discontinued using all other makes for the reason that my results with your Foods have been *uniformly satisfactory*, and the chicks I have raised upon your foods have always turned out large, plump, well-developed and evenly-feathered birds. When I could get it, I have *always used your chick food* for my little chicks. At times I have had to substitute some other brand of food, and whenever I have done so I *have been sorry afterwards*. I have found more or less grit and other cheap materials in other makes of chick food that I have tried, whereas your foods contain *nothing but clean, pure wholesome grains*.

THE SCHOFF FARMS (Arno Schoff, Prop.)



This Book Would be Cheap at \$5.00 Per Copy, Judged by Actual, Detailed Value of Contents. Tells How to Produce Broilers, Fryers, Roasting Chickens and Capons; Also Exactly How to Feed the Layers and Breeders. 52 Pages, 7x10 Inches. One FREE COPY on Request to Any Address.

Cyphers Company's Latest New Free Book. Most Complete Treatise to Date on This Vitaly Important Subject. Goes Into Every Detail From Time Chicks are Taken From Incubator Till They are Placed on Range. Book of 52 Pages, 7x10 Inches in Size, Well Illustrated, Mailed FREE on Request to Any Address.

"Maximum Results with Minimum of Labor"

North Abington, Mass., Oct. 30, 1912.

Cyphers Incubator Co., Buffalo, N. Y.
 In January of this year I obtained 1,500 White Orpington Chicks. These chicks, as well as all of my other stock, were fed on your Cyphers Balanced-Ration Poultry Foods, according to "The Cyphers Way", and in return I succeeded in getting the *maximum results with the minimum of labor*. As an example of the weights I obtained by feeding your Balanced-Ration Food, I will state that chicks hatched June 12th averaged 2 1/2 pounds by August 20th, and I have pullets 14 weeks old that averaged 4 1/2 pounds; cockerels that average 7 1/2 pounds. Anyone who adopts Cyphers methods will require to make a big mistake of some sort, or meet with some accident, *not to obtain results that show handsome profits*.

MISS ANNA B. SANDERSON.

"Good, Strong Fellows, Too"

Augusta, Mich., Nov. 6, 1912.

Cyphers Incubator Co., Buffalo, N. Y.
 Year before last I gave your Sealed-Bag Brand Poultry Foods a *fair trial*, and now it is "Cyphers Foods exclusively for me." I hatched a bunch of 105 Barred Rock Chicks—good, strong fellows, too. I was then feeding the chick food that I bought of a milling company at \$2.00 per 100 pounds. *In eight days' time I had just 51 chicks left*. I got desperate, as they were choice chicks, ordered a bag of Cyphers Co. Chick Food from your Chicago Branch House by telephone, began feeding it at once, and *lost only seven chicks from that bunch afterward*. How much would that \$2.50 bag of food been worth to me at the start? For the balance of the season I used Cyphers Food exclusively and *had fine results*. I am a beginner, but have learned that Cyphers Foods are *the cheapest when results are counted*.

W. C. HODGES.

"Seeing Is Believing"

Bancroft, Kans., April 12, 1912.

Cyphers Incubator Co., Buffalo, N. Y.
 Two of my neighbors were *here this morning* to see my chicks and were so pleased with them that they wanted to know what I fed them. I told them I used Cyphers Balanced-Ration Foods and nothing else except a little steel-cut oatmeal. *Seeing is Believing*, so one woman borrowed my catalogue to order some of your foods and the other borrowed some of my Cyphers Chick Food till she could get some. *Our chicks sure look fine and are growing so fast*. I enclose order for Cyphers Grit and Short-Cut Alfalfa.

MRS. W. A. HENRY.

"Chick Loss Was Stopped"

Cyphers Incubator Co., Buffalo, N. Y.
 Have used your Poultry Foods *exclusively* for the last *six years*. These foods are unsurpassed—especially the Chick and Developing Foods. Before that time I had used most anything called "Chick Food" sold by local grocers and feed dealers, and they were called the best, of course, but I *continually lost chicks*, and it was not until I began using Cyphers Chick Food that I found out where the trouble was and the *chick loss has stopped*.

STROBEL ORCHARD FARM (Fred Strobel, Prop.)

"Cockerels that Weigh 6 lbs. 1 oz. Each"

Cyphers Incubator Co., Buffalo, N. Y.
 I have had the best kind of results from using your Sealed-Bag Brand Chick and Developing Foods, also your High-Protein Meat Scrap. I have found your foods to be *clean and free from waste and shrievel or musty grains*. Have tried other brands but they do not nourish the Chicks like the Cyphers. I have raised Barred Rock Cockerels *three months and one week old that weigh 6 lbs. and 1 oz. each*. These birds were fed on your Chick and Developing Foods, Fattening Mash and Meat Scrap.

HENRY D. BRAENTIGAN.

Write today for the two Free Booklets, addressing our place of business nearest you.



Cyphers Company's Chick Food

This 100-Lb. Bag will Feed 100 Newly-Hatched Chicks Four Weeks, or 50 Chicks Six to Seven Weeks. Price \$2.50 f. o. b. Buffalo, Boston, New York City, Chicago and Kansas City. Price f. o. b. Oakland, \$3.00.



Cyphers Company's Developing Food

This is a Medium-Granulated, Five-Grain Balanced Ration that we Advise Our Customers to Feed to Growing Chicks Between the Ages of Six to Twelve Weeks, Before They are Given Whole Grain.

Cyphers Incubator Co., Factory and Home Offices: Dept 23 **Buffalo, N. Y.**

Branch Stores: New York City, 23 Barclay St.; Boston, Mass., 12-14 Canal St.; Chicago, Ill., 329-331 Plymouth Ct.; Kansas City, Mo., 317-319 Southwest Blvd.; Oakland, Cal., 2127 Broadway; London, Eng., 121 Finsbury Pavement.

but it cannot be too much emphasized for the poultry house. It not only keeps out extremes of heat and cold, but all dampness. It is also vermin proof, nor will mildew, rot and wood-boring insects parasites infest it. A laying house built of it will not be troubled with hen lice.

Poultrymen should look into this Natco system of construction. It is economical, adaptable to every condition and is easily handled. It costs but little more in money than a wood house—no more in time and labor to build. And it is there to stay—once up, without constant repairing and painting.

The editors of this paper are interested in this new type of construction for the poultryman, and do not hesitate to recommend it for many purposes. Further information of a more detailed character can be gained either from the manufacturers or by writing the Editor of this publication. Enclose a two cent stamp for a reply, and state in what particular class of poultry buildings you are most interested.

PROPER INCUBATION.

The time to begin to prepare for the hatching season is not when the eggs are put into an incubator or under a hen. Preparation should begin at least a month before the eggs are to be incubated. The most important items toward successful hatches are plenty of litter on the floor, sound, wholesome food, and an abundance of fresh, pure water.

Green food is very important if any success is to be had and the fertility will be very low unless it is fed in abundance. It can be supplied in the form of sprouted oats, cut clover, beets, turnips, cabbage, etc. Meat is another important food that should be fed quite liberally in the form of granulated bone, green cut bone, beef scraps and oil meal.

The mash to be fed in the morning may consist of the following: Four parts of bran, three parts of corn meal and one part of meat meal. Park & Pollards and Eatons' Dry Mash are also excellent. At noon green food with a small quantity of mixed grain should be fed. At night a mixture such as the following is fed: 60 lbs. corn, 60 lbs. of wheat, 30 lbs. oats, and 30 lbs. buckwheat.

All pens should be mated a month before hatching time. Twelve to fifteen hens and one male constitute a good pen for the Mediterranean and ten to twelve hens and one male for the American and Asiatic breeds. Do not feed stimulants to the breeding pens, for if this is done low fertility will be

the inevitable result. The houses should be kept very clean for fowls will not thrive in unhealthy quarters. Roup and such diseases are the usual result from damp quarters and when roup once gets a foothold it means the extermination of the whole flock unless vigorous measures are used.

After these things have been carefully watched the incubator will be our next consideration. There are many different styles and makes of incubators on the market. The hot water machine is in my opinion, far superior to the hot air machine. They range in size from the little fifty egg machine to the mammoth incubators holding thousands of eggs.

The incubator should be started a day or two before filling to get it in good working order and properly adjusted. Use eggs that are medium in size and color as eggs that are too small or large will not produce good chicks, if any at all. The eggs should not be over twelve days old as the evaporation of the egg substance gives less room from the chick to properly develop.

Fill the tray but do not crowd the eggs and under no condition put one on top of another. The thermometer, lying on top of the eggs, should register 102 degrees the first week, 103 degrees the second, and 104 degrees the third. The question of moisture is one of great importance, more so than is generally believed. Every incubator should be equipped with a Tyco's Hygrometer to tell the correct moisture. The humidity of the egg chamber depends largely upon the atmosphere of the building. If more moisture is needed it can be supplied by placing a pan of water beneath the incubator,

while if there is too much moisture increased ventilation will give the desired result. Small chicks are the result of insufficient moisture, while if there is too much moisture the chick will be too large to affect an escape from the shell.

Turn the eggs twice a day, morning and night and the third week turn three times a day. This may seem a good deal of trouble but when a good hatch is the result you will feel amply repaid. The white eggs may be tested on the fifth or sixth day and the brown eggs on the seventh day. They should be tested again on the fourteenth day and all eggs that are not sufficiently developed removed. Poisonous gases arise from the infertile eggs, thereby injuring the other eggs, therefore necessitating their removal at once. Do not turn the eggs after the nineteenth day as the chick is liable to pick the shell at the bottom, thereby being upside-down and its escape from the shell impaired.

Watch the regulator closely at the time of hatching as the heat from the chick will raise the temperature of the egg chamber considerably and the chicks are liable to be smothered. Do not open the door too much or the eggs will be chilled. It may become necessary to extinguish the lamp until the heat is sufficiently reduced. When the chicks are a day old they should be removed to a brooder that is heated to a temperature of 95 to 100 degrees. Do not feed the chicks for twenty-four hours but give plenty of grit and a little warm water.

SEND TO-DAY FOR OUR 64 PAGE FREE ILLUSTRATED CATALOGUE FREE

It gives valuable information about 55 PLANET JR. labor saving implements. Write postal for it to-day! S. L. ALLEN & CO., Box 1203P, PHILADELPHIA

IMPORTANT AND PROFITABLE

Secure two new subscribers and take advantage of our special offer of three subscribers for \$1.00. This offer makes it easy for you to get your paper free for one year.

The reader can secure two subscribers at 50 cents each, send us \$1.00 and we will send Poultry Keeper one year to the one who has procured the new ones.

It is easy for one to secure two new subscribers in almost any locality. All it takes is a little energy and a few minutes, time.

There are many interested in poultry raising who would subscribe for the Poultry Keeper if they understood the value of the paper. Others are securing their papers without expense to themselves under this offer. Are you willing to do the same?

Below is a subscription blank on which the names and postoffice addresses may be written. We urge an early effort to secure three names under this liberal offer. A dollar will reach us if sent in a letter.

POULTRY KEEPER, QUINCY, ILLINOIS:

Enclosed find \$1.00 for three subscriptions to Poultry Keeper for one year.

NAME	POSTOFFICE	STATE

\$60 PER HEN PER YEAR

SEND POST CARD TODAY for free 56 page free book, "The Why and How of The Miller System." Test our ideas far enough to form an opinion. Show our guarantee to your lawyer. Miller System Company, 52 7th Binghamton, N. Y.

BLACKHEAD IN TURKEYS, ITS CAUSES, ETC.

Liver trouble in turkeys is one of the most common diseases the turkey raiser has to contend with. It is usually brought on by over-feeding as what I am about to explain will verify.

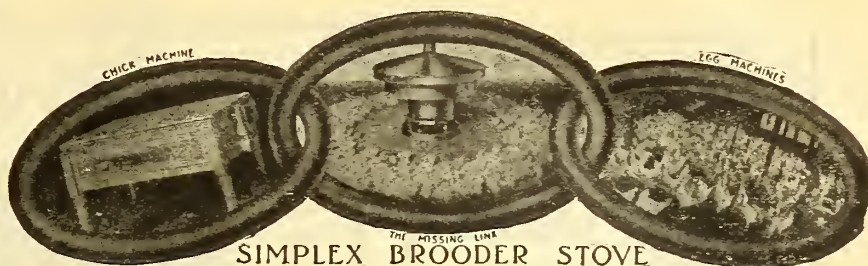
A neighbor who had some late hatched turkeys that were too small for the holiday market, kept them over to put in condition for early spring market. After they had been fed for a week the owner came to me to ask if I supposed his turkeys were coming down with blackhead. I went over to see them and found the disease present in all stages affecting old and young alike. I made arrangements to go over the next day and slaughter and examine each bird as no two were in the same stages. This he agreed to do providing I paid him a certain amount for each bird killed. Of course I was willing to do this as never before did I have this opportunity. Now here is a question? How many ladies would undertake such a job just to get a little knowledge that could be obtained otherwise?

The conditions certainly would make an ordinary stomach feel fuzzy all right and feel more like taking a camphor sling with a moth ball for a chaser than sitting down to a turkey dinner.

First I will relate how these turkeys were fed. Small potatoes were boiled in an iron kettle. These were mashed without first being drained and corn meal and buttermilk added which made the dope still sloppier then poured into a long open trough. The birds could run through and eat drink and take a bath without changing tubs. What was not eaten froze and soured. Such slop and the way it was fed would spoil the digestion of a low bred hog.

Now to the point. In some cases the liver was found studded over with yellowish spots without much enlargement. Some were found much enlarged. In cases where the disease was not fully developed the whole liver was incased in a cheese like sack. Upon opening this sack the contents were of a green color having an offensive odor. In the advanced stages or those about to die the intestines were litterly packed with decayed food. In one case the contents of the whole alimentary canal was baked as solid as a brick, the lower bowel being decayed. In many cases the heart and lungs were involved and the lungs would be floating in a transparent liquid, part of one or both lungs being decayed. Several birds were walking around partly mortified. I should like to hear from more advanced authority on my idea of the so-called blackhead.

Food nourishes or poisons according to how long it remains in the bowels undigested. If the digestive organs are crowded or over-loaded and unable to perform their functions properly, part of this food decays before it has time to digest and is as dangerous to health as food decayed before eaten. The system becomes clogged with these impurities which are carried by the blood circulation to various parts of



White Diarroehea No More a Scourge

If those back breaking, foul smelling, White Diarroehea breeding hover brooders of yours are taking their usual heavy toll of the chicks you put into them you owe it to yourself to order one or more **Simplex Brooder Stoves** and not only save the chicks which are still living, but save yourself all that endless back-breaking work of caring for those little fifty-chick compartments.

If you have a building on your farm which is not less than 8x10 ft. or more than 15x30 it will be possible for you to install a **Simplex** and have it in operation within 24 hours after it arrives on your farm. No added expense to speak of. We furnish a stove complete, ready to set up and save your chicks. We will ship by ex-

press, prepaid, or make you express allowance if you live west of the Mississippi or south of the Mason-Dixon line, on day your order is received. **No Delay.** Send us the dimentions of your building with your first letter and we will tell you how to install the stove in it. \$29.50

pays for a stove complete with automatic oil regulator, oil pipes and connections and a 28-gallon galvanized oil tank.

Why Not Telegraph Your Order.

We will ship C.O.D. on the day your order is received. Full and complete instructions for operating go with each stove. *Just Nature and a Simplex are bound to make a profit for*

you. Don't hesitate to order. All stoves are sold on thirty days trial.

Chicago, Ill., April 9, 1913
Simplex Brooder Stove Co.,
Grand Rapids, Michigan.

Gentlemen: Enclosed please find my check for \$29.50 in payment of brooder stove shipped me on the 7th. This is the second stove I have purchased from you this season, and of course the last one is purchased because the first one is doing the work. The stove works entirely satisfactory, and does all that you claimed it would do. *I believe you have solved the bothersome problems in brooding. THE STOVE HAS ENTIRELY ELIMINATED WHITE DIARROEHA from which I suffered heavy losses, losing 50 percent of my hatch. The losses with the stove have been very small.*

Very truly yours,
J. C. Everett.

Why the Simplex Does Away With White Diarroehea

With our system of ventilation, the air in the room is changed every fifteen minutes, and the carbon-dioxide which the chicks exhale in their breath is carried out of the room instantly. In the old fashioned brooding systems, which it is impossible to ventilate properly, the chicks are compelled to breath back into

their systems the poison in the shape of carbon-dioxide which nature has thrown off through their lungs and bowels. This carbon-dioxide is the only cause of bowel trouble and chicks which are kept in properly ventilated rooms are seldom afflicted with bowel trouble, and never when fed and housed correctly.

"Successful Brooding" is a book that really tells you something about raising chicks. It tells how to feed hens to get eggs that run 90 percent fertile any month in the year and produce chicks that have a chance to live. Many brooding troubles begin in the egg. This valuable book sent for 50c. It will put you on the road to success. Send for our free catalogue. It tells all about White Diarroehea. It also explains just why a **Simplex Saves 90 per cent of the labor, 75 per cent of the operating expense and brings to maturity from 20 to 50 per cent more and better chicks.** Write today for this catalogue. **IT'S FREE.**

Simplex Brooder Stove Co., 142 Fourth Street, S. W., Grand Rapids, Michigan.

the body. The liver acts as a filter and it is here impurities and germs find lodging and find place for speedy development. A certain portion of the poisonous matter is carried past to other organs.

Turkeys have ills other than blackhead. With most breeders any minor ailment is surely it. To my mind there is only one blackhead and for this there is no cure. We can prevent it by careful feeding. We cannot keep it in hand when the birds are on the range. They are affected the most while under our personal observation, so we must use care in keeping the intestines and liver free from foreign matter. I do not think blackhead is contagious any more than I think bowel trouble with little chicks starts from the egg. I have tried them both out to my satisfaction. I have written this article thinking it may be of educational value to those who do not fully understand the nature of the disease.

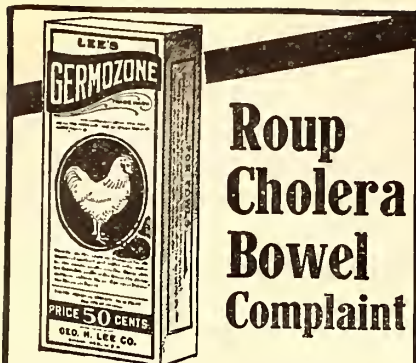
Mrs. D. A. Farwell,

New York.

ALFALFA.

Is alfalfa really a good food for hens? Nearly all prepared mashers contain it. My experience has been that even a small amount is harmful to fowls. I keep several hundred Leg-horns and have tried to feed alfalfa in the shredded form and as meal and it invariably scours them, decreasing egg production. The fiber content, 25 per cent, is too high to make it a desirable or an economical food. The only possible excuse for having it in dry or wet mashers is that it takes the place of green food, but every practical poultryman knows that while alfalfa clover hay, dried beet pulp and dried lawn grass clippings may, in some measure, take the place of green food, they are successfully used only in filling out the succulent ration. At best they are only a substitute, and are decidedly inferior to fresh green stuffs such as sprouted oats, mangel wurzels, cabbages, etc.

I believe that many beginners fail



**Roup
Cholera
Bowel
Complaint**

Safeguard your fowls by using

GERMOZONE

The few cents it will cost you to put Germozone in the drinking water twice a week will be repaid many times over in good, vigorous, healthy fowls, better able to withstand the ravages of disease. Germozone is the greatest of all poultry medicines for diseases that occur oftenest.

Liquid or Tablets, Price 50c

Lee's Lice Killer

Quick and deadly. Kills lice both by contact and by fumes, but entirely harmless to fowls. No handling necessary. Paint or spray roosts and walls. Surest, safest and quickest of all lice killers.



Quart, 35c
1/2 gal. 60c
Gallon \$1

3 Good Books Free to You

Incubator Catalog; Lee's Poultry Book and "Mandy's Poultry School." Write for them. Geo. H. Lee Co., 1105 Harney St., Omaha, Neb.

**MORE EGGS
MORE MONEY**

By feeding **CRYS-CO**, a petrified shell and grit combined, containing **99% PURE CARBONATE OF LIME** and **1% HARD SHARP SILICATE GRIT**. Better than oyster shells, gives one-half again as far, even buying separate grit. Indorsed by leading breeders in the United States and thousands of poultry raisers. Ask your dealer. Look for trade-mark. Valuable booklet, free. **W. A. NEUSITZ & CO., St. Louis, Mo.**

**KILL RATS & MICE
SCIENTIFICALLY**

with **Pasteur Laboratories Rat Virus**

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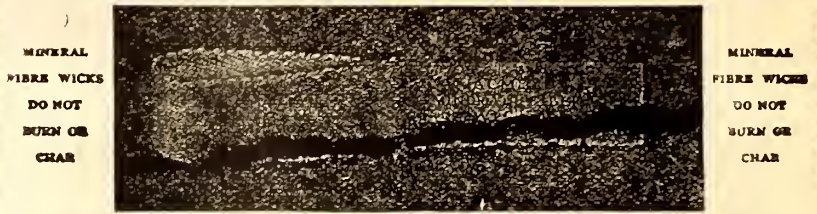
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NEW YORK 366 W. 1ST. CHICAGO 443 S. DEARBORN ST.
Room 865

WHITE KLONDIKE CHICKENS. White Muscovy ducks. Eggs for hatching. Stamp for folder. (Prize Winners.) Andrew C. Sticht, Box 773, Missoula, Mont. 5-4

ANCONAS. Champions, free range, big, dark, vigorous birds. \$1.25 sitting; 30 for \$2.00. W. P. & L. C. McCullough, Mercer, Pa. 5-1

'Acme Incubator Lamp Wick'



Practically Indestructible. Keep lamps well filled with oil and wicks do not need trimming, burning uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and aid keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two, 15-16 inch wide; or Number three, 11-13 inches wide. Price, ten cents each. Special rate made on large lots. Fit any lamp. Address,

Poultry Keeper Publishing Company, Quincy, Illinois

in the poultry business because they place dependence on this over-rated source of green food and neglect to supply their hens in winter with the different vegetables, sprouted oats, apples, etc., containing the juices and earth-salts, unimpaired by drying, so necessary to continuous and liberal egg production in the winter months.

Glance at any of the numerous circulars describing the different prepared dry mashes offered to the public and you will generally find the statement that no green food is necessary, as the mash contains alfalfa sufficient to supply this part of the ration. I have yet to meet a poultryman who has succeeded in getting eggs in profitable quantities in winter, who depended entirely on dried alfalfa, ground or shredded, for his source of green food.

Clarence V. Mason,
Vermont.

NOT A SUFFRAGETTE.—SHE IS TOO BUSY WITH HER OWN WORK.

I have a Red pullet hatched out April 23, 1912. She is a bright, nice looking pullet, red to the skin, no smuit, commenced to lay November 4th and has laid one hundred and three eggs up to March 8th. She laid twenty in November, twenty-seven in December, twenty-one in January, a double yoked on January 14th and another one on February 23rd. She skipped the 15th of February, but up to that time she laid twenty-one eggs in twenty-two consecutive days and after the 15th laid every day from that time up to the 9th of March, thus laying one hundred and three eggs in one hundred and twenty-four days up to the 9th, skipping the 9th and is still laying.

I would like to inquire if you do not consider this a record for Rhode Island Red stock?

I am using F. O. Wellcome's style of trap-nest, and have been for upwards of two years, so that I have a record of each and every bird.

A. L. Tompkins,
Massachusetts.

AFTER MAY 15TH, 22 Runner duck eggs \$1.00. Mrs. Ella Whitwood, Hudson, Ill. 5-1

ANCONAS. Stock, eggs, baby chicks. Catalog free. Evans & Timms, Malta, Ohio. 5-1

EASY CHICKEN MONEY. Double the weight of your frying chicks in 14 days. No stuffing, just cheap feed you all have; its all in "Knowing how" to prepare it. For free information about this wonderful discovery, write, F. A. Thelen, Kewanee, Ill.

WANTED

TO HEAR FROM OWNER who has good farm for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

BUTTERCUPS. 2nd at Jackson Show, 1913. Stock for sale. Eggs, 15 for \$3.00. Mrs. May Worden, 1012 Lansing Ave., Jackson, Mich. 5-4

SINGLE COMB WHITE LEGHORNS, Rose Comb Reds. Record layers. Eggs, 5c; chicks, 10c each, up. Circular. Albert Dally, Frankfort, Ohio. 5-2

P. K. MARKER.



There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 50c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

White Rocks

All thoroughbred stock, bred from prize winning birds, and big layers. Won more prizes at Mo. State Show than all other White Rocks shown.

25 Choice, large, vigorous cockerels at a bargain. Must be sold soon. Also few choice hens and pullets cheap. EGGS FOR HATCHING from prize winning pens. Illustrated catalog and mating list free. I guarantee to please.

Dr. L. D. LeGEAR

ST. LOUIS, MO. 731 HOWARD ST.,
Farm at Kirwood, Mo.



Incubator and Brooder And Poultry Yards Supplies

Our catalogue, No. A-20, shows a complete line of all metal parts or Incubators and Brooders; and we have just issued a special booklet on new Labor Saving Devices for the poultry yard. Both catalogues, A-20 and 21, mailed free on request.

THE OAKES MFG. CO.

Tipton, Ind.

KULP'S GREAT LAYING STRAINS.



BROWN LEGHORNS
Rose Combs, 242; Single Combs, 240 egg strain. Large eggs and birds.
WHITE LEGHORNS,
Rose C., 244 best, Single C. 236 egg strain. Large eggs and birds. 42 prizes Madison Square.
White Wyandottes,
Barred Rocks, Reds, all of cup winning quality. Practical. 27 years breeding my strains. Eggs, \$2 and \$3 per 15; \$10 per 100. Catalogue.

W. W. KULP,

Box 30, Pottstown, Pa.

QUESTIONS and ANSWERS

DEPLUMING MITES.

Will you kindly tell me what to do for some of my pullet? They are losing the feathers on their heads and some of them even on their backs. The feathers seem to break off and drop out. I have dipped their heads in a solution of Conkey's Noxicide, a teaspoonful to one pint of warm water, then greased with carbolated vaseline. Still it seems to be spreading all over the flock. As the weather has been cold, I have hesitated to use this treatment as I have no warm place to put them after their heads and bodies are dipped. Do you suppose this could be what is called depluming mites? If so, what is the cause, cure and above all preventive? I have painted roosts and droppings board with a mixture of crude carbolic acid and coal oil. The house is kept clean and is whitewashed. The chickens are not sick and are laying well, but make a bad appearance with heads bare. Isn't there some kind of salve I could use for this purpose? Louisville, Ky. M. D.

This is probably the depluming mite. Mix enough flowers of sulphur with vaseline to form an ointment and apply to the affected parts and to the feathers around the parts for an inch or more.

SELLING EGGS.

Can you give me a few hints as to how a price for fresh eggs can be arranged with a distant buyer? The conditions are these: I live in a small town, 50 miles from a city of 45,000 inhabitants, to which city I have been sending my eggs for the past few months. When starting to send I was willing to let the grocer set his own price, which has generally been from 5 to 10 cents more than I would have received at our local stores. Besides, it was cash and a case per week was more than my parents could conveniently trade out. If my present success continues I shall continue to send regularly when the prices are high this fall and it is for this period that I should like to arrange some plan whereby I can know what to expect from my shipments. I have no way of telling what market prices are in this city; there is a paper published there which I take but from the sameness of the market reports I judge this column is not changed oftener than necessary. Our town stores were paying at Christmas time for average farmers eggs, 25c. Friends in the city, now and then, told me that an egg was hard to get for 40c while I received for mine 30c. How much is a grocer reasonably expected to allow per dozen for his profit. I had thought of this plan. Our local stores receive their cards every week from commission houses, stating the current price for eggs. Have my party agree to give me either a flat rate, say 10c per dozen above this card, which I would each time send him, or a graded rate, say 10c during the winter months to 5, 6, or 7c toward the summer. Through inexperience I do not know how high I dare reasonably ask, whether such a flat rate would be more than I ought to expect for first class eggs. According to the comparison of local and city prices during the past months this

does not seem disproportionate. Would be very glad to have an idea from you if you can give it space in the Questions and Answers. W. B. K., Carnavillo, Iowa.

Where one is trying to secure more than the market price he will have to make his own sharp bargain. There isn't much that we can suggest. You should have the correct quotations for fancy nearby eggs in the city to which you ship. There must be a fixed rate which all the dealers pay. Even if you are to get more than this it is important that you know what the market is. Usually the seller has very little choice but has to take what the dealer will give him unless he has some special bargain. Some towns are better egg markets than others and the prices ruling in one city do not hold good in another. In New York when eggs are selling under 30 cents per dozen the profit is divided up about like this: The commission man gets his pay from the producer by charging him five per cent for selling. He sells to a jobber who makes two cents per dozen and the retailer four cents. When eggs go above thirty cents the jobber and retailer want a few cents more.

RATION.

Kindly advise, through your columns, whether my feeding is proper for laying pullets? If it is not correct for breeding stock? Also advise if pullets forced their first year for laying are fit for breeding during the following season. Scratch feed made up by weight of wheat, 10 parts, cracked corn, 5; White Egyptian corn, 2 1/2; barley, 5. Dry mash fed in hoppers, made up by weight as follows: Shorts, 6 parts; corn meal, 6; bran, 3; beef scraps, 5; alfalfa meal, 1 part. Green food in generous amounts consisting of pumpkins, kale, stock beets and chard, a different kind each day. I give them all they will eat. Will they eat too much? I have four yards of ten White Orpingtons each and give them a quart and somewhat over of scratch food per day; a pint to each ten birds in the evening and a pint in the morning. I fed more grain for a while but found their hoppers full of mash each night so I cut down the grain and they consume about two quarts of mash and one of grain per day. Is this about right? They average seven eggs per day in each pen.

Fullerton, Calif.

H. B. B.

Your ration is rather good though it seems you are feeding quite heavily of beef scrap. You design the hens to eat more mash than grain and consequently it should not be as narrow as it should when they eat one-third mash and two thirds grain as is largely practiced. We think you could well reduce the quantity of beef scrap to three parts. There is no danger of the hens taking more greens than is good for them. Pullets will not be injured for breeders by heavy laying unless they are fed a too concentrated ration. If they are given all the greens they want there is not much danger of their being injured by heavy feeding.

\$2. for \$1.25

Success With Poultry\$1.00
Poultry Keeper50
Any other 50c Poultry Paper.. .50

All for\$1.25

This is one of the best offers ever made to poultry readers. It gives the best practical book on money-making poultry and two poultry papers at a greatly reduced rate. Address,

Poultry Keeper Pub. Co.
QUINCY, ILLINOIS.

RHEUMATISM

A Home Cure Given by One Who Had It

In the spring of 1893 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. If, after you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free? Don't delay. Write today.

Mark H. Jackson, No. 310 Alhambra Bldg., Syracuse, N. Y.

"Bourne Bignum" poultry band



(Patent Applied for.)

Send two 1 cent stamps for samples and trial offer. Large numbers showing ten feet away. First to use numbers you can see. Best band out Sizes for Bantams, Leghorns, Rocks and Reds, and large males. Black numbers from 1 to 100 on white, light blue, pink green, yellow, cherry and red celluloid. Withstands weather and water. State size, color and numbers wanted. Send cash with order. Price 3 cents each; \$2.50 a 100.

BOURNE MFG. CO.

Box L, Melrose, Mass.

CONGDON'S Barred Rocks

BRED FOR Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants.

INCUBATOR EGGS—\$5 per 100; \$45 per 1,000.

Our farm consists of 145 acres of land all within the corporate limits of the village of Waterman and valued at \$200.00 per acre.

\$3,000 Invested in Barred Rocks and buildings. Booklet free.

W. A. Congdon

Box 14, WATERMAN, ILL.

Write for Valuable Booklet and Balanced Ration Formulas Both Free —if you write us your dealer's name and address

SOMETHING TO CROW ABOUT

"HEN-E-TA"

NO OTHER hone or grit needed now—nor bone cutters—nor beef scraps—nor charcoal—nor oyster shells if you feed "HEN-E-TA."

Makes Hens Lay

"HEN-E-TA"—the phosphorus food gets the most eggs with least trouble. Is about

30% Bone Ash

Odorless—100 lbs. only \$2.25 or 500 lbs. only \$9. We will see that you are supplied if your dealer won't.

HEN-E-TA BONE CO.
NEWARK, N.J. DEPT. 17 FLEMINGTON, W.VA.

Wood Out These Drones

"The Ideal"

Trap Nest

SHOWS WHICH HEN LAID THE EGG.

The world's leading trap-nesters use them. The "Ideal" is practical for you or I will refund your money. The cost is small. Mr. N. G. Dun, Van Buren, Ark., writes: "I am more than pleased." Have made the nests at

FIVE CENTS EACH.
NO WATCHING! NO FREIGHT!
PLANS, TRAPS, BANDS AND RECORD SHEETS.

Write me today for prices and proof.

F. O. Wellcome
Box C, Yarmouth, Maine.

Make Your Old Incubator New With SHEER'S Acme Fixtures

Make it better than it was at its best. Make your old hatcher new with my perfect Acme Fixtures and it will hatch more, better and stronger chicks. My Acme regulators, Lamps, Burners, etc., are made to fit any incubators. No matter what make of incubator you are using my improved fixtures will reduce your operating expenses fully one-half. Thousands of incubators remodeled and repaired with my fixtures. It's as easy as A-B-C. Remember

My Fixtures Fit Any Machine

If you are thinking of a NEW machine do not buy any incubator until I tell you how 200,000 poultrymen have built their own Peerless Incubators with my Acme Fixtures and my Free Plans. Anybody can do the work. I guarantee results, absolutely the most perfect, cheapest to operate and surest hatcher possible to secure. My exclusive patented automatic fixtures and my plans give you in a Peerless Incubator

The Peerless Automatic Vapor Heating System. The Peerless Automatic Moisture System. The Peerless Automatic Ventilating System. The Perfected Acme Automatic Lamp. The Perfected Acme Trip Burner. The Acme Tandem Double Compound Thermostat Regulator. Let me tell you about these marvelous features and send you my **Free Book** describing my fixtures, how to remodel old incubators, build Peerless Incubators.

H. M. SHEER
Dept. 3
Quincy, Ill.

CHICK HATCHING EXPERIENCES.

Having been in the poultry business for more than thirty years my way of hatching and caring for chicks may help someone. When I sit hens, I always have some kind of a room for them so the laying hens cannot bother them. At night when all is quiet I move my broody hens to the room where they are to sit, keep them covered for a day or two and lift them off at a regular time each day to feed and water them, also letting them dust themselves. I watch them for twenty or thirty minutes and see that each hen is back on her nest and cover them until the next day.

I run my incubators according to my book of instructions, but always watch them carefully to see that everything is all right. I have read many articles where the writers claimed they did not have to look after their incubators at night, but my experience has been that with good fertile eggs it is necessary for me to get up and cool the eggs two or three times at night during the last ten days. This seems like a good deal of trouble, but when I get a 90 per cent hatch and my neighbor who does not believe in looking after the incubator at night gets a 15 or 20 per cent hatch I feel fully repaid. In regard to moisture in my incubator, I never worry about that. The third week I sprinkle the eggs two or three times with warm water while they are cooling and when they are about half through hatching if they are slow about getting out, I bunch all the eggs on one tray and wring a thick woolen cloth out of water as warm as my hands will bear, and place quickly on the eggs and close the machine for an hour or two.

When the chicks are 24 hours old I give them clean water and sand and when 36 hours old I give cornbread or stale light bread, slightly moistened. I feed on this diet but do not stuff them for three or four days, then I feed coarse corn meal and oats that are ground together. They will pick out every kernel of oats and leave the hulls. I feed it dry, always keeping water by them. I raised over four hundred chicks the past season and did not feed one morsel of chick feed. I use chaff from the barn loft or forest leaves in my brooders. I have about 275 fine Leghorn pullets and have sold enough of the cockerels for broilers to pay for the raising of all of them. I

keep a close account with my chickens, charging them up with all their feed and other expenses and giving them credit for all eggs and poultry sold and used at home. I keep my incubators in my dining room and my brooders too if the weather is cold.

I have tried several breeds, but like the White and S. C. Brown Leghorns best. The great secret in poultry raising, as with everything else, is to season everything with brains. What I have learned in my ups and downs in the poultry business would make a big book, but what I don't know would make a still larger book.

One thing I do not understand is, What makes the yolk of the eggs harden in incubator chicks? They will live several weeks and then droop and die. In cutting them open you will find a little lump of yolk putrid and ill-smelling. Also what makes little chicks' eyelids stick together? They will stick together so that the chick will finally starve.

Mrs. Ella Cline,

Iowa.

WHITE DIARRHOEA CURE DISCOVERED

For many years White Diarrhoea has stood between the poultryman and success in chicken and turkey raising.

A new and scientific formula has been discovered however which has now had several years of searching trial and has been on the market for two years.

The remedy was discovered by Milton W. Brown, M. A., M. Sc. of Cincinnati, and the formula now belongs to the Nabob Remedy Co., Gambler, Ohio. The formula was handled last year by the Cheviot Supply Co., but in order to give the formula better financial backing it has been sold to the above named company.

Seven out of ten persons who ordered the remedy last year have reordered this year, and such letters as the following seem to indicate that the remedy is the one poultrymen have been praying for, for a good many years:

Afton, N. Y.,
Nabob Remedy Co., Gambler, Ohio.

Gentlemen: I enclose money order for \$2 for which send me more of your Prescription No. 3 for White Diarrhoea. I don't intend to try to raise any incubator chicks with it, and recommend it to my neighbors and saved lots of their chicks. Please send price on dozen lots.

Yours truly,

J. E. Mayhew.

March 26, 1913.

The Nabob Remedy Co. advertises in this issue to send a big box of the remedy absolutely guaranteed to cure or money back for 25c. They claim never to have had a box returned and that millions of the tablets have been sold the past year. Every poultryman ought to try these tablets when it may be done under such a guarantee—use the whole box, and if not satisfactory write and get your money back, in full.

SUCCESS WITH POULTRY

Contains MORE AND BETTER
Practical, Reliable Information
on the general subject of

Poultry for Profit

Than any other book published.
It treats of every branch of

Practical Money Making Poultry

And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

HOW TO GET STARTED LEADING STANDARD BREEDS

CHARACTERISTICS OF BREEDS

PRACTICAL POULTRY HOUSES (Plans)

POWLS: CARE AND FEEDING MODEL BROODING HOUSES (Plans)

CARE OF ADULT FOWLS FEEDING FOR EGGS

A HEN CATECHISM

FEEDING YOUNG CHICKENS

CARE OF GROWING STOCK

ARTIFICIAL INCUBATION

INCUBATOR CELLARS

BROILER AND BROILER

RAISING

CARE OF BROODER CHICKS

PEKIN DUCKS FOR PROFIT

5000 DUCKS WITH STANDARD-BRED POULTRY

PROFITABLE EGG FARMING

TURKEYS: CARE AND MAN-

AGEMENT

CAPONS AND CAPONIZING

POULTRY AND FRUIT COM-

BINED

DISEASES OF POULTRY

The publisher's price of "Success With Poultry" is \$1. We will send it postpaid and Poultry Keeper one full year for price of book alone, \$1. If already a subscriber, we will extend your subscription one year and send the book to any address you furnish. If taken alone the price of "Success With Poultry" is \$1. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

Wyckoff's S. C. White Leghorns

ACKNOWLEDGED EVERYWHERE THE WORLD'S GREATEST LAYING STRAIN. UNEQUALED IN STANDARD QUALITIES. Remember that we are the ORIGINATORS, and for over 30 years SPECIALTY BREEDERS of the justly celebrated "WYCKOFF STRAIN of S. C. WHITE LEGHORNS, the MOST PROFITABLE STRAIN OF POULTRY IN AMERICA today. Place your orders at headquarters and make no mistake. EGGS FOR HATCHING in any quality from the grandest matings at \$2.00 per 15; \$3.75 per 30; \$5.00 per 45; \$10.00 per 100. Catalogue and testimonials free. Address

C. H. WYCKOFF & SON, Box P. K. Aurora, Cayuga Co. N. Y.

CARE OF INCUBATOR CHICKS

I am not a professional poultry raiser but raise just enough young each year to supply myself with pullets and some left over to use on our own table and to sell, but what I raise are mostly hatched in an incubator.

I think the main thing is to be careful and not open the door too much while hatching for it allows too much moisture to escape. This might not count so much with some makes of incubators but with mine it seems to be important.

I have no brooder but take a box, line it well with paper and place the chicks in, then cover with a warm cloth. Unless in a warm room I fill a jug partly full of hot water, wrap with several thicknesses of cloth and place in the box. I do not feed until the chicks are 48 hours old and then only stale bread crumbs. After the first couple days they are fed prepared chick feed until old enough to eat wheat and coarsely cracked corn which will be in four to six weeks and they do not object to eating it longer.

From the first they are given what fresh water they will drink and as we keep a cow I give them sweet milk and cottage cheese.

There should be some form of green food, such as lettuce or lawn clippings, supplied to them every day, unless they are given free range, which is not possible for us as we live in town. I do not think it best to keep more than twenty-five together and after they have grown to some size a dozen in a place is better, as they are sure to crowd the smaller chicks if together.

On account of rats, I place them in their boxes and bring them into the kitchen at night until they are feathered and then they are left in their coop, which has an open front covered with wire screen which keeps out rats but is not warm enough for them until they have a coat of feathers.

This spring I shall take store boxes and after making them rain and rat proof place a jug full of hot water and my chicks in them and leave them out doors, but as I have never tried it I do not know how it will work.

Last year I raised all my chickens as I have given here, and all that died were a couple of weak ones that hatched a day late and died the first week, and three older ones that I put in with the little ones and covered too

warmly. I know this is not remarkable but I hope it may be of use to some one who wishes to raise a few chicks without a brooder.

Mrs. Melva Lowe,

Indiana.

B. I. REDS MAKE IDEAL FARM BIRDS.

Having read with great interest the egg records published in Poultry Keeper, I thought I would send a report of some of my Reds.

I have 25 S. C. Reds hatched about May 1, 1912. Two or three began laying in September and the rest in October and November.

Their record is as follows: Sept., 37 eggs; Oct., 130; Nov., 211; Dec., 226; Jan., 283; Feb., 318, or 1205 eggs and at present (March 8) they are laying from 16 to 22 a day with only one broody since Feb. 4. This is not at all a remarkable record, but as they are all winter eggs it shows a good profit.

They are farm birds with ordinary farm care, never have been trap-nested but I always mate up my very best birds each year and when buying new stock try to get a good laying strain for it is impossible to get winter eggs from a poor laying strain.

So many say pullet eggs show poor fertility but 110 eggs set last week tested 105 good, strong germs. There were only 5 infertile eggs which I think a fairly good test.

Reds are my favorite birds, though we have kept most all kinds. They hatch well, chicks are strong and sturdy and pretty sure to grow. They make splendid plump 4 to 5 lb. roasters at four months old. The pullets lay very young for a large breed; are tame and easily handled and best of all do not mind cold weather at all.

Whenever it is possible to leave their door open the 25 pullets mentioned above are out all over the range singing, scratching, picking—a perfect picture of vigorous, healthy contentment, regardless of the cold.

I am glad that farmers as a rule have discarded mongrels for thorough-breds.

My birds have never been cooped up in a show pen but certainly are handsome fowls and such a constant delight to the eye that it more than repays the extra trouble and cost of getting the best I can.

A. L. Adams,

Pennsylvania.

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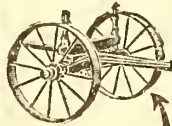


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Questions and Answers

GENERAL QUESTIONS.

1. Where can dry milk be procured, as made mention by M. M. Rochelle, New York, in your March, 1913, issue?
2. Do you intend to publish the details of extension course advertised by Massachusetts Agricultural College, Amherst? Also knowledge obtained in egg contest at Connecticut College? Egg records are insufficient.
3. Where can I obtain a sample copy of Butter, Cheese and Egg Journal, made mention by Mr. Essex before meeting of National Poultry, Butter and Egg Association, Chicago?
4. Where can book of education (best authority) be obtained on buying and selling eggs and poultry to consumers, if in existence or to consumers or middle men?

Ft. Madison, Iowa.

1. You can get dry milk of most dealers in poultry feeds. It is manufactured by French Kreme Co., 6 Bush Terminal, Brooklyn, N. Y., and by several other firms. The factories are usually situated where cheese is made and shipments are made from different points.

2. The course at the Massachusetts Agricultural College will probably not be published. The conclusions arrived at in the Connecticut Egg Laying Contest will be issued in a bulletin from that station.

3. You can secure a copy of the Butter, Cheese and Egg Journal of your newsdealer. The American News Co. and its branches will furnish any paper, book or magazine published in America or England, and your newsdealer can order you a copy. We do not know whether they furnish free samples or not. Most trade and technical journals do not send free copies.

4. We know of no such book.

CONDIMENTS—HOUSING—CROSSES.

1. What condiment, if any, do you recommend to make hens lay?
2. I formerly kept 15 layers in a closed house 10 by 14 feet. Will it pay me to increase the number when using an open front house of the same size?
3. Do you know anything about the White Leghorn-White Wyandotte cross? They are a good looking fowl, but are they worth having?
4. Do wafer thermometers make a reliable regulator?
5. What cross did Columbian Wyandottes spring from? Are they good layers?

Middletown, Conn.

E. J. W.,

1. Condiments are of little use to force hens to lay. A healthy condition is the laying condition and so the aim should be to feed for health. For a mild tonic there is nothing better than mustard or mustard bran. Great claims have been made for mustard and the hens like it. The mustard grown for green is also beneficial and is one of the best greens to grow for hens.

2. An open house 10x14 is sufficiently large for thirty hens.

3. We have seen such a cross. Some of them are good looking and some are not. They are not as good as either breed pure.

4. The wafer thermostat, when properly made, make a reliable regulator.

5. They carry the blood of the Light Brahma and White Wyandotte to a large extent. They are credited with being good layers, but that is more a matter of strain than of breed.

DAMP POULTRY HOUSE.

Part of the floor of my poultry house is constantly wet, even with a foot of straw covering it. The opposite side is as dry as tinder. What can I do to remedy this?

Nottingham.

P. K.,

You will have to cut off the water from underneath. You do not say what kind of a floor your house has, but if the roof does not leak the dampness must come from the floor.

CANNIBALISM.

What makes chickens pull out each others feathers and get the blood started and then keep picking until they eat the chicken alive? What do they need that the feathers supply?

Mrs. P. H. M.,

Pine Ridge, Neb.

This is one of the bad habits chickens get into. We cannot tell any more what causes them to do so than we can why people form bad habits. The taste of blood has a fascination for almost all animals. Some say they need meat and salt and in some cases the hanging of a piece of salt pork in the coop has cured them. There should always be an abundance of mineral matter in the diet of growing chickens.

MIXING A RATION.

Will you please tell me how to mix the following to get the best results for eggs as in Colorado we cannot get bran and middlings separate, the two being mixed together? The following are the feeds: bran and middlings, corn chops, cotton seed meal, alfalfa meal, beef scraps and salt.

J. D. C.,

Denver, Colorado.

The bran and middlings is probably what is sold in the east as wheat feed and is supposed to be the run of the refuse from flour. Mix three parts wheat feed, four parts corn chop, one part each of cottonseed meal, alfalfa and beef scrap. Add three pounds of salt to each hundred pounds of the mixture. These proportions are by weight.

ANIMAL FEED.

Which is the best animal feed for chickens, commercial beef scraps, green cut bone or skimmed milk? What is the best way to feed it? How often should it be fed? How much at a time for 100 hens?

H. A. G.

We are unable to say, as under some conditions one may give better results than another. Beef scraps of good quality will supply the largest proportion of protein. Cut bone is a great thing to start hens to laying. The hens should have some form of animal food every day and this is the most easily supplied in beef scrap. Some feed cut bone two or three times a week and on days the bone is not used give beef scrap. Milk can be used in connection with either or both of these. Cut bone can be fed from troughs or thrown on the litter. Beef scrap may be fed from a hopper or

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mixed with a dry or wet mash. About eight pounds of cut bone can be fed to 100 hens after they become use to it, but we should start with a small quantity. If fed in a mash beef scrap can form from ten to fifteen per cent of the dry mash or it can be kept in hoppers and the hens allowed to take what they want.

GLUTEN AND BREWERS' GRAIN.

Please tell me what gluten meal or brewers' grain is made of and its food value for poultry mashes. A. E. V., E. Grand Forks, Minn.

There are some twenty brands of gluten and most of them are made by a different process. In feeding value they range from 21 to 30 per cent protein. There is gluten feed and gluten meal but the high protein gluten meal is now practically out of the market. It all goes now under the general name of "gluten." Gluten is a product of corn after the glucose has been extracted. It is a very concentrated feed and the average of that sold carries from 22 to 26 per cent protein. The guarantee is on the bag. Brewers' dried grain is the barley malt after the beer has been made from it. This is dried and ground. It carries about 19 per cent protein and six per cent fat.

CHOOSING A BREED.

Will you please tell me the best breed to buy that will fill my requirements for the markets I have to cater to, i. e., a heavy winter layer of dark shelled eggs, the poultry to weigh from 4 lbs. up to 19 to 20 months old? Am keeping R. I. Reds but they do not come true to feathers and eggs as I found from my highest priced hatches last year I had quite a few black and black with red necks. They are fine layers, but lay a white egg. I was told that I must keep those out or not put more than 2 into a case of 12.

J. A. J.,

Sterling, Mass.

We should think any of the American breeds would meet your requirements. The White Wyandottes are about the size of the Reds and some strains lay a nice dark egg, but the eggs are not uniform in color nor are they in any of the dark shelled breeds. If you want a fowl a little larger choose the Plymouth Rock, either White or Barred, and you will have a breed which should meet your requirements providing you get a good strain. That is probably the matter with your Reds. No breed comes true to feather and usually the Reds lays the most uniform colored egg of any of the dark shelled breeds, it being a reddish brown.

DISTINGUISHING THE SEX.

Will you please tell me through your columns, how to distinguish a gander from a goose? Any information you can offer will be gratefully received as I do not know anything about them and want to raise some. I have three gray ones and have been told that one is a gander, but they all look alike to me.

Mrs. W. R.,

Holly, Mich.

The voice of the female is coarse and she does the most talking. The male is thicker in the neck and has a masculine appearance. You can soon learn to tell them after a little observation. As you have but three you can watch them when they lay. The male doesn't lay.

PROTECTING HENS FROM LICE.

How do poultrymen with large flocks keep the birds free from lice, especially around the vent? W. H. Y., Fennville, Mich.

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Tells the facts and describes the incubator which has enabled over 400,000 others to make big money. Sent free for a postal. **JOHNSON—INCUBATOR MAN, Clay Center, Nebraska**

The best way is not to let the lice get a start. If the hens get lousy they must be individually treated, either by powdering or dipping, and it doesn't make any difference how large the flock is. Poultrymen with large flocks usually do their work on the defensive. They catch them coming. The house must be kept clean, the roosts oiled or sprayed regularly and the hens given a good dust bath. Lice powder is often used in the dust bath, and by this means the hens do not become lousy to any extent. It is one of the problems of the large poultry plant to keep the hens free from lice.

J. E. Heatwole, Harrisonburg, Virginia, is an extensive breeder and offers 35 varieties of land and water fowls and can fill almost any kind of an order entrusted to him. He has been an advertiser in the Poultry Keeper for a number of years and we can recommend him to any prospective purchaser.

LICE AND MITES

And how to get rid of them is a problem many poultrymen cannot solve. It is very easy if you use Liceoil Compound. Simply hang the bottle in the coop, the vapors leaving the bottle are three times heavier than air and descend in a misty form, penetrating feathers, cracks and crevices. Lice have no lungs and breathe through the pores of their body and positively cannot live in this vapor. It is not necessary to point, spray or dust. Liceoil is so easy and convenient to use. Write Metzger Co., No. 45, Quincy, Ill., for free circular telling of this marvelous preparation.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., OF THE POULTRY KEEPER

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Poultry Keeper Publishing Co.,
F. Piggott, Secretary.

Sworn to and subscribed to before me this 5th day of April, 1913.

August H. Wehmyer, Notary Public.
My commission expires January 10, 1915.

THE PROFITABLE CAPON.

A Wonderful Opportunity for the American Poultryman Lies in Capon Raising. Capons Are Easy to Make, Cost no More to Raise Than Cockerels, and Bring Twice as Much in a Fancy Market.

There is today no more profitable source of revenue open to the American poultry raiser than the capon. When the ease and quickness of the operation is considered, the fact that any one can become an expert caponizer with a little experience, and the further advantage that the high priced capon is merely the transformation of a cockerel that would have been sold at a very low price, it is hard to realize that the demand for capons is never quite filled, and that more poultrymen do not take up this extremely profitable line.

Capon raising can be taken up as a side line on any poultry plant with hardly any increase in equipment and without necessitating a greater cost of maintenance. The purchase of a good caponizing set is about the only real essential, as the capons require no special quarters, nor particular feed, nor any more time and attention than

will probably kill two or three birds to start with, but as a cockerel killed in this way is just as good for market as one killed in the ordinary manner, there is nothing lost. The first bird may take fifteen or twenty minutes for a satisfactory job, but very soon it will require only three or four minutes. Expert caponizers turn out a bird in two or three minutes and even less. No particular knowledge or experience is necessary to caponize well, nor very much time. Any one can do it. It is just a simple surgical operation, requiring chiefly good instruments, a little care and cleanliness.

As to the time to caponize, this depends more on the size of the cockerel than the age. In general, the bird should be from two to three months old—never more than six months—and should weigh from one to two pounds. Most of the capons are made in the months from April to October, for the reason that spring chickens arrive at the proper weight for caponizing during these months, and also because capons made during this period arrive at the proper weight for market from November to May, at which time the demand for them is greatest and price highest.

There is not, however, any reason for selecting a particular season for caponiz-

Caponizing Instruments.

Too much importance cannot be attached to the selection of the right instruments for caponizing. Only the very best should be used—best in material and workmanship, as well as convenience and efficiency. The caponizer should begin with one of the sets of capon tools sold by dealers, rather than attempt to pick his own tools. After he has attained expertness, he can pick out special instruments that he is able to use with better success than others—but at first he can do no better than get a complete set of capon tools.

Among the many sets of such instruments, those manufactured by the Geo. Pilling & Son Company of Philadelphia, possess decided advantages in the way of finest tested material and adaptability for their particular uses that has come from long experience. The Pilling company has been making caponizing tools for over fifty years, and their instruments are in use everywhere, by the best caponizers. They are heavily nicked, a fact that renders them absolutely sanitary and safe. They embody every improvement invented in this country and abroad, and they are reliable and satisfactory in every respect. The Pilling Company issues an illustrated catalog of capon tools that every poultryman should send for, if for nothing else than its information. A copy will be sent free on request.

Raising and Marketing the Capon.

After being caponized, the former cockerel loses all of his objectionable traits. He no longer chases about the yard, spoiling for a fight, running off his flesh, eating his head off, waking the neighborhood at sunrise and otherwise causing trouble. He becomes quiet, gentle and content, seeking the company of little chicks and never molesting his fellows. The capon begins at once to put on flesh and to increase in stature, growing much more rapidly than his brothers who have not been caponized.

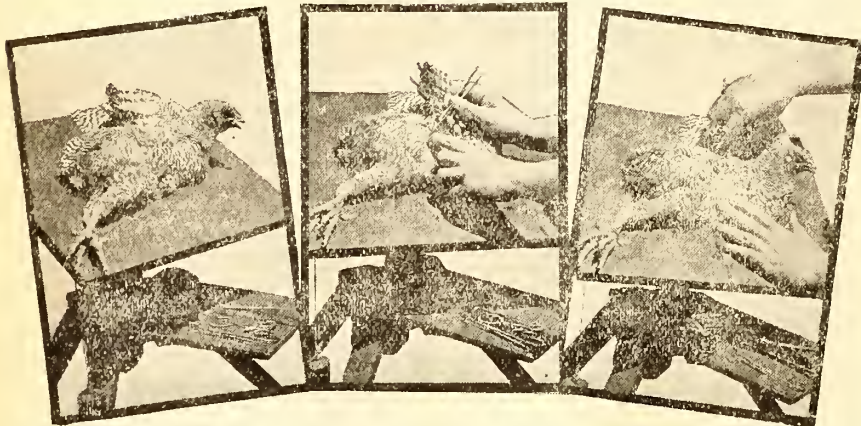
Although advisable to make some arrangements for housing and keeping capons together, especially if there are many of them on the place, it is not essential to go to any expense for special equipment or feeding. Plenty of water and soft feed should be available directly after the operation, which, by the way, seems to produce no bad effect on appetite or health, even for a short time. Also it should be remembered that the capon is to be fattened for market, and fattening feed should therefore be fed. The capon is very hardy and healthy and requires no special attention.

The capon is usually kept for a year before killing. Some keep them longer, on account of market conditions, but this is immaterial. One year, however, is the minimum age for capons. By this time they become large, fat and beautiful birds—well worth the top prices they command.

Killing and Dressing Capons.

There is a great difference between the dressing of capons and ordinary fowls. When the bird is ready for market, it should be kept without food for twenty-four hours before killing, in order to entirely empty the crop. A clean, light, cool place is selected for killing, and two heavy nails are driven about a foot apart in an overhead beam. Two nooses of strong string hang from these, and a leg of the capon is secured in each. Catch the head of the bird, and with a French poultry killing knife, cut the vein at the back of the throat through the mouth. Never cut this vein from the outside. Immediately it is cut, run the point of the knife through the roof of the mouth clear through the brain. This causes instant death and also makes the feathers come off easily. Begin plucking at once.

A sharp hook, with a weight of about two pounds attached, should be fastened in the lower bill after killing and renders plucking easier. Capons are always dressed with the head one, as this is their distinguishing mark. Feathers are left on the wing up to the second joint, also the head and hackle feathers, the tail, those on the left half way up to the drumstick and the long feathers on the hip close to the tail. Take care not to tear the bird, wash the head and mouth in cold water, removing all blood, and then place in the cleaning box. Cut carefully around the vent and remove the intestines. The fat with which they are covered should be pushed back



an equal number of cockerels. In fact, they are far less trouble than the rangy, quarrelsome cocks. Every poultry owner should investigate the possibilities of capon culture—it is a field in which there is little competition and great profits.

The prime advantage of the capon is, of course, the high price it brings, and the excellent market conditions that attend its sale. Ordinary dressed poultry will average anywhere from ten to fifteen cents a pound, according to season, and often the poultryman encounters adverse market conditions that result in a very small margin of profit. The dressed capon, however, commands from 25 to 35 cents a pound, almost regardless of season, and can be handled in connection with fancy trade and hotels to bring the very highest profits. It should be remembered, also, that capons weigh from 8 to 10 pounds and over, while ordinary poultry will not tip the scales more than half as much. Many successful capon raisers state that they get 100 per cent profit from their capons, considering only the actual cash outlay involved.

The institution of a capon department on the commercial poultry plant means also that a more rigid culling of cockerels can be made, because the culls can be converted into capons and sold for a good price, whereas at certain seasons the cockerels bring in no profit, and are often left in the flock. The coming of the capon will mean an improved stock at no loss, but even an increase in profit.

Important Considerations.

There are a number of questions usually raised by the poultryman interested in capon raising, of which the most important are: Can I easily do it myself? What is the best time to caponize? Will the section in which my place is located affect my market?

Answering the first question; it can be said that any man with ordinary intelligence can learn to caponize quickly and efficiently in a short time. A few hours spent learning the directions, a few experiments to give the knack, and the rest is a mere matter of experience. The beginner

ing, and the only reason that capons appear on the market at certain well defined periods of the year is because of the demand exceeding the supply and the comparatively few large capon plants in existence. Capons should be on the market all the year, and the time is coming when they will be. A bird can be caponized at any season with good results, provided operation is conducted on a sunny day and with ordinary precautions.

The locality of the plant should not affect a capon business. Just as good capons are produced in the west, the north or the south as can be made in New Jersey or in the vicinity of Philadelphia. These regions have secured their repute simply because they were the pioneers in capon culture. The name, "Philadelphia Capon" does not imply that the bird was raised near Philadelphia, but that it is a certain type of capon—a type that can be produced equally as well in Virginia as in Ohio.

The Operation of Caponizing.

The actual caponizing, as stated above, is merely a short and very simple surgical operation. However, space forbids here a detailed and minute description, or anything more than a general set of directions. The beginner should secure his method of procedure from one of the many books written on the subject, from issues of poultry journals that have treated the subject, from State or Government Bulletins, or from the handbooks distributed by makers of caponizing instruments. Among these latter, that published by the Geo. Pilling Company, of Philadelphia, perhaps the best known makers of poultry and cattle instruments in the country, is excellent. This book, "The Complete Guide for Caponizing," takes up the subject in detail, and can be secured free of charge from the Pilling people.

In caponizing, care should be exercised to keep hands and instruments clean, and a certain dexterity, easily acquired by experience, is needed. However, it is wonderful to note how quickly the birds recover and how much rough and inexperienced handling they can stand. It is essential, however, that good instruments be used.

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and slightly turned outward, and after hardening will give a very rich appearance. Let the birds hang in a clean, cool place until thoroughly cold and then pack for shipment.

Points to Remember.
There is less competition in this than in any other field of poultry raising. Every season the demand for capons is greater than the supply.

What kind of bird makes the best capon? Any kind! Even the dung hill fowl is twice as profitable if caponized. Plymouth Rocks and Langshans, however, on account of their size, make largest and usually best flavored capons.

Be sure to have good instruments. Don't torture fowls with bad ones. Don't risk using imperfect tools. For first class results, first class means must be used. Write for the Pilling catalog and caponizing sets—they are absolutely reliable.

Remember—capon range in price from 25 to 35 cents until February when they advance steadily until July. Capons weighing 9 and 10 pounds sell around 35 cents per pound.

Start caponizing now! Don't mind killing a few cockerels to become expert—they are just as good for eating as if killed in the regular way. Get a Pilling Set and become a proficient caponizer. Write the Geo. Pilling & Son Company, Philadelphia, Pa., telling them you have seen this article in the Poultry Keeper, asking for their booklet and catalog, and investigate this great poultry opportunity.

PROFITABLE GOOSE-CULTURE.

Goose raising is not so extensively engaged in as duck raising, the conditions under which geese are raised being almost entirely different from those necessary for raising ducks. The duck, being smaller, can be raised in a more limited space than the goose, which needs free range and water, while the former has been found to do well without water. There are many waste places on a farm that are worthless for cultivation that can be used with excellent results for raising geese for market. Fields or pastures having streams or large brooks, ponds or rivers on them can be used by geese and cattle. Our cattle and geese run peacefully together. Many farmers are profiting by this opportunity and adding to their income without loss of time or detriment to their pastures or fields. However, overpasturing with geese is bad practice, since the geese soil the grass and make it unpalatable for horses and cattle.

Simple Shelter is Sufficient.
The care in raising geese and the attention needed to successfully raise them are small when compared with the cost of raising other fowls for market. A goose on free range will gather the largest portion of its food, consisting of grasses, insects and other animal and vegetable matter to be found in fields and streams. The simplest form of shelter is used, where the birds are not crowded. An old shed is suitable if one has nothing better.

Geese live long, but it is not wise to keep ganders over four years old. They then become quarrelsome and ugly, and the younger ones are more active and prolific and insure greater fertility of the eggs than old ones. The goose retains her laying and hatching qualities through life. The feathers are another source of profit, and you can always get a ready sale for them.

Almost all varieties of geese make good mothers, and if left to themselves will make their nests much as the wild goose does and hatch a large percentage of their eggs. It is wise to use hens to hatch the eggs, or incubators, letting the goose have the last clutch of the season; the goose then will lay a larger number of eggs than if she is allowed to sit at first.

Geese have been bred for table use at least since the days of ancient Egypt. They are now common all over the world, but perhaps are the most abundant in Germany, where their flesh is relished in various forms. For table purposes they should never be over three years old. Their flesh becomes tough and loses its agreeable flavor when older than that.

The Principal Breeds.

There are seven principal varieties, as follows: Toulouse, African, Canadian Wild, Egyptian, Brown China, White China and Embden. Of these breeds I prefer either Toulouse or Embden for the farmer to raise for market purposes. But for those who are partial to crosses I suggest an Embden gander and Toulouse goose, Embden gander and African goose and Embden gander and White China goose. These crosses will give good growth, and the young birds will dress well for market. Crosses should only be made for market purposes, and always from pure-bred stock. Embdens are my favorites because of their snowy whiteness. They are nice-looking, of large size, tall and erect carriage and snow-white plumage.

Mate two to four females to one male, and in winter feed equal parts of bran, corn meal and middlings, with a small amount of beef scraps. Feed once a day with this; in the morning and at night feed cracked corn. Also give green foods like steamed clover and cooked vegetables.

Every county should have a poultry association, and in it should be found every poultryman who has poultry, dressed or alive, or eggs, fancy or market, for sale at any time of the year. Each association should employ a man of experience and honor and place him in the nearest market center for the purpose of marketing the produce. It would be his duty to make contracts with the restaurants, grills, hotels and confectioners for supplying them with guaranteed fresh eggs and poultry that is not kept in cold storage for weeks and months. Do you see where this would place the poultryman in relation to the profits? As it is now the cost of grain and other feed for poultry is so great that the wholesale price of poultry products is far below a living price, not to say anything about a realization of profit. By having a man in charge of the marketing, the poultryman would obtain the retail price for his produce.—(Exchange.)

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

RATTLES.

Please tell me what is the matter with a young White Leghorn pullet that I have. Every morning when I feed her, she eats a few kernels, then drops her wings and her throat rattles like there is something sticking in it. G. C., Crete, Ill.

This is probably some form of roup. Rattling in the throat may be the effect of a cold or of roup. If the bird shows signs of being ill commence treatment by giving a dose of castor oil (one teaspoonful) then twice a day administer a small amount of vaseline, a lump about the size of a pea. If this does not affect a cure in two or three days use a good roup remedy.

BURNED BONES—CROSSES.

1. Is bone burned till only the lime is left, good to break and feed to chickens, and what is its nutritive value?
2. Is a cross between a fine Houdan rooster and Leghorn hens, Silvery Spangled Hamburg hens, and Rhode Island Red hens, a good one?
3. Which is better—to inbreed chickens or cross breed them? I have some fine half blood Houdan pullets. Would you advise inbreeding or hatching only from the Leghorn and Red hens?

Reader.

1. Burned bone is valuable only for the mineral matter it contains, but mineral matter is one of the most important elements in the ration of laying hens and growing chicks.

2. When you cross you have mongrels. Some may be good and others worthless. There is nothing uniform in crosses. Some have the opinion that a cross of two breeds will produce a progeny with the characters of both breeds and that they will be uniform in size, shape and color, but this is not the case. The birds are as likely to assume the character of some ancestor removed by eight or ten generations as they are the parents. It has taken years of breeding to get our breeds to come anywhere near true to type and feather and one cross puts them back into the mongrel class.

3. It depends on how carefully you breed. If you are a careful breeder you can inbreed without danger, but if you wish to breed from the whole flock without close selection you had better get new blood, but do not go outside the breed. We should by all means hatch only from pure bred hens mated to pure males. There is no cross equal to the pure bred fowl.

LIGHT BRAHMAS—GAPES.

1. Would like to have you advise me in your next issue, the true color of a pure bred Light Brahma.

2. Also give cure for gapes.

R. V. T., Illinois.

1. The color of the Light Brahma is white and black. The head plumage is white in both male and female and the hackle has a white web with black stripe extending down middle of each feather. The wing bows white, except fronts, which may be partly black; primaries black with white edging on lower edge of lower web; secondaries, lower portion of lower web white, sufficient to secure a white wing-box, the white extending around ends of feathers and lining upper portion of upper web, this color growing wider in the shorter secondaries, the eye next to the body being white on surface when wing is folded; remainder of each secondary black. The surface color of the back is white; cape, black and white; under-color white or bluish white. Fluff white. The tail is white and black in female and black in male with the curling feathers underneath white or black and white.

2. Gapes can be cured by stripping the web from a feather except at the point, so as to leave a little brush. Dip this in turpentine, insert it in the bird's throat and give it several twists. This will loosen the worms and the bird will cough them up. Another way is to make a small funnel of stiff paper, insert the small end in the bird's mouth and blow a little powdered sulphur down the throat.

THE BIRDS THAT ALWAYS MAKE GOOD

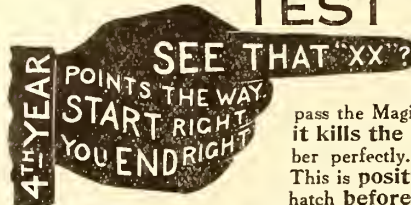
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ADDRESS POULTRY KEEPER PUB. CO., QUINCY, ILL.

CAMPINES.

1. Please give standard weights for Silver Campines, also color and markings.
 2. Are they non-sitters and are they good layers?
 3. To what class do they belong?
 H. C. T.,
 New York.

1. They have no standard weights. Campines are not a Standard breed. In size they are about the same as the Leghorn. Some breed them larger. There are several standards for color. We understand that the Campine Club has adopted the English standard. The ground color is silvery white penciled with black. The neck hackle in both sexes and the saddle in males is silvery white in the Silver variety. The ear-lobes are bluish white, leg and feet dark slate-blue.

2. They are classed as non-sitters and are excellent layers of large, white eggs.

3. The American Standard has not classified them. They belong to Belgian race and are so classified in England. We will probably place them in the Hamburg class, as there is little doubt that the Campine was largely used to produce the Penciled Hamburgs. When first brought to this country some thirty years ago they were thought to be of the same origin as the Hamburgs. While the Spangled and Penciled Hamburgs are the same breed they had different origins.

ABOUT DUCKS.

1. Will Pekin and Indian Runner ducks mix if allowed to run together?
 2. When should Indian Runner duck eggs be set for laying ducks?
 R. C. B.,
 Missouri.

1. Yes.
 2. Between March 1 and June 1.

POULTRY HOUSE CONSTRUCTION.

I intend to build a poultry house this summer, 20 by 14 feet, 7 feet in front and 5 in rear. I want it well ventilated and would like to know if I should have a string of windows at top of house and muslin for the rest of the south side. I intend to add a scratching shed to the house, two feet from the top and sloping south and the south side covered with wire netting. Would it be better to have the space above scratching shed boarded and space below covered with muslin with a couple of windows at the bottom? The muslin would be the partition between scratching shed and main house. Please advise where I should have the windows and muslin.
 E. H. C.,
 Iowa.

As we understand you intend to have the scratching shed in front of the house. If this is the case it will be necessary to have windows above the scratching shed in order to let in light to the house. We do not think it will be necessary to have any partition between the house and shed as this will only obstruct light and air.

FEEDING.

I have 11 pullets and 4 hens (White Orpingtons) and feed them a quart of mixture of corn, wheat and oats in the mornings, thrown in litter and one quart at night also. Is this a proper ration?
 R. E.,
 Illinois.

This does very well for an all grain ration, but you will get better results if you use some ground grain and meat which can be made into a dry or moist mash. Take equal parts by weight of bran, middlings, corn meal and gluten, mix and add fifteen per cent of beef scrap. Place this in a hopper which will not allow the hens to waste it and keep it before them all the time. Then feed about as much of the mixed grain as they eat mash. You can give this grain in one or two feeds.

AILMENTS—FEEDING.

1. I have a pen of late pullets. They began to lay early in January. Early in the winter the feathers around the vents began to come out and at the present time (March 13th) the rear end of each pullet is bare, the back of legs also. They

are laying fairly well; have good appetites and are free from lice as far as I can tell. Would be glad to know cause and remedy.

2. In another pen I have lost 3 or 4 during the winter. The first I notice is one standing around by itself. It will not eat and in about a week or ten days it will die. Can you tell me what is the matter with them? They are young hens and have been well cared for and are free from lice. I keep the coops clean and don't know any reason why they should go wrong.

3. Should like to know what will be a good ration with the following grains, as these are about all we can get in this part of the country: Wheat, barley, oats. We can grow stock beets and alfalfa for green food. Corn is expensive here, about \$1.75 per cwt. Beef scraps, \$5 per cwt, and green bone 4c per pound. Can we afford to feed the above at these prices? Eggs are at present 20c per dozen. They get up to 35c and 40c a dozen early in the winter.
 W. J. C.

1. This is probably the work of the depulping mite, but it may be that the flesh is diseased. Anoint the parts with sulphur ointment or use a two per cent solution of Zenoleum once a day for a week.

2. You do not give any symptoms so we are at a loss to determine what the disease is. In most cases the hens refuse to eat when sick. If they simply go around and grow thin it may be tuberculosis.

3. By weight, two parts barley, three of wheat and one of oats. Beef scraps at 5 cents and green bone at 4 cents are expensive, but it will pay to feed them economically. We can hardly get along without any meat in the ration.

FEATHER PULLING.

Please give a cure for feather pulling in chickens I have never been bothered with this trouble, until the past season.
 Mrs. J. H. R.,
 Pennsylvania.

Several methods are recommended for preventing the habit. The most effective is to file away the bill in front and on the sides so that it will not close tightly, but when shut leaves a space of about one-tenth of an inch. This will prevent the bird from grasping the feather with sufficient force to remove it, but will not interfere with eating. The bill will grow out again, but by that time the habit will probably be forgotten.

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GRIMM'S CELEBRATED ANCONAS won four first prizes Springfield, Dec. 1912; five first prizes St. Louis, Dec. 1912. Magnificent cockerels, \$3.00. Eggs, 15 for \$2.50. Booklet free. Fred Grimm, Webster Groves, Missouri. 2-4

ANCONA COCKERELS, \$3.50 up. Catalog for a stamp. Egg orders booked. R. W. Van Hoosen, Franklinville, N. Y., editor Ancona World, Pres. Ancona Club. 2-4

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S. C. RED BABY CHICKS, 15 and 20 cents each. Older chicks reasonable. Also English Shepherd puppies. Mrs. D. A. Farwell, Houghton, N. Y. 5-1

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BABY CHICKS, R. C. E. Minordas, \$15.00 per 100; S. C. W. Leghorns, \$12.00 per 100. Safe arrival. Hatching eggs, Mrs. Wm. Schenck, Ft. Madison, Iowa; R. 1. 2-5

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BABY CHICKS, Standard bred S. C. Rhode Island Reds, Buff Orpingtons, White Wyandots, Banded Rocks, \$2.00 dozen. 33 chicks, \$3.75; 50 chicks, \$7.50; 100 chicks, \$15.00. Guaranteed safe arrival 2,000 miles. 15 eggs, \$1.00; 60 eggs, \$3.00; 100 eggs, \$5.00. White Orpington and Leghorne Martin Michelson, 232 5th St. Aurora, Ill. 3-4

BABY CHICKS \$12 per 100. Eggs \$4 R. C. Reds, S. C. White Leghorne, Kellergrass White Orpington chicks 20c each. Booklet and testimonials free. Myron J. Morse, East Berlin, Conn. 3-4

BABY CHICKS 8 cents and up. Several varieties. Ducklings 15c to 25c. Eggs \$1.00 to \$3.00 per 15. Satisfaction guaranteed circulars free. Mapleleaf Poultry Farm, Circular, W. S., Mich. 3-4

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EGGS AND BABY CHICKS from my Golden Nugget strain of S. C. Buff Leghorns. High scoring stock with egg records to 266. Write your wants. John Oudeans, Oconto, Falls, Wis. 3-4

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BABY CHICKS, Single Comb Baby Leghorne, White, Buff and Brown, Black Minorcas. Hatching eggs. Catalogue. Falling Poultry Farm, La Fargeville, N. Y. 3-4

S. C. BROWN LEGHORNS, Baby chicks, \$3.00 per 25; \$11.00 per hundred. Stock and eggs. Prices and booklet free. None better. Prompt service. H. M. Moyer, Bechtelsville, Route 2, Pa. 2-4

BABY DUCKS, Indian Runners, 13 and 19 cents. White eggs. Heavy layers, English Walton strain. Baby chicks, R. C. B. Minorcas, 15 cents; S. C. W. Leghorns, 12 cents. Eggs for hatching. Mrs. Wm. Schenck, Ft. Madison, Iowa, R. No. 1. 3-4

100 BABY CHICKS, \$10.00; 100 eggs, \$5.00; 15, \$1.00. 700 heavy laying, purebred Single Comb White Leghorns. Illustrated folder free. Ellsworth Shaw, Grand Junction, Michigan. 3-4

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FLORENTINO'S HIGH QUALITY LIGHT BRAHMAS, Pullet "Dutch Lil" has met 33 pullets this year and has not lost a first place. My birds are undefeated and win over them all. Mating list free. Write Fred Florentino, Atkins, W. Va. 3-4

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SICILIAN BUTTERCUPS, world's champion layers. Lay large, white eggs. Very handsome and the tamest of all breeds of poultry. Larger and eat only half as much as Leghorns. Thoroughbred stock for sale cheap. Hatching eggs, \$2.00 per 15. Henry Woodworth, Box 505, Cheboygan, Mich. 4-4

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500 GUINEA PIGS in pairs, or many extra females as wanted. Stamp for circular. Geo. R. Palmater, Troy, N. Y. 4-4

CORNISH.

CORNISH EGGS from prize winners. Stock for sale. Farm range, large and vigorous. D. Barnett, Waynetown, Ind. 1-4

CORNISH INDIANS, Exhibition stock. Fine Laced birds. Sacrifice sale. Pullata, \$2.50 to \$5.00 each. Eggs, \$1.50 per 15, delivered by Parcel Post anywhere in United States. Frederick Shank, Timberville, Va. 3-4

DOMINIQUES.

DORSEY'S DOMINIQUES won 3 Buffaloes. Best layers and broilers. Eggs, chicks. B. J. Dorsey, Box 53, Leon, N. Y. 3-4

DUCKS.

HATCHING EGGS from prize winning pens. White Runners, fine type, pure white, very erect, fine racy birds. Twelve eggs three dollars. Mating list. Crane, Spencer, Indiana. 1-6

INDIAN RUNNER DUCKS, the wonderful white egg producers. Stock and eggs for sale at all times. Right prices. Eggs, \$1.00 per 15; \$4.00 per 100. Also White Runner eggs, \$3.00 per 15; \$8.00 per 50, C. W. Michael, Independence, Ind. 1-5

MAMMOTH PEKIN DUCKS, Big breeders from stock that have won at state and other big shows. 16 years' experience breeding and showing Pekins. White eggs always, \$5.00 per 100. Oscar Wells, Farina, Ill. 10-12

MAMMOTH PEKIN DUCKS, Extra Large show stock. Silver cup and state show winners. No better stock at any price. Customers always pleased. Eggs, \$2.00 per sitting. Order early. Oscar Wells, Farina, Ill. 3-4

HARSHBARGER WHITE EGG STRAIN, American standard bred light Fawn and White drakes. All have fawn heads and tails. Eggs, \$1.50 per 15; \$7.00 per 100. Mrs. Ella Whitwood, Hudson, Ill. 2-4

ENGLISH PENCILLED RUNNERS, The true Runner. Eggs, \$1.00 per 15. Guaranteed white egg strain. Stock, \$4.00 per pair. Eggs and stock any time. S. L. Greathouse, Campbell, Missouri. 3-4

I. E. DUCKS, (Fawn and White). Fawn Caps, white eggs. Pen 1, \$2.00; pen 2, \$3.00 per 15 eggs. Scoring from 91 to 94 3-4. S. C. B. Leghorns, \$1.00 per 15. Mrs. J. M. Barnes, Paris, Mo. 3-3

AMERICAN AND ENGLISH RUNNERS, Eggs 75c per sitting up. Massive White Embden Geese. Eggs, 25c each. H. A. Millard, Oregonia, Ohio, R. No. 1. 11-6

GENUINE INDIAN RUNNERS, English and American standard bred, greatest layers on earth. Large pure white eggs, 18, \$1; 100, \$5. B. F. Morgan, Independence, Ind. 2-4

WHITE INDIAN RUNNER DUCKS, Banner layers of large white eggs. Write for price on eggs. L. J. Ferrill, Farina, Ill. 2-4

EGGS, High scoring Indian Runners. American Standard. Dalvin Schneider, Case City, Mich. 1-4

INDIAN RUNNERS. See large ad elsewhere in this issue. S. H. Long, Elwood, Ill. 3-6

GLENN TRUE FAWN AND WHITE RUNNERS, Layers of large white eggs. Blue Ribbon winners. Eggs, 1st pen, \$2 per 15; 2nd pen, \$1 per 15. George C. Cannady, Danville, Illinois. 2-4

WHITE INDIAN RUNNER EGGS, (Fishes-Rhodes Strain.) Fawn and White Runner eggs. (Harshbarger white egg strain.) Prices right. Mrs. J. W. Hickman, Sistersville, West Va. 5-1

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WHITE RUNNERS. 12 eggs, \$1.50. Catalog. Will Albers, Lombard, Ill. 5-4

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BRADLEY'S HIGH SCORING Reds and Runners. Pure bred Rose Comb Red pen eggs, \$1.50 per 15; three sittings, \$4.00; range eggs, \$4.50 hundred. English Penciled Runner ducks, pen eggs, \$1.50, 13; range, \$7.00 hundred. Mrs. Walter Bradley, Mystic, Iowa. 5-1

INDIAN RUNNER DUCKS, Light Fawn and White. Eggs, \$1.50 per sitting; \$5.00 per 100. White Leghorn eggs the same. Easing strain. Rosa Staley, Forest Hill Poultry Farm, Clay City, Ill. 2-4

INDIAN RUNNER DUCK EGGS FOR sale, \$1.00 per 12. English type, good layers, good size. Booking orders now; order early. Roy Crandall, Albion, N. Y. 2-4

FAWN AND WHITE INDIAN RUNNERS (Harshbarger white egg strain), \$1.00 per 13 eggs Mrs. Del Suter, Biggsville, Ill. 3-3

FANCY WHITE RUNNERS, Spencer Strain. Eggs, \$2.50, 12. Myrtle Stormont, Salem, Ill. 4-2

MAMMOTH PEKIN DUCKS, white eggs, 75c per sitting. Mr. J. C. Loewer, Worden, Ill. 4-1

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I. R. DUCK EGGS for sale. Don't pay fancy prices for eggs, when you can get prize winners for \$1.00 per 13; \$2.00 per 30. Photo of duck if desired. Herman T. Miller, R. 5, Box 46, Decatur, Ind. 4-4

ENGLISH PENCILED, also White Runners. White egg strains. Eggs, ducklings, circular. Mrs. George W. Church, K-1, Townville, Pa. 4-4

WHITE INDIAN RUNNER DUCKS. Great layers of pure white eggs, \$3.00 per sitting. Wm. A. Peterson, Box K, Galesburg, Ill. 4-2

INDIAN RUNNERS, Fawn and White. Harshbarger white egg strain, 12 eggs \$1.00. Sunnybrook Farm, Deansboro, N. Y. 4-2

FAWN AND WHITE INDIAN Runners. blue ribbon winners, beautiful white eggs. Single Comb Black Orpington, Single Comb Mottled Ancona eggs, \$1 per 15. Ruby Murwin, Garrettsville, Ohio. 4-4

WHITE AND FAWN Indian Runner ducks. Eggs for sale, \$1.00 per 13. White egg strain. Ida Jennings, Mayview, Mo. 4-2

BARRED ROCKS, Fawn and White Runner ducks. Rocks, Pen 1, \$2, 15; Pen 2, \$1, 15; \$5.00, 100. Cockerel matings. Runners, white egg strain, \$2, 15. Mrs. E. W. Collins, Sigourney, Iowa. 4-4

WHITE INDIAN RUNNERS. Goodacher Strain, two dollars for fifteen. Imperial Pekins one fifty for fifteen. Have one hundred choice breeder. No better. Shipment made day laid. Bolser Farm, Le Mars, Iowa. 4-4

WHITE RUNNER DUCKS of the superb laying and winning quality. We will send on request best booklet on them. Eggs, \$3.00 per 12; \$20.00 per 100. Baby ducks, safe arrival, 50c each; \$40.00 per 100. See large ad elsewhere. S. H. Long, Elwood, Ill. 4-4

BRED TO LAY Runner ducks, Fawn and White Eggs, 12, \$1.50; 200, \$6.00. Experiment Farm, W. E. Hartz, Bloomfield, Mo. 3-3

BABY DUCKS. Pure White and Penciled Indian Runners, 35 and 18 cents. Eggs for hatching. S. C. W. Leghorns. Mrs. H. W. Knemeyer, Ft. Madison, R. 2, Iowa 3-4

BUFF ORPINGTON DUCKS. Prettiest duck grown. Large, wonderful layers white eggs. Won prizes Indianapolis, Greencastle, Terre Haute, etc. Drinking water only needed. Eggs, prize pens, \$5.00; others, \$2.00, 12; 100, \$12. Shipped in February; March 1-4 off. H. Pherson, Bainbridge, Ind. 2-4

FAWN AND WHITE INDIAN RUNNERS and Mammoth Pekins, 15 eggs, \$1.50. Buff Orpington Ducks, 15 eggs, \$3.00. Daniel Seifert, Mt. Vernon, Ind. 3-2

BUFF ORPINGTON DUCKS. Eggs, \$5.00 13. Runners. Harshbarger's best exhibition strain. 280 egg record Eggs, \$4.00, 13. Fawn and White, 200 egg record, flock headed by prize winners, \$1.00, 13; \$6.00, 100. Mrs. J. J. Reese, Cordova, Md. 3-2

INDIAN RUNNER DUCKS, Fawn and White; White Leghorn and Barred Plymouth Rock eggs, 75c for 13; \$5.00 per 100. Mixed orders if desired. Baby chicks, ducklings. Mallison's Ideal Poultry Yards, Ocean View, Delaware. 3-4

INDIAN RUNNER DUCKS, Fawn and White. White egg strain. For delivered prices on eggs address Malby O. Eddleman, Dongola, Ill. 3-2

WHITE INDIAN RUNNER DUCKS. Prize winners. Pure white eggs, \$3 per dozen. No stock. T. F. Dice, Prescott, Wash. Member National White Indian Runner Duck Club. 3-4

INDIAN RUNNER DUCKS, Fawn and White. White egg strain. Eggs, 15, \$1.25; 50, \$3.00. Loren Truex, Wakarusa, Indiana. 9-12

FAWN AND WHITE INDIAN RUNNER DUCK EGGS, (Cook's White Egg Strain). Heavy layers. Drake to six ducks assuring fertility. Selected eggs, 13, \$2.00; 25, \$3.50. J. Thompson, 224 North 4th St., Mount Vernon, Illinois. 3-4

INDIAN RUNNER DUCKS, Fawn and White and English Penciled. Fine flock, bred to lay. Eggs from my six pens. Write for my circular. W. J. Meglitsch, Box 41, Harvel, Ill. 3-4

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INDIAN RUNNER DUCK eggs. White and Fawn, (Harshbarger Strain). Heavy white egg strain. Also Buff Orpingtons, (Cook Strain) Hen eggs from prize winners. Write wants. H. H. Weller, Tioza, Ill. 3-4

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WHITE INDIAN RUNNERS, with upright racy carriage. Prize winners. Great layers large white eggs, 13, \$3.00; 100, \$18.00. Circular on feeding and raising ducklings free. B. F. Morgan, Independence, Ind. 3-4

INDIAN RUNNERS. Standard color, Layers of large, pure white eggs, \$1.25 and \$2.00 per 13 eggs. E. P. Miller, Junction City, Kas. 3-3

FISHEL'S STRAIN WHITE Indian Runner ducks. Eggs, 12 for two dollars. Southern raised, lay earlier, are harder; Fawn and White one dollar for fifteen. National Duck Farm, Letohatchee, Ala. 3-4

MAMMOTH PEKINS, (Rankin). very large. Eggs, \$1.25 per 12; 100, \$6 Buff Orpington ducks, (Dunrobin). Eggs, \$2 per 12; 50, \$6 C. McFerrer, Belleville, Ohio. 3-4

ENGLISH PENCILED INDIAN RUNNERS, (Walton Strain). Great layers, pure white eggs. Score 92 1/2-94. (Klein). Booking a limited number sitting. 12 eggs \$3.00; 26 eggs, \$5.00. P. W. Whitlock, Mt. Vernon, Ill. 3-4

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WHITE INDIAN RUNNERS, Spencer strain. The best money can buy. No brassiness, absolutely white. Standard size and good carriage. Eggs, \$3.00 per 12; \$16.00 per 50. Abble Stover, Fredonia, Kan. 3-4

HARSHBARGER STRAIN Fawn and White Runner ducks. White eggs, \$1.75 and \$1.50, 13. Booklet free. Modern Hennyery, Box 7, Myersville, Md. 2-4

HINES WHITE EGG STRAIN INDIAN RUNNER DUCKS, Layers of beautiful white eggs. Sitting of 12, \$1.50; per 100, \$9.00 Satisfaction guaranteed. Oak Park Poultry Farm, K-4, Winfield, Tenn. 2-4

PURE SPENCER STRAIN White Indian Runner Ducks, S. C. Black Orpingtons, Eggs and stock. Prices right. Satisfaction guaranteed. A. R. Williams, R. F. D. No. 4, Winchester, Ind. 2-4

COOK'S BUFF ORPINGTON DUCKS won 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th. E. H. Cook, Huntley, Ill. 2-4

LIGHT FAWN AND WHITE, Harshbarger blue ribbon strain. Guaranteed layers of pure white eggs, 250 egg record. Blue ribbon winners in every state and territory. Booking orders, spring delivery. Circular, 1c stamp; all about them. Mrs. Wm. Harshbarger, Waveland, Indiana. 12-6

WHITE RUNNERS. Racy bodies fine head points. \$3 per sitting. Mammoth Pekins, from range; eggs, \$5 per hundred. Selected pen ducks from 8 to 1 pounds, \$2 per 11. B. C. Brown Leghorns, prize winners, eggs, \$3 per 15. Cockerels for sale Carl Farthing, Salem, Ill. 1-12

BUFF ORPINGTON DUCK eggs, \$1.50 per 15; \$4.50 per 50. Alex J. Fix, Monroe Mich. 2-4

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MAMMOTH TOULOUSE GEESE eggs for sale, 25c each. Am booking orders now. Get your in early. Beautiful stock. Roy Crandall, Albion, N. Y. 2-4

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PEARL GUINEAS. Eggs, \$1.00 per 15 \$2.00 per 36. J. L. Hoak, R. 30, Spencer-ville, Ohio. 4-2

PEARL GUINEAS. Stock and eggs for sale. Stamp for circular. George D Wayne, Route 3, Medaryville, Ind. 4-2

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HAMBURGS, Silver and Spangled. Always a winner cock in first pen, never beaten five shows. Barnett Bros, Waynetown, Ind. 3-4

SILVER SPANGLED HAMBURGS, Great winter layers. Eggs from choice mating containing my prize winners, score \$2 and better, \$2.00 per 15; \$3.50 per 25. Satisfaction guaranteed. Louise Stein, Versailles, Ill. 2-4

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LAKENVELDERS. Won five first Chicago 1912. Send for circular. Frank Myers, Freeport, Ill. 3-3

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WHITE LANGSHAN EGGS from great laying strain, reasonable. J. R. Shimmitt, R. 5, Monmouth, Ill. 4-3

WHITE LANGSHANS. Farmer's friends. Handsome as Orpingtons and noted for health and winter laying. Stock for sale. Eggs, \$1 per 15; \$5 per 100. R. H. Moore, Nellie, Ohio. 3-4

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EXTRA BIG BONED, greenish glossy, black eyed Black Langshans. Scored 92 to 96. Cockerels, \$5; eggs, 15c. H. Osterfoss, Hedrick, Iowa. 3-4

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BLACK LANGSHANS. Eggs, \$1 sitting; \$5, 100. Fine laying strain Golden Gate Farm, Lafayette, Ind. 2-4

BIG BLACK LANGSHANS cockerels scoring 90 to 95. Eggs for hatching from pen stock scoring 93 to 96 and range stock scoring 90 to 94. Satisfaction guaranteed. Price right. A. H. Koch, De Soto, Iowa. 2-4

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EGGS THAT WILL HATCH, from pure bred, farm raised, Single Comb Brown Leghorns. Heavy laying strain. \$1.00 per 15; \$2.50 per 45; \$4.00 per 100. Will F. Ellerman, Versailles, Indiana. 3-4

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SINGLE COMB WHITE LEGHORNS. Strong chicks, eggs, any number from record year round layers, big white eggs. Farm range, large, vigorous, handsome breeders. Wyckoff strain. Guarantee safe arrival, 90 per cent fertility. Low prices. Circulars. Write wants. R. T. Ewing, Atlantic, Pa. 7-4

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(WYCKOFF-BLANCHARD) Single Comb White Leghorns. Prolific layers of large white eggs. 15, 75c; 50, \$2.25; 100, \$4.00. Fertility guaranteed. Prospect Hill Farm, Glenelg, Illinois. 2-5

BEACHAM'S SINGLE COMB WHITE LEGHORNS are bred for heavy laying and exhibition quality. Eggs for hatching, \$1.50 per 15. Send for mating list. T. D. Beacham, Weason, Miss., Box 191. 2-4

S. C. BUFF LEGHORNS from my Kansas City, Indianapolis, Indiana State, Richmond, Columbus, Ohio, Louisville, winners. Eggs, \$2, \$3, \$5 per 15, utility, \$1 per 15 or \$5 per 200. E. E. Cartwright, Box B, Richmond, Ind. 2-4

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SINGLE COMB WHITE Leghorns, bred from heavy layers, mated to cockerels scoring 93, bred from Young and Eastling stock. Eggs, \$1.00 per 15; \$1.75 per 30; \$2.50 per 50. Orle Elrod, Indianola, Iowa. 4-3

50,000 Leghorns, all varieties, stock, eggs, day-olds, poultry, collie, hare. Catalogue, stamp. Falling Poultry Farm, La Fargeville, N. Y. 4-4

ROSE COMB BROWN LEGHORNS. Eggs from cockerel mated pen, headed by prize winning male, \$2.00 per 15; utility stock, \$1.00 per 15; \$1.50 per 30 eggs Hilbert Siegler, Box 57, Bangor, Wis. 2-3

S. C. W. LEGHORNS. Exhibition stock, \$1.00, \$2.00 and \$3.00 per 15. Pen 3 and Brown Leghorns, \$5.00 per 100. Chas. J. Rauch, Jenera, Ohio. 4-2

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S. C. BROWN LEGHORNS Eggs for hatching, \$1.00, 15. Satisfaction guaranteed. Guy Giles, Route 3, Skowhegan, Maine. 3-4

WYCKOFF-LAKEWOOD S. C. White Leghorns. Farm raised. Baby chicks, twelve dollars per hundred. Hatching eggs, (95 per cent fertility guaranteed) one dollar per fifteen; five dollars per hundred. B. A. Suttles, Blanchester, Ohio. 3-4

FARM RAISED Single Comb Brown Leghorns, laid all winter. Eggs, \$1.00, 15; \$5.00, 100. Eda Staples, Lathrop, Mo. 3-2

SINGLE COMB WHITE LEGHORNS. Winners wherever shown. Eggs for hatching, birds scoring 94 to 96 3-4. Satisfaction guaranteed. Write for circular. George W. Klein, Defiance, Ohio. 3-3

S. C. GOLDEN BUFF and Snow White Leghorns. Eggs, \$1.50 to \$3.00 per 15. J. A. Herman, Odell, Neb. 1-4

PEDIGREED S. C. BUFF LEGHORNS. Stock and eggs bred from hens with records between 219-267, mated to 250 record blood. Winners in large shows. Bargains in breeders now. Dr. L. Hesley, Widdcomb Bldg, Grand Rapids, Mich. 3-4

ROSE COMB BROWN LEGHORNS. Stock and eggs from first prize winners at two Missouri, two Illinois state shows; Indianapolis, Centralia, etc.; seven silver cups, first cockerel, seventeen times in nineteen shows. Oscar Wells, Farina, Ill. 10-12

ROSE COMB BROWN LEGHORNS exclusively for 16 years. Prize winners wherever exhibited. Eggs, \$3.50, 100. Baby chicks, 100, \$12.00; 50, \$7.00; 25, \$4.00. Mrs. S. J. Belding, Northboro, Ia. 3-4

HINES STRAIN SINGLE COMB BROWN LEGHORNS. Layers of beautiful large white eggs. Sitting of 15, \$1.50; 100, \$5.00. Choice hens, \$1.50 each. Oak Park Poultry Farm, K-4, Winfield, Tenn. 3-4

S. C. WHITE LEGHORNS, (Young's strain). Eggs, \$1.00 per 15. M. H. Arthur, Riverview, A. A. Co. Maryland. 2-4

ROSE COMB BROWN LEGHORNS Kulp's 242 egg strain. Bred for size, quality, vigor, egg production. Eggs from high scoring farm range stock. 15, \$1.00; 100, \$4.00. R. H. DeVault, Bloomfield, Iowa. 3-4

SINGLE COMB WHITE LEGHORN eggs for hatching, 75c per 15; \$4.00 per 100. Bred for size and egg production. R. H. Elchhorst, Downers Grove, Ill. 3-4

S. C. BLACK LEGHORNS. Unequaled as winter layers. Eggs from pen headed by first cockerel Akron, \$2 per 15. La Master Bros. Route 21, Akron, Ohio. 3-3

SINGLE COMB WHITE LEGHORNS. Utility first, last and all the time. Eggs for hatching, \$1.50 per 15; 100, \$7.00; 1,000, \$60.00. Lynden Poultry Yards, H Oordt, Prop. Lynden, Wash. 3-4

ROSE COMB BROWN LEGHORNS. Eggs circular. G. J. Donahue, Box 53, Delavan Wis. 3-3

WANTED. Solid Buff Leghorns, hardy, large eggs. Prolific females, vigorous, long-bodied males. Prize winning stock, 257 egg pedigree for sale at reasonable prices. J. C. Benedict, Chevy Chase, Maryland.

FOR SALE. Pen White Leghorns (cockerel and six pullets). Good layers, beautiful birds. \$10. Leghorn eggs \$1 per sitting. Pen White Orpingtons (Philo stock), cock and three hens, \$15. Orpington eggs, \$2 per sitting Mrs. J. T. Kelton, Thrall, Texas. 4-3

ROSE COMB WHITE LEGHORNS AND WHITE WYANDOTTES. Cockerels, eggs and baby chicks. Mrs. Viola Young, Greenwood, Wisconsin. 3-4

SINGLE COMB BUFF LEGHORNS, pen hens and cockerel for \$10.00. Eggs from winning stock \$2, \$3 and \$5 per sitting. Baby chicks. Mrs. M. E. Gifford, Sherman, New York. 3-4

R. C. WHITE LEGHORN eggs for hatching. Lowest prices and fertility guaranteed. C. W. DeWitt, Troy, Pa. 3-4

S. C. BUFF LEGHORNS specialty. Green layers, large, white eggs. Hardy. Farm stock. Eggs, \$1.50 per 15; \$2.50 per 30; \$5.00 per 100. Mrs. W. H. Bundy, Say, Pennsylvania. 3-4

SINGLE COMB BUFF LEGHORN eggs. 15, \$1.50; 50, \$4.00, 100, \$7.00. Ferndale Poultry Farm, Goodview, Virginia. 4-3

ONLY ONE AND TWO YEAR range-bred Single Comb White Leghorns, that lay throughout the past winter are mated this year. Eggs, \$1.00 per 15. Kimbrough Leghorn Farm, Orland, Ill. 4-4

ROSE COMB BROWN LEGHORNS and Indian Runner, White and Fawn, white egg strain. Eggs, \$1.00 sitting. C. E. Foster, Chelsea, Mich. 4-2

ROSE COMB BROWN LEGHORN eggs for hatching. Heavy laying strain, healthy, vigorous stock. \$1.50 and \$2.00 per sitting; \$3.00 and \$10.00 per hundred. Satisfaction guaranteed. Ward W. Dasey, Frankford, Delaware. 4-4

SINGLE COMB WHITE LEGHORNS. Selected eggs for hatching, \$4.00 per hundred; 75c per 15. Range raised. Chas. Henry, Atlantic, Penna. 4-3

(BLANCHARD-WYCKOFF) Single Comb White Leghorns Heavy layers large white eggs. 20 eggs, \$1.00; 50 for \$2.25; 100 for \$4.00. Catalogue free. William Albers, Lombard, Ill. 9-12

SINGLE COMB BUFF LEGHORN eggs, \$1.25 per 15; \$5.00 per 100. Pillets, \$1.00 each. Rouen duck eggs, \$1.00 per 11. Toulouse Geese eggs. Golden Pheasant male birds. Arthur Worthington, R. 7, Manitowoc, Wis. 4-2

SINGLE COMB WHITE LEGHORNS. Any number eggs, or strong chicks properly hatched from selected record laying birds. Wyckoff and Young strains pure. Eggs, 4 cents; chicks, 8 cents up. Fertility and safe arrival guaranteed. Booklet free. R. T. Ewing, Atlantic, Pa. 4-4

INTERLAKE STRAIN S. C. White Leghorns. Bred for heavy egg production. Eggs \$1.00 per 15; \$5.00 per 100. Fred Kunes, Geneva, N. Y. 3-3

S. C. WHITE LEGHORNS, headed first prize cockerel Ft. Wayne Show, 1913. Stock and eggs. Send for mating list. Oak Grove Poultry Farm, Kimmell, Ind. 3-4

MINORCAS.

ROSE COMB BLACK MINORCAS won all firsts Toledo show last two years. Mating list free. J. S. Ball, Station A, Toledo, Ohio. 4-3

FOR SALE, ROSE COMB BLACK MINORCA EGGS, 15 for one dollar. Good layers, big white eggs. D. H. Sharp, Agent L. N. R. R., Sebree, Kentucky. 3-4

BLACK MINORCAS. (32 page catalogue free.) "Etwinoma Farms," Hampton, N. Y. 3-3

SINGLE COMB BLACK MINORCAS. Bred from best blood in America. Eggs, 15, \$1.00; 100, \$5.00. Special, \$1.50. Frank Gross, Alhambra, Ill. 3-3

S. C. BLACK MINORCAS. Stock and eggs. Breeder 10 years. Nearly clean sweep State Fair, 1912. Also 2nd pullet, 2nd pen at State Show, 1913. Mating list. Eggs, best pen, \$5.00 sitting. Baby chicks, 50c. Every bird in first pen a prize winner. John D. Dirksen, North 3rd St., Springfield, Ill. 2-4

SINGLE COMB BLACK MINORCAS. (Northup) and (Pape) strains. Eggs and stock for sale. Price list free. H. H. Lachelt, Markesan, Wis. 3-4

MINORCAS. S. C. Black Minorcas, baby chicks, hatching eggs, cockerels. Catalogue. Failing Poultry Farm, La Fargeville, N. Y. 3-4

SINGLE COMB BLACK MINORCAS, Northup-Pape Strains. Prize winners, heavy layers. Eggs for hatching. Get mating list. Satisfaction guaranteed. E. A. Merriam, Gaysport, Ohio. 3-3

EGGS FROM MY PRIZE WINNING Rose Comb Black Minorca Beauties. Ten cents each. Half price after May 15. Fertility guaranteed. Rev. Paul E. Wagner, Beaufort, Mo. 2-4

ROSE COMB WHITE MINORCA Blue Ribbon winners at great Hagerstown Fair. Eggs for hatching; price reasonable. No stock for sale. Kiefer Poultry Farm, Plainfield, Pa.

ORPINGTONS.

S. C. BUFF ORPINGTONS, from Owen's best pens. Monarch strain Pekin ducks. Puff duck eggs, \$1.50 sitting. W. S. Iacey, Kinmundy, Illinois. 2-4

S. C. WHITE ORPINGTONS won firsts Searcy, Ark., Pine Bluff, Arkansas. Arkansas State Fair, Hot Springs, Ark. in 1912. Eggs, Pen No. 1, \$2.00; No. 2, \$1.00. J. W. Peebles, Searcy, Ark. 1-6

SINGLE COMB WHITE ORPINGTONS, Owen Farm and Kellerstrass stock direct. 1 cock, 4 yearling cockerels, 7 hens and 11 pullets, \$1.50 each, if sold at once. Elizabeth H. Marshall, Morven Farm, Markham, Va. 4-4

SINGLE COMB BUFF ORPINGTONS, Cook and Bridgewater stock direct. Pens and free range stock. No scrubs kept and all unhealthy fowls killed. Eggs for hatching, \$1 to \$5. Stock for sale. Price subject of correspondence. Elizabeth H. Marshall, Morven Farm, Markham, Va. 4-4

SINGLE COMB BUFF ORPINGTONS. Cockerels for sale. Large, vigorous. Eggs, baby chicks. Stock free range. Prices on application. Breeder Buffs exclusively. Rocky Ford Poultry Yards, R. 1, Gahanna, Ohio. 3-4

CRYSTAL WHITE ORPINGTONS. Eggs from exceptionally good pens. Guarantee to please. W. E. Crane, Tilden, Neb. 3-4

S. C. W. ORPINGTONS. Prize winners for years. Hens, pullets, \$1.25 up. Fine cockerels, \$2 up. Eggs, \$2, \$5, 15; \$7 hundred. H. Pherson, Bainbridge, Indiana. 2-4

KELLERSTRASS WHITE ORPINGTONS exclusively. Eggs from Pen No. 1, \$2.00 per 15; No. 2, \$1.50; No. 3, \$1.25. Safe shipment and fertility guaranteed. A. W. Fisher, De Soto, Iowa. 3-4

S. C. BUFF ORPINGTON eggs from four good pens, including my prize winners, \$2 per 15. J. O. Baker, Canton, Ill. 3-3

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"HADHERWAX" S. C. Buff Orpingtons. Mrs. A. K. Charles, Lancaster, Atchison Co., Kansas. 3-4

S. C. BLACK ORPINGTONS. Order now and get the best eggs from my prize winners, scoring first pen 94-96; second pen, 93-95. Price, \$3.00 and \$5.00 per 15. G. C. Hays, Jefferson, Iowa. 3-3

PRIZE WINNING Crystal White Orpingtons won in December four firsts, one second, four specials, including silver cup. Eggs from selected pens, \$5.00 per sitting. Leaf Poultry Yard, Bennettsville, S. C.

WHITE ORPINGTONS. Imported from Miss Carey. Winners at Grand Rapids, Lansing, Port Huron, Bay City. Eggs, \$2.50 up. Mating list. L. S. Brooke, Box P., Howell, Mich. 3-4

WHITE ORPINGTONS, (Kellerstrass) mated to 11 lb. cockerel, very white. Eggs \$1.25 per 15; 100, \$7.00. C. McFerren, Bellville, Ohio. 3-4

ROSE COMB WHITE ORPINGTONS. Catalogue with illustrations from life. S. P. Porter, Mallet Creek, Ohio. 3-4

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PURE KELLERSTRASS WHITE ORPINGTONS. First prize and silver cup winners Davenport and Burlington, Iowa. 11 eggs, Parcel Post, \$3.75. Safe delivery guaranteed. Also baby chicks. Oaklawn Poultry Farm, Clinton, Iowa. 2-4

SINGLE COMB WHITE ORPINGTONS. Large size, excellent shape. From Cook's prize winners at Madison Square. Bought direct. Eggs, \$1, \$3 and \$5 per 15. A. H. Faulkner, Millington, N. J. 3-4

SINGLE COMB WHITE ORPINGTONS, (Cook-Vass). Prize winners. Eggs, \$3.00 for 15. V. B. Isbell, Clarendon, Va. 3-4

SINGLE COMB WHITE ORPINGTONS, (Byer's Strain). Breeders direct from Byer's pens, mated by himself. Fine, massive stock. Eggs in limited numbers, \$2.00 per sitting 15. Single Comb White Leghorn eggs from two year old hens, heavy layers large white eggs, \$1.50 and \$1.00 per sitting of 15. Joseph Barber, Nelsonville, Ohio. 2-4

KELLERSTRASS WHITE ORPINGTONS direct, \$3.00 per 15 eggs. Mrs. Ella Whitwood, Hudson, Ill. 2-4

SINGLE COMB WHITE ORPINGTONS, Eggs, 15, \$2.00; 30, \$3.50. Also fill orders for Single Comb Buff Orpingtons, Rhode Island Reds, both combs, Banded Plymouth Rocks and White Wyandottes. Eggs, 15, \$1.50; 30, \$2.50. Wm. S. Rea, Matteson, Cook Co., Illinois. 2-4

FOR SALE. Some A No 1 Kellerstrass White Orpington cockerels. Also eggs for hatching. Albert Goebels, Cullom, Ill. 2-4

S. C. W. ORPINGTONS from self imported stock. Cockerels and pullets, the low-down, heavy set, big boned, snow white, for sale. Eggs, five dollars sitting. Robert Broeker, Nevada, Mo. 2-4

R. C. REDS AND WHITE ORPINGTONS. Eggs reasonable. We can please you. Try us. W. S. Keyton, Troutville, Va. 4-4

KELLERSTRASS WHITE ORPINGTONS. Eggs from Pen No. 1, headed by cockerel from Kellerstrass Farm, 1913, \$2 per 15; Pen No. 2, \$1.50 for 15. W. O. Byler, Bucklin, Mo. 3-4

S. C. WHITE AND BLACK ORPINGTONS, R. C. White Wyandottes. Eggs, \$2 for 15; \$3.50 for 30. Special prices by the hundred. Heaton V. Mallison, West Salem, Illinois 3-4

SINGLE COMB BUFF ORPINGTONS. Eggs, \$1.50 per 15. "Golden Rod" strain. Baby chicks, 20c. Mrs. P. O. Larson, 1047 E. North St., Galesburg, Illinois 4-1

BUFF AND BLACK ORPINGTONS, Great winter layers, with size and color to match. Eggs, \$1.50 and \$2.00 per 15. Fertility guaranteed. T. A. Wilson, Route No. 3, Phelps, N. Y. 4-4

S. C. BUFF ORPINGTON EGGS, 100 per cent fertility guaranteed. Heavy laying utility breeders. Healthy, vigorous, line bred stock. \$1.00 per 15; \$3.00 per 50. Frank B. Finch, Fremont, Ohio. 4-4

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BUFF ORPINGTONS! Eggs and chicks from carefully selected hens with good egg records. Even buff color. Baby chicks, 15 cents each; eggs, \$1.50 per sitting. Geo. H. Smlth, College Mound, Mo. 1-13

S. C. BUFF ORPINGTON EGGS, \$2.00 for 15 from winners at 1913 Kansas State and Hutchinson Shows. Birds score 92 to 94 1/2. Geo. W. Martin, 231 Lulu Ave., Wichita, Kans. 4-4

S. C. BUFF ORPINGTONS (Cook and Frazier strains). Winners at the country shows. Bred for winning and laying purposes. Eggs, \$1, \$2 and \$3 per 15. Roy Snyder, Pleasant Valley, Pa. 2-4

BUFF ORPINGTONS. Elegant stock Standard bred, trap-nested for winter laying. Winter laying is the only kind that's paying. Eggs, \$1.50 and \$2.00 per 15. Guaranteed. N. H. Mendall & Son, Bellevue, Ky. 2-4

BUFF, BLACK AND WHITE Orpington eggs for hatching, \$2.00, \$3.00 per 15. From prize winning stock. Utility eggs, \$5.50 per 100. Satisfaction guaranteed. E. B. Conable, Independence, Iowa, Box E. 2-4

BUFF ORPINGTON EGGS from first class birds, \$1.00 per 15. P. E. Gregoire, Newton, Ill. 4-3

STREBY SNOW WHITE STRAIN Rose Comb White Orpingtons are the whitest in the world. Eggs half price after June first. C. M. Streby, Belleville, Ohio. 5-4

ORPINGTON EGGS. Foundation stock Kellerstrass hundred dollar pen, male direct from Kellerstrass, fifteen eggs, two dollars. Also Kellerstrass stock mated with Cook strain, fifteen eggs, one dollar. Roland McKean, Mulberry Grove, Ill. 5-2

BUFF ORPINGTONS. From a strain that breeds so true to size, shape and color. Trap-nested layers. Our birds have produced winners for St. Louis, Indianapolis, Detroit, etc. Eggs from choice range stock, \$1.50 per 15; \$7 per 100. From selected special matings, \$3 per 15. Fine breeding cockerels for sale. State your requirements to the firm that produces the big per cent high grade birds. Wyant Bros., Route 23, Thorntown, Ind. 3-4

EGGS. S. C. Buff Orpingtons, Rhode Island Reds, White Leghorns, White Cochins Bantams, 15, \$1.00. White Runner ducks, 12, \$2.00. Mammoth Bronze Turkeys, 25c each. H. Fitzkam, Ste. Genevieve, Mo. 2-4

ROSE COMB WHITE ORPINGTONS exclusively. "America's best". Boston, Philadelphia, Hagerstown, Allentown, Williamsport winners. Eggs reasonable. Circulars, fowls; 2nd pen chicks; 2nd and 3rd cock. Wm. Seidel, Washingtonville, Pa. 2-4

TRAP-NESTED, RANGE RAISED, standard bred S. C. W. Orpingtons. Eggs, \$1.50 per sitting up. White Guinea eggs, \$1.00 per 15. H. A. Millard, Oregonia, Ohio, R. No. 1. 12-6

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SINGLE COMB BUFF ORPINGTON stock. Eggs, \$1.50 and \$2.50. Write to Carl Stalling, R. 2, Chanute, Kan. 2-4

SINGLE COMB WHITE ORPINGTON stock. Eggs, \$2.00. Write to Carl Stalling, R. 2, Chanute, Kan. 2-4

SINGLE COMB WHITE ORPINGTONS, eggs for sale, \$1.50 per 13; \$10.00 per 100. Fine pure white birds, the Alba strain. Roy Crandall, Albion, N. Y. 3-4

WILLOW BROOK FARM, E. B. Bergea, Harlingen, New Jersey. If you want show birds book order now for eggs I have S. C. White Orpingtons, direct from Wm. Cook and Sons, the finest you wish to see. My pens are mated up with best I could buy. My \$100.00 pen, \$2.50; \$200.00 pen, \$3.50; \$300.00 pen, \$5.00, and \$500.00 pen \$10.00 for 15 eggs. Also have three choice pens Sheppard's S. C. Anconas direct. Pen 1, \$5.00; pen 2, \$3.50; pen 3, \$2.00 for 15 eggs. 2-4

QUALITY WHITE ORPINGTONS EXCLUSIVELY. Trap-nested winter layers. Only paying kind. Eggs, \$3.00 per fifteen. Limited number baby chicks. Send for mating list. Crystal-O Farm, Box K, East-avilla, Illinois. 1-4

CRYSTAL WHITE ORPINGTONS. Eggs for sale from strictly high grade stock. Satisfaction guaranteed and all inquiries promptly answered. Mrs. Chas. E. Fuller, R. No. 5, Northfield, Minn. 2-4

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EGGS FROM HIGH SCORING prize winning S. C. White and Black Orpingtons, \$2.00 per 15. A. Myers, Wayne City, Illinois. 2-4

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PHEASANTS worth \$4.00 a pound, easily raised. Investigate this rich industry. Complete book, natural colors, raising pheasants, wild game, 75c copy. Illustrated catalogue, 350 varieties, 25c. Eggs for hatching. Exchanges made. U. S. Pheasantry, Poughkeepsie, N. Y. 3-4

5 VARIETIES OF Pheasants, Wild Geese and Brant Wild Ducks. All the leading varieties of chickens. Eggs and stock list free. G. H. Harris, Taylorville, Ill., R. R. 5. 1-4

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I OFFER GUARANTEED MATED HOMERS, in any quantity, at \$1.00 pair, and challenge squab companies or dealers to produce better stock at twice this price. Beautiful White Homers, \$1.50 pair. Get my prices on Runts, Carneaux Maltese Hens, and save dollars. Charles B. Gilbert, 316 N. American Street, Philadelphia, Penn. 4-4

PURE BELGIAN HOMING PIGEONS, \$2 per pair. Frank Gannon, Union Ave., West Haven, Conn. 1-4

FOR SALE. Pigeons all colors, 35 varieties. Catalogue, 35 illustrations, 10 cents. Jos. Schroer, 1309 Benton St., St. Louis, Mo. 2-13

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WHITE ROCKS, eggs from high scoring birds, \$2 sitting; two sittings, \$3. Also English Red Cops, \$3 sitting; two sittings, \$5. Mrs. R. Roseboom, 2910 Gilead Avenue, Zion City, Illinois. 1-4

EGGS FROM MY FARM RAISED Barred Rocks. Good layers, \$1.25 per 15, post-paid. Rob Carr, McClure, Ohio. 2-4

WHITE ROCKS, Bourbon Red Turkeys, Pekin ducks. Write me your wants and get prices. Shady Brook Farm, Moulton, Iowa. 2-4

FISHEL AND OWEN FARMS White Rocks. Reared on free range, orchard, field, clover. Pure white, full size, vigorous. Eggs, \$2 and \$3 sitting. John J. Newton, Sait Lake City, Utah. 2-4

TRUE BLUE STRAIN BARRED ROCKS Eggs from grand sweepstake and Indianapolis winner. Prices low. C. M. Moffett, Box K, Bainbridge, Ind. 2-4

BUFF PLYMOUTH ROCKS, Gold Nugget strain. Eggs, \$2.00 per 15 delivered. Large birds, great layers. John W. Morgan, Marietta, Ohio. 2-4

BUFF ROCKS, 20 years specialist. Winners wherever shown. Home of the Buffs. Eggs from same pen as we use, \$2 per 15. F. S. Zwick, R. D. 2, Seymour, Conn. 2-4

MY BARRED ROCKS won 5 ribbons (two firsts) on 7 entries in a class of 126. Eggs from this stock, \$3.00 per 13; \$5.00 per 26. Wm. Wisler, Douglassville, Pa. 2-4

WHITE PLYMOUTH ROCK eggs \$5 per 100, from my prize winning and heavy winter laying stock. Circular free. Phillip Condon, Route 15, West Chester, Ohio. 2-4

HIGH CLASS WHITE ROCKS. Eggs from six choice matings. \$2.00 per 15; \$5.00 per 30. Order early. Address, Ralph A. Racine, Johnson, N. Y. 2-4

BARRED PLYMOUTH ROCKS. Thirty year's experience as breeder and fancier. Egg circular can be had for the asking, tells all about my matings. A. B. Shaner, Lanark, Ill. 2-4

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HATCH RINGLET BARRED ROCKS, Golden Buff Rocks. Get eggs of me. Pure bred. Priced right. E. C. Brokaw, Albia, Iowa. 2-4

BICKERDIKE' WHITE ROCKS. High scoring hens and cock birds, both young and old. Good utility stock all at reasonable prices. Eggs, 15, \$2.50; 100, \$15.00. Utility, 15, \$1.00; 100, \$5.00. Mrs. Robert Young, Palestine, Ill. 2-4

FISHEL WHITE ROCK EGGS, \$1.00, 15. Mrs. Chas. Skinner, Adel, Iowa. 5-4

PARTRIDGE PLYMOUTH ROCKS, Noftzger Strain. Eggs for hatching, \$3.00 per 15. Clemens Blank, 5737 Beechwood Ave., Indianapolis, Indiana. 5-3

FOR SALE. Ringlet strain Barred Plymouth Rocks. Bronze Turkey, Indian Runner duck eggs. Write Chester Harmon, New Hartford, Iowa. 5-1

BARRED ROCKS, Bradley and Thompson strain, both matings. Eggs for sale. Winners wherever shown. C. Sandahl, Melrose, Iowa. 2-4

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BRADLEY BROS. strain Barred Rocks. Large boned, fine shape and barring. Eggs, \$1 for 15; \$1.75 for 30; \$5 for 100; \$8 for 200. Satisfaction guaranteed. Mrs. Henry Confer, Lena, Illinois. 2-4

EGGS FROM THOMPSON'S Imperial "Ringlets" Barred Plymouth Rocks. Both pullet and cockerel matings. \$1.50 and \$3.00 per 15. Day old chicks from best matings. W. F. Wright, Spirit Lake, Iowa. 2-4

WHITE AND BARRED ROCK eggs for hatching, any number Burket's Poultry Farm, Frenchtown, New Jersey, Route 4. 2-3

PARTRIDGE PLYMOUTH ROCKS, Missouri, Illinois, Michigan State winners. Bred to lay. Pennsylvanla customer writes, "The seven pullets laid 149 eggs in a month, before they were eight months old." Eggs in season. Write for prices. Fred Landgraf, Marissa, Ill. 2-4

BARRED ROCKS. Extra large, vigorous, prolific layers. Beautifully marked. Money makers. Eggs, \$2.00 per 15. Circular free. F. E. Payne, Hedgesville, West Va. 2-4

BARRED ROCK EGGS. Eggs from choice matings, \$2, \$3, \$4 sitting of 15 eggs; \$1 per sitting of 15 or \$5 per 100 from utility flock. Mrs. J. W. Waterbury, Prairie du Sac, Wis. 2-3

THOMPSON'S IMPERIAL RINGLET BARRED PLYMOUTH ROCKS. Stock direct from E. B. Thompson this season, 1913. Eggs two dollars per sitting. Send your order early. Fred H. White, Bucklin, Missouri. 2-4

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RANGE, stay white Rock eggs, 100, \$4.50. White Plume Farm, Waterloo, Ia. 2-3

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BARRED ROCKS, \$2 per sitting. Lide M. Goldsmith, Ellenville, N. Y. 2-3

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EGGS FROM A PEN of Thompson's Imperial Ringlet Barred Rocks, pullet mating, \$2.50 for fifteen. From large, bred-to-lay Barred Rocks, \$1.50 for fifteen. Mrs. William Coon, Ames, Iowa. 2-4

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BARRED ROCKS. Eggs, \$1.50 to \$3.00 per 15. J. A. Herman, Odell, Neb. 2-4

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ROYAL RINGLET BARRED ROCK EGGS from prize stock, \$2.50 per 15. Pearl Guinea eggs, \$1.25 per 15. F. A. Maryott, Townville, Pennsylvania. 2-4

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COLUMBIAN ROCKS. High quality, low prices. Four ribbons on four entries at Chicago. Eggs from best pens, \$3 per 15; \$5 per 30. W. R. Craun, Butler, Ind. 2-4

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Island Reds that are dark and even color-
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Three pens, fine color and shape. Eggs,
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ROSE COMB REDS Rich, even color.
Typical shape. Strong, healthy, prolific
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Write for mating list. I will treat you
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REDS THAT ARE RED from non-fad-
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ROSE COMB RHODE ISLAND REDS.
Trap-nested, individual records, 242 and 207
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are fine large, high scoring birds, rich in
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Heavy laying strain. Write for mating list
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R. C. RHODE ISLAND REDS. Big
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Scored 90 to 94. Cockerels, \$5. Eggs, 15c.
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Tompkin's strain. Bred for size, quality,
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Extra good color, large size and exception-
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S. C. REDS, (Tompkins Strain.) Eggs
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EGGS! Single Comb Reds, winter lay-
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Pen of females, scoring from 90½ to
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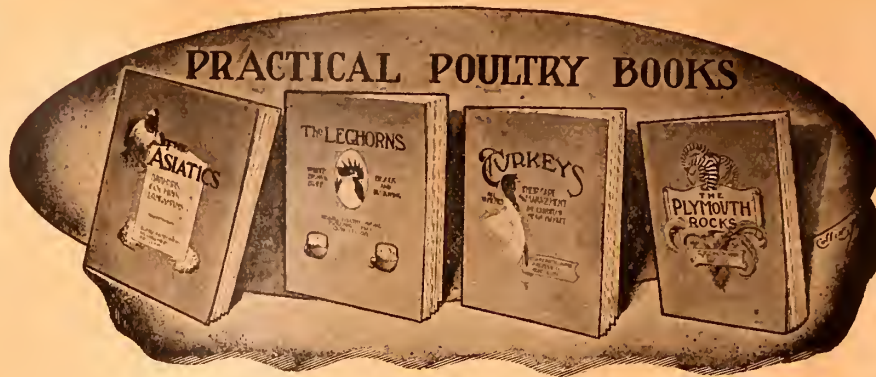
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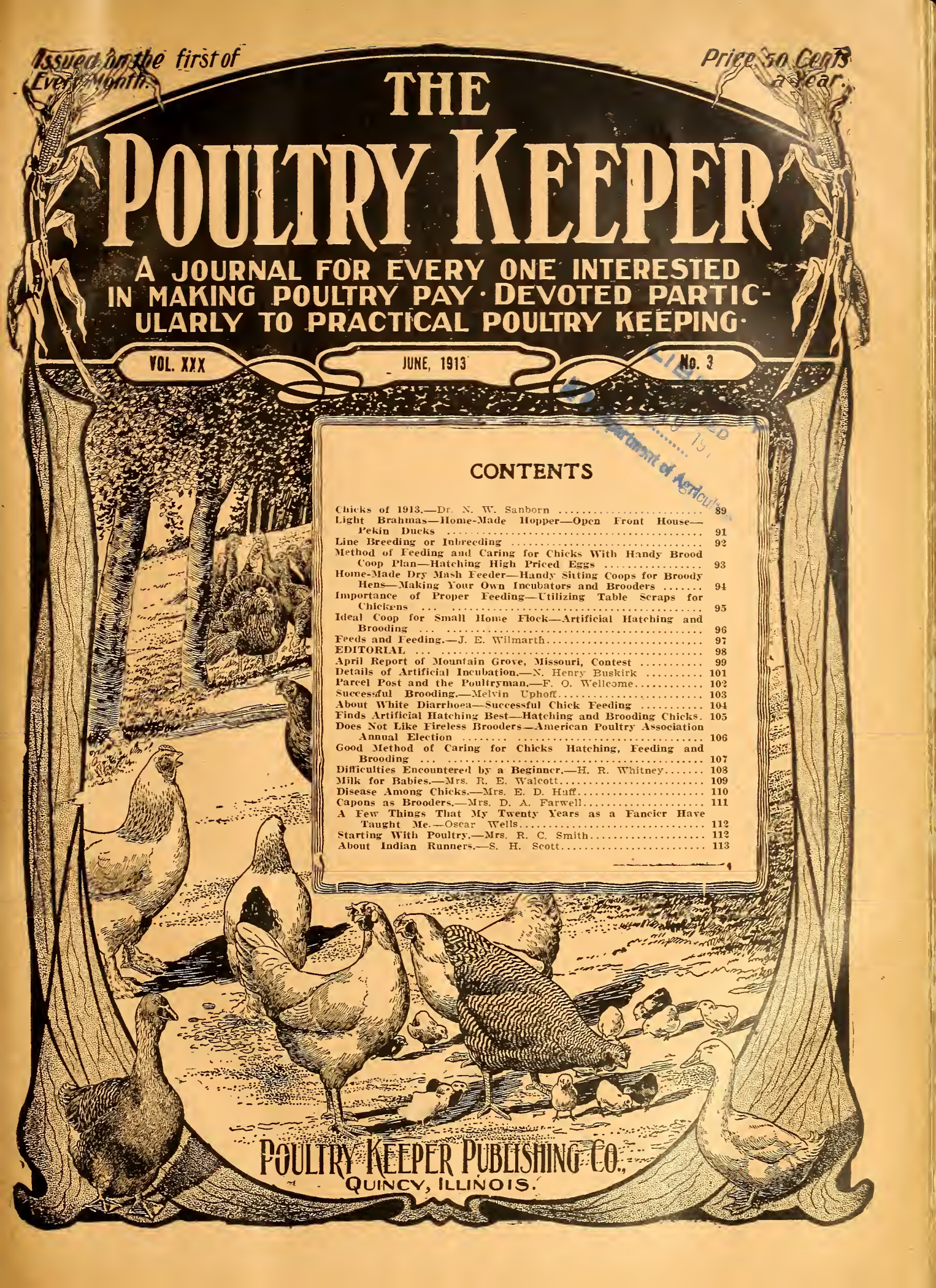
JUNE, 1913

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KEEPER

VOL. XXX.

JUNE, 1913.

No. 3.

CHICKS OF 1913.

Dr. N. W. Sanborn, Holden, Mass.

CHICKS seem to have done better this year than for several years. Not all the reports have been cheerful but there are fewer letters of "bad luck" than for some time. As a whole the early hatches were not large but the chicks that did come out of the shell were sturdy. February and March hatched chicks are no more numerous than in 1912, but April hatches were good, with few losses in the brooders. Right near me is a poultryman who showed me three brooder lots of April hatched chicks, each from a different machine and he said he had

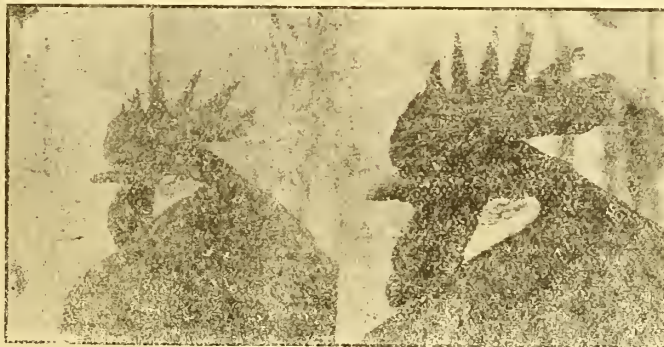
inen or litter in it, and fed and watered as I did the brooder chicks. The only thing that was new was the putting into the drinking water of fifteen grains of sulphocarbonate of zinc to offset any bowel trouble. One chick developed bowel looseness and I killed it. Another got a broken leg and I killed it too. See, there's as strong a lot of chicks as you need own. The eight chicks that started strong in the machine had made good under natural methods with the old hen."

I looked into the grain room on this small farm. I like to see what other

the complete mixture. At ten days of age I also feed the same dry mash I used for my layers. My mash is made up of three scoops of bran, two of alfalfa, one each of gluten, red-dog, ground cull beans and fish scrap." Certainly the feed must have suited his birds as I never saw better chicks than those of one week to two months that were running on the grass fields back of his barn.

One Man's Chick Trouble.

A business friend of mine developed real chicken fever last year, but did not get any chance to let it work till this spring. He bought a pen of sixteen pullets to supply his table with eggs. He bought one hundred, day-old chicks and brought them home on the train. Not knowing anything about chicken raising he was induced to buy a hover brooder with a "capacity" for 100 chicks. They did well for a few days when they began to die, when he was led to think that they were too crowded in the one brooder. Then he put in his order for another brooder of a different style. When it was still in transit several warm days came on. It seemed the proper thing to do to bring the chicks and circular hover out of doors into the milder weather. That night the temperature dropped, the wind came up and blew out the lamp and in two days he found he had seventy chicks. Then the other brooder came and thirty-five chicks were given to each one of the brooders. That first flock of sixteen pullets got the best feed that could be had. Mash, mixed grains, scrap table waste, all in unlimited amounts. The birds were given a big run. Some two of them had impacted crops within ten days after he bought them. Men of years of experience have chicken troubles enough, but the beginner has to go through lots of them and is fortunate if his courage holds out.



Specimen Male Birds From Brown and White Leghorn Yards of W. W. Kulp, Box 30, Pottstown, Pennsylvania. Mr. Kulp Has Been a Poultry Breeder for Nearly Thirty Years and Has Paid Special Attention to Building up Heavy Laying Strains of Leghorns.

not lost a chick since they were put in the brooder. He had eight chicks with a hen, running near the barn, and made an interesting statement in regard to them. He said: "I had ten chicks in my first April hatch that had something the matter with them when I emptied the machine. Either the chick was weak, was small or was badly buttoned up where the yolk is absorbed. They were a sorry bunch. I wanted to kill them but finally decided to see if they would live if brought up with a hen. So I found a hen that had gone broody two nights, put the ten chicks under her in the evening, and left them alone over that and the next night. Then I transferred them to a common bushel box, with an

folks buy for chicken feed and how they mix it for daily use. A question or two brought out the fact that these chicks of his were fed somewhat differently than previously when he had lost many chicks. There was a bag of commercial chick food in the grain room. It seemed to be made up of cracked wheat, corn, Kaffir corn, oats, flax seed and coarse charcoal. He was feeding this to chicks of all ages, adding fish scrap and grit to it. Said he: "I take up eight small measures of the chick food, one measure of coarse fish scrap, one measure of chicken grit. The baby chicks, right from the machine, get a very little of the feed with the fish left out. When the chicks get to five or six days of age I feed

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants it except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

Day-Old Chicks.

I suppose that many more baby chicks have been sold this year than in any previous two years, yet we hear little of them. The newness has worn off. I know a few men who think the buying of baby chicks has solved the hardest of their poultry problems. They now give their time to the producing of table eggs for nearby markets, raising the pullets for layers, and working off the cockerels for broilers and roasters. They seem to be satisfied to get away from the need of fertile eggs, the trouble of hatching and the raising of breeding stock. One small plant, not far away, buys from seventeen hundred to two thousand chicks each April, and plans to winter nearly five hundred layers. There is work enough in this, with the other work of the farm, to keep busy all the year. Personally I should not be willing to give up the pleasure of making up my matings, trap-nesting and pedigreeing, improving my line of birds along utility and fancy lines.

Some men seem to have the faculty of getting chicks out of eggs, the know how of producing fertile eggs, that other folks lack. These men are just the ones to take up the selling of baby chicks and they are the ones who are doubling egg capacity each year. One of these plants that has not only been selling day-old chicks but also doing custom hatching for other men, is seriously considering the giving up of trying to incubate eggs from other yards. One such mammoth hatching plant told me this year that it was discouraging to try to hatch such eggs, as they had been running one-third clear eggs, one-third dead germs and only one-third would hatch good chicks. The man who gets a chicken from every three eggs set at home under his own hens thinks nothing wrong of the results, but let someone else get such results from the eggs in a big machine and he just sits up and howls.

Half Grown Pullets.

There is a growing call for half grown chicks, pullets, to fill the small laying house of the townman. The man who needs a dozen good pullets each autumn to supply table eggs through the winter is glad to get rid of the raising of them. Many of these folks are buying in late August, pullets that will weigh from two and one-half to three pounds. The laying stock of the winter before has either been sold off as a bunch in middle July, before the molt, or has been eaten at home through the summer. The house is empty and the pullets go right into it after cleaning. There are families in nearby cities who close the house and grounds all summer, leaving town as soon as the close of public schools. These people do not want chicks or hens through the hot months and prefer to sell the year olds and buy pullets when they return in early autumn. Such a well grown pullet is a bargain at one dollar and such a pullet pays well the man who raises her. Both parties are pleased. Often a fancier can dispose of his cull pullets, culled

from the standpoint of the fancier, getting rid of something that he does not want and selling something that the other man needs.

Mishaps in Raising Chicks.

One Vermont woman made her first venture last year with well-bred stock. She sent fifty miles away and bought a sitting of eggs, paying two or three dollars and got eleven pullets out of it. That was a surprise that pleased her. Speaking of her section, she wrote: "It is very poor hatching here in my vicinity and certainly it has been so with my own eggs." Speaking of those eleven pullets, in a letter this month, she says: "They began to lay Nov. 20, at six months. Did not keep a record of their laying till January, in which month the eleven laid 252, in Feb. 255, and in March 252 eggs. These pullets did not give me a sitting hen till April 24, after five months splendid laying." This year she has had the courage to pay five dollars for another sitting from the same breeder, getting nine chicks from the sitting. She tells me that she has been held up to severe criticism for her open front houses, by her neighbors. They can't understand though why her new pullets have laid so well, can't understand that breeding and feeding count and when it became known that she paid five dollars for a sitting of eggs her ears burned, but she could not make them understand 'that nothing ventured nothing gained.' They expect to pay market prices for sittings and get gold mines. She hears of big egg records but has seen nothing yet to touch her eleven pullets out of a sitting of fancy eggs. This woman has it in her to hatch and raise chicks and she turns the mishaps of others into success for herself.

A few years ago I spent two weeks in the mountains of the upper part of New York State and while there saw a mishap that was a serious loss. A thunder storm coming up suddenly the small chicks all ran into a hen house, into one pen of it, into one nest in it. They all piled up, higher and higher and when the storm was over the poultryman found over half his chicks dead from want of air.

I have had, myself, sudden showers in mid-summer, that wet the chicks, laid them flat on the ground, helpless and apparently about dead. I remember bringing into the house a basket of twenty of such half dead chicks, soaked and cold, putting them in front of the wide open oven door and in an hour taking back to the brooder nearly the whole bunch. I might have lost two or three of them.

The other day I went out to my brooders after it had been raining an hour, finding that the first gust of wind had blown the door shut and closing out the chicks in the wet. The chicks were quickly put under the hover, the lamp wick turned high and in two hours you could not pick out the injured chicks from the others. Quick treatment often does wonders. No matter how careful you may be, no matter how far ahead you may plan, there will come times when mishaps will come to your chicks. Take it in

the best spirits you can and try not to be caught that way again. Last March I had over one hundred chicks of two weeks of age, in two out-door brooders. The weather was mild, the evening pleasant, no air stirring. In the middle of the night the thermometer dropped thirty degrees, the wind blew hard, the clouds gathered. Those brooders dropped in temperature forty degrees, the chicks piled up around the heater, became wet with sweat or moisture, and took "cold." Two-thirds of them died in less than ten days. If any one had awakened in the night to realize the change in the weather, the brooders would have been attended to, the windows closed, the lamp wick turned up, the brooder blanketed. But we all slept through till six o'clock in the morning, not waking till daylight was close at hand. Then it was too late, the mischief done, the brooder chicks were seen and all done that could be. Such troubles will come if you raise any number of chicks, or keep at the work through a series of years.

The late spring weather was fine. Grass started early, days were comfortable, nights mild, no severe winds. Chicks had more chance this year to live out-of-doors, to get an abundance of green food and be contented at night. Conditions like these are helpful to getting quick growth in the chicks, getting a start that helps right along to maturity. While there are more chicks in sight this year than last, the number seems to be less than is needed. No drop need be expected in meat prices this fall and pullets will hold up to the high value of a year ago. It looks to me as though Leghorn pullets hatched in July will be worth trying. The cockerels meet a good demand in the fall and the pullets can be made to mature to get the high winter egg prices. The larger breeds seldom are profitable hatched later than July first, unless you have a market for soft roasters and can hatch in August. Where there is a call for big roasters along in April, birds dressing seven to ten pounds, selling for twenty to twenty-five cents a pound, the matter is worth looking into.

BARNES KNOWS HOW.

A recent letter from Charles E. Barnes, of Taylorville, Ill., who breeds the champion strain of Buff P. Rocks, says:

"At the late National Buff Rock Club Show, held with the Illinois State show at Springfield Jan. 6-11, last, with 243 Buff Rocks in competition I won 5 ribbons, on 5 entries, winning the much coveted National ribbon for best colored male, with 81 males competing. I also may say I have raised my chicks on Chamberlain's Perfect Chick Feed for the past 10 years."

Yours truly,

Charles E. Barnes,
Taylorville, Ill.

LIGHT BRAHMAS.

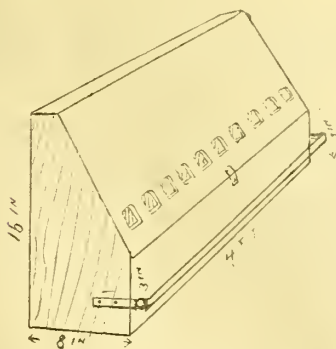
In answer to the appeal from Webb Tichenor, I will agree with him about boosting the Light Brahmas. Why have they been neglected? The attention of many breeders has been drawn from them by big stories of some new breed, which is probably the only explanation I can make, as I do not see where they are excelled by any breed or variety. They have their faults, but show me the breed that has no faults. The Light Brahmas certainly have their good points. They produce more pounds of flesh than any other breed, lay fine, dark brown eggs of very large size and lots of them. Better still, they produce them all during the winter when eggs are highest priced. A sudden change of weather does not effect their laying in the least. I should like to find out if there ever was a Light Brahma that had an ailment or sickness of any kind. No such trouble ever shows up in my flock and this is the report I get from others. Besides this, the Light Brahmas breed very true to color and type and could you ask for a more handsome bird?

Alfred Kester,

Wisconsin.

HOME MADE FEED HOPPER.

The accompanying drawing represents the home made feed hopper which I have found to give the desired results. It does not require any attention further than filling and it never clogs. Neither can the chickens roost on it. It is also rodent proof. The description is practically useless with the drawing, but will add the front is made of 5-16 or 3-8 lumber. Pieces of good boxes will do. Cut holes $2\frac{1}{2}$ inches wide, 4 inches high, spaced $2\frac{1}{2}$



W. M. Johnston's Feed Hopper.

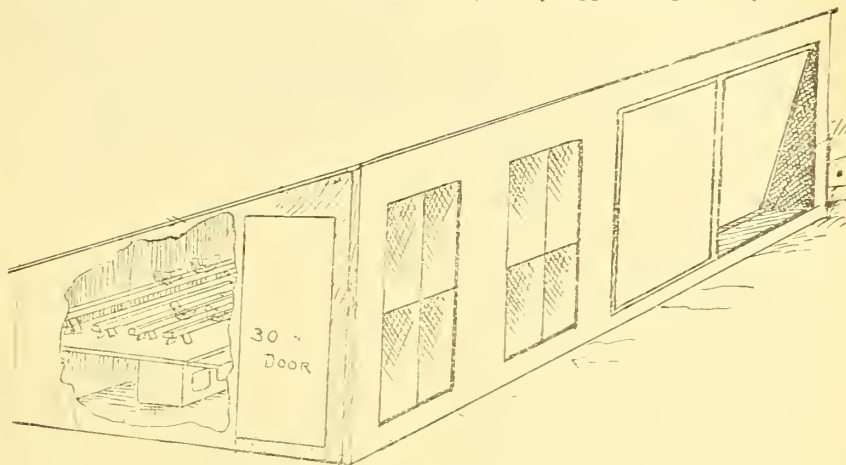
inches apart. Two of these are required. Hinge the bottom one at the top and the other is laid flat on the bottom one and held in place by two buttons, one at the bottom and one at the top. This top cover is for the purpose of closing the hopper at night. Simply pull the top $2\frac{1}{2}$ inches either way and the hopper is closed. The hopper can be made in any length that may be required.

W. M. Johnston,

Illinois.

OPEN FRONT HEN HOUSE.

I have seen many articles in regard to the open front house but none of the houses have seemed as good as the one I have. My house is eight feet wide and 24 feet long and is divided into two rooms of equal size, by a par-floor and contains the roosts. There are four perches running its entire length, 12 feet, and they will furnish titon. The first room has a cement



Plan for Open Front Laying House.

room for 75 or 100 fowls to roost. Under the roosts are the nests, out of the way and dark as biddy likes them. A hinged door makes them easily accessible. This room contains hoppers for dry feed, oyster shells and gravel, and two dust boxes. This room is well lighted with two windows, with two sash each and is warm in winter. The second room is a scratching shed. It has a wooden floor, covered with litter. It is open front with two large muslin curtains on frames to fasten up on the ceiling during the day and to close during inclement weather. There is wire netting on the front of this half of the house. The hens get all their feed in this room. A small opening between the rooms allows the hens to pass through and the door is kept closed in cold weather. Thus the flock has an open front room to exercise in and a warm room to dust and sun themselves in. There are all the advantages of the long, low house with its maximum of sunlight. There are no draughts in my hen house and the hens are comfortable at all hours of the day.

Mrs. H. G. Hawthorne,

Pennsylvania.

PEKIN DUCKS.

Upon looking through the advertising columns of almost every magazine one picks up, the good qualities of the Indian Runner ducks are heralded but I want to tell you of the good qualities of the old-time Pekin ducks.

In my experience with them I find they are non-sitters and layers of large snow-white eggs. (never tinted) commencing early in January and laying persistently well into September. They require no more special care than chickens and are quite hardy and good foragers. The eggs are very fertile and

the ducklings quick growers, maturing in 10 to 12 weeks. Near the larger cities you will find a ready market at once for the young ducks but in the smaller places where one has to wait until fall to sell the surplus, they can be made to produce still extra profit by picking the earlier ones once or twice. There is always a market for their pure white feathers and they bring so much more than colored. The very early eggs are generally used in

the home from my flock but they are sought after upon the market.

In hatching, artificial modes of incubation are employed. The eggs are set either under chicken hens or in incubators. When the young ducklings hatch I take them out of the nest or chick tray as soon as dry, putting them in a warm lined box or basket near the fire. When the hatch is done, (if a hen is used) I place them in a good roomy coop, or if the incubator, not too many to each brooder, about twenty-five.

They are then ready for their first meal. It is composed of light bread soaked in skimmed milk or water, with a little bran and fine grit added. I gradually increase their feed to all they will eat, omitting the bread in a few feeds, adding middlings and corn meal. I keep water at hand for drinking but none is needed for swimming although they will take advantage of any on hand. Their habits are the same as other ducks, soon learning where their sleeping quarters are and returning always at night to be enclosed. They do not stay with a brooder long and very soon scorn the hen. Then I provide larger pens and put more together.

A few weeks before sending to market pen all together in a small lot as you would hogs for fattening. Then feed the daily mash besides whole corn. They put on fat very fast, soon weighing 10 and 12 lbs. per head. Be sure to have them fat and you can demand and get the top prices. Where ducks are raised for market the difference in the weight soon counts with a tidy sum in the pocket of the Pekin breeder.

Mrs. F. E. Hull,

Ohio.

LINE BREEDING OR INBREEDING.

During each year we are asked for full information about line breeding. Line breeding is inbreeding and consists of using birds that are related to each other instead of getting new blood each breeding season. The intent of this close breeding is to intensify the good points possessed by a certain male or female and thus a son is mated back to his own mother, or a daughter to father, or sister to brother. The latter retains the even balance of half of the blood of each parent, while mating the son back to his mother, increases the blood of the original dam. Cockerel or pullet matings are resorted to for the same purpose of intensifying fine markings in plumage or certain points as to form or weight, thus making it possible for breeds to be developed more uniformly, and furnish the show rooms with the prize winning specimens. Bad points may be intensified as well as good points in this close breeding, so that great care must be exercised in selecting birds of the strongest constitutions. In the human family these close matings are forbidden by law, so that while man resorts to such practices in breeding farm animals of all kinds he is careful to avoid close marriages himself. In a flock where one male is used with several females, the progeny may be mated back to the original hens with less chance of inbreeding, as only one of the hens can be the mother of the progeny, and such a resulting male bird would be wholly unrelated to all of the other females in the original pen, outside of his own mother.

Writers on the subject of inbreeding usually refer to the chart originated by I. K. Felch, which is illustrated herewith, and a reference to it, will show how the blood from either male or female side may be varied by the succeeding breeding. Too much attention has been paid of late years to typical feathering, shape and weight; all of these points being covered by the Standard of Perfection, which has not covered the most practical side of all, that of getting a good egg yield and making all flocks more profitable. In choosing the original birds to start the line breeding, only females known to be good layers should be selected, and the male bird must have come from a mother of strong egg laying propensities.

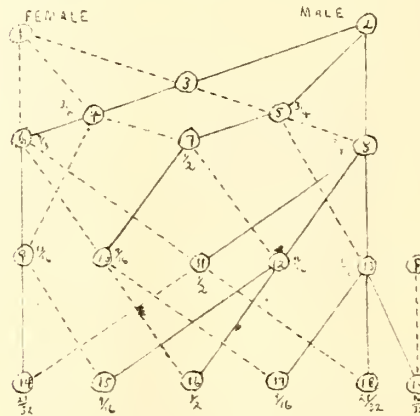
Beginning with the selected pair of pure bred birds, the matings of successive seasons are so made that three decidedly distinct lines of breeding stock are developed. The second season the original sire is mated to one of his daughters, the choice of all the pullet chickens of the first year's hatching. The original dam is paired the second season, to one of her sons, the pick of the cockerel chickens. The third season the original sire, if still in good breeding condition, is mated to one of his daughters by the second season's mating to his own daughter. The original dam is mated in corresponding manner to one of her sons by her son, selected from the off-

spring of her second season's mating.

Two lines of breeding coming from the original pair, are thus established, one in which the blood of the original sire predominates and one in which the blood of the original dam is dominant. By breeding together two birds, each of the same generation, one from the sire line and the other from the opposite line, a third generation is obtained having equal amounts of the blood of the original sire and dam, without pairing brothers and sisters.

The following is Mr. Felch's explanation of the chart and his plan of line-breeding.

"Each dotted line represents the female as having been selected from the



Felch's Chart for Line Breeding

connected upper group, while the solid line shows the male as having been taken from the indicated upper group. Each circle represents the progeny. To wit: Female 1 mated with male 2, produces group 3, which is one-half the blood of sire and dam.

"Females from group 3, mated back to their own sire 2, produce group 5, which is three-fourths of the blood of the sire 2, and one-fourth of the blood of the dam, 1.

"A male from group 3 mated back to his own dam 1, produces group 4, which is three-fourths of the blood of the dam 1, and one-fourth of the blood of the sire, 2.

"We select a cockerel from group 5 and a pullet from group 4, or vice versa, which will produce group 7. This is mathematically half of the blood of each of the original pair, numbers 1 and 2. This is a second step towards producing a new line.

"Females from 5, mated back to the original male, 2, produce group 8, that are seven-eighths of the blood of number 2. A cockerel from number 4, mated back to the original dam number 1, produced group 6, that is seven-eighths the blood of the original dam and only one-eighth of the blood of the original sire.

"Again we select a male from number 8 and females from number 6, and for a third time produce chicks (in group 11) that are half the blood of each of the original pair. This is the third step and the seventh mating in securing complete breeding of our new strain. In all this we have not broken the line of sires, for every one has

come from a group in which the preponderance of blood was that of the original sire. Numbers 2, 8, 13 and 18 are virtually the blood of number 2.

"We have reached a point where we may wish to establish a male line whose blood is virtually that of our original dam and we now select from number 6 a male which we mate with a female from number 4 and produce group 9, which is 13-16 the blood of the original dam number 1, and 3-16 the blood of the original sire.

"Again we select a male from number 9 and a female of the new strain number 11 and produce group 14, which becomes 21-32 of the blood of the original dam, thus preserving her strain of blood.

"A male from number 13, which is 13-16 the blood of the original sire, number 2, mated to females from number 10, which are 5-16 the blood of the original sire, number 2, gives us group 17, which is 9-16 the blood of said sire, while in group 16 we have the new strain and in number 18 the strain of our original sire, number 2. Thus we have three distinct strains, and by and with this systematic use we can go on breeding for all time to come.

"If the breeder finds it desirable to introduce fresh blood, he may select a female fowl (F), as similar as possible to the strain already developed and breed her to a male bird of the sire line, e. g. from group number 13. Her chicks by this mating possess one-half of her blood, 13-32 of the blood of the original sire and 3-32 of the blood of the original dam. Her blood may then, through her progeny, be introduced wherever it seems to be necessary.

100-DAY EGG LAYING CONTEST.
(Nov. 24, 1912 to March 1, 1913.)

I am pleased to report the following 100 day egg record from two pens of pullets in my back yard at David City, Neb.:

Eggs Laid.

Pen No. 1, 18 April pullets, 15 June pullets, Nov., (10 days) 39; Dec., (31 days) 346; Jan., (31 days) 497; Feb., (28 days) 547; total, (100 days) 1429.

Pen No. 2, 20 April pullets, Nov., (10 days) 137; Dec., (31 days) 363; Jan., (31 days) 328; Feb., (28 days) 345; total (100 days), 1172.

Pen No. 1, average number of eggs laid (100 days) 43 plus, per hen.

Pen No. 2, average number of eggs laid (100 days) 58 plus, per hen.

Each pen is a chance flock of unselected pullets.

Rations fed, sprouted oats, grains, and ground bone.

Houses are equally warm, lighted and ventilated.

Pen No. 1 was housed in a two-story house (14 by 7 ft.)

Pen No. 2 was housed in the four-story house (6 by 8 feet.)

Rob't. H. Harrison.

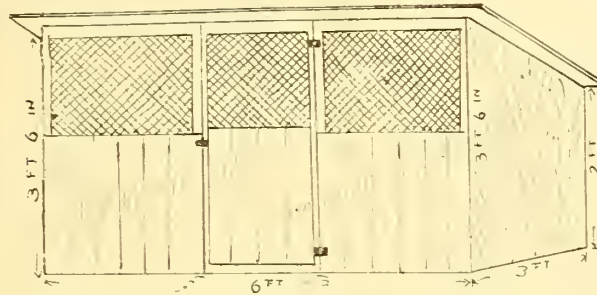
METHOD OF FEEDING AND CARING FOR CHICKS, WITH HANDY BROOD COOP PLAN.

As all lovers of poultry are busy with their young chicks now, a few lines along this line may help some beginners. I have just taken off my first hatch today (March 2nd.) As I use hens for hatching and had only two to hatch I have not a very big bunch of chicks to take care of, but they are as lively a bunch as one would care to see. I have several more hens sitting so will have a new lot of chicks off every few days this month. I always try to do my hatching in March and April as I think the earlier hatched chicks grow and do much better than ones hatched later when the weather is so hot. Then again the earlier hatched chicks are matured and ready to go to work producing the high priced eggs that we all like so well to get, then if cold weather sets in, if you have a good house and feed and care for your pullets properly they will furnish you lots of eggs all through the winter months. It pays to carry a large basketful to market.

As to the feed and care of these early birds will say there are several different methods of feeding. While I have been successful with my way of feeding, some one else may have been equally successful with another method. I use and recommend the dry feed from the first day to the last. Some may say "My grandmother or mother did not use this high priced dry food and she raised as many chickens as anybody. She just mixed up a little cornmeal batter or slop and threw it out on the ground, and she always raised them." But these writers do not go on and tell the rest of the story. Grandmother did not hatch her chickens until May and June when it was natural for all birds to hatch and raise young and as soon as these late hatched chicks ate the cornmeal they were off to the meadow eating grasshoppers, bugs and worms and from there to the wheat or oat field. But all the chicks of today do not have these advantages, so we must look elsewhere for their feed. When you chicks hatch, let them stay under the hen for 24 hours, if not longer, then having a nice, warm, dry place ready for them, take them to it and give them fresh water, in something they cannot get wet in. A peach can filled and inverted in a saucer makes a very good fountain. Have their house or coop floor covered with chaff or some fine dry hay and in this scatter some chick feed. If your grocer does not handle the prepared chick food, you can order direct from some catalogue as well as he can order it and probably get it cheaper. I feed the small size chick feed until the chicks are about four to six weeks old, then use scratch food, composed of the same material, except that it is in larger pieces. As soon as they are large enough to eat it they are given corn once a day and if they have free range they will grow like weeds. I keep a box with shorts,

bran and cornmeal where the chicks can get it at any time.

I use a small house, about three by six feet for the hen and chicks. Have the front boarded up about half way and poultry netting over the balance of the front. The sides and back are boarded up solid. This makes a handy place and after the hen weans the chicks I put a pail in the house for the chicks to learn to roost on. They can stay in a house like this all summer as the open front makes it cool.



Fred Andre's Brood Coop for Hens and Chicks.

The reason I hatch early is because I have the Rhode Island Reds and like all other large breeds they do not mature as early as the Leghorns and other small breeds, but by hatching early, they begin laying early and I want to say right here that they will lay as many eggs as anything that wears feathers. I tried several breeds before I settled on the Reds but you will not find anything but Reds on my farm now.

Fred Andes,
Kentucky.

HATCHING HIGH PRICED EGGS, ETC.

This season of the year finds both the small and large poultryman trying to produce young chicks of their favorite breed. Every poultryman is trying to do his best to secure that which to his mind is the correct way to push ahead in order to succeed. The large poultryman has been through it all while the amateur in time will get his share of the ups and downs. The question for the latter is whether he has the nerve to hold on after a few failures.

There are new poultrymen venturing into the business this season, perhaps on a small scale, maybe upon a large one. For the benefit of those who are going to set high priced eggs from some breeder who uses half a page of advertising space, a few suggestions as to how to handle the eggs for hatching for good results should be considered from all the knowledge a person can get.

The first thing is to find where you are going to get the eggs. You may find to your sorrow that some of these big advertisers, like the new comer into the business, as easy "picking." Some of these big advertisers have the quality but the question is whether they distribute the goods to their customers. I have seen eggs and birds that simply were unfit for even good mon-

grel stock from just such advertisers. Knowing it by getting stung myself, now for three seasons, as well as the results others have had with them. I have bought the best money can buy for eggs, but the results have been little better than ordinary. The big problem therefore is from whom you purchase eggs and their business methods.

Just a word here to those who are more or less learning or trying to get started from some special breeder. I claim in order to build up a strain you have to do your own strain building. Listen to what the rest have to say but do your own thinking. After you have the eggs ready to set make a nice nest with plenty of straw some place where

the other hens cannot disturb her. The hen should be set on good eggs of small value for a day or so, (not China eggs) in order to see if she is the kind that breaks eggs, as some do in many cases. Do not leave the hen to come off the nest just when she takes a notion, but take her off yourself, being careful that no eggs are tucked close to wing or one of your valuable eggs will be lost as you lift her from the nest. A good plan is to have two hens for one sitting, placing half the eggs to each hen, then if one gets off the nest chilling them you still have a few left. This may be a little extra work for you but where high priced eggs are being set its the only safe way. The seller, of course, tells you to test the eggs, and so on, expecting you to be able to tell a jumbled broken yolk, a dead germ or the clear ones, the latter one could tell, but there is only one way to make this satisfactory and that is to guarantee so many livable chicks regardless of how many eggs it takes to do it. Most breeders are so scared some one will get an extra chick or so, that its hard to squeeze extra eggs out of them.

Some one said to me recently that he had come to the conclusion there was nothing in the business after he got soaked on a deal he made. Right here is the place for one more poultryman that will go ahead and sell honest stuff honestly. One of the best poultrymen in the world today, by his honesty and his desire for his customers to win, pleases him more than any other thing because it speaks well for his birds and brings him more customers. A man who is afraid some one else will pass ahead is on the wrong track. I say some big advertisers can win in any show on earth, yet I am sure there is something wrong some place in their business methods.

H. E. Yoeman,
Ohio.

HOME MADE DRY MASH FEEDER AND FEED SAVER.

I have been trying feed hoppers for several years and always have had trouble with the feed sticking and not working down as it should and if the food did come down, some fowls would get too much and others not enough. This home made feeder is the most satisfactory of any I have ever used and it is made mostly of waste material. I used five gallon

coffee or tomato cans and cut them down to about two inches deep, then cut in two pieces, making a half cup, Fig. 6. This I tack to side of pail under the feed opening to catch any feed that may drop out of the opening while the fowls are eating. I then cut some pieces of tin like Fig. 1 and bend in circle like Fig. 7. I nail these over the top of feed openings on inside which keeps the feed from coming out too freely when being filled, also prevents waste. When the fowls

MAKING YOUR OWN INCUBATORS AND BROODERS.

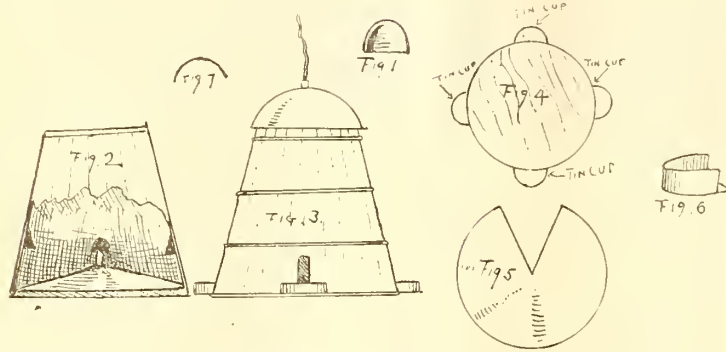
Although the writer has successfully constructed his own incubator, made after the plan of the commercial incubator, with hot water boiler and circulating tank, he advises others not to try it. It is a gamble whether it will not cost as much in the end as a first class machine bought direct from the maker of experience who can tell you just how to run his machine, thereby saving you much time and anxiety.

The machine that my brother and myself built was carefully, and we believe, well made out of kiln dried lumber 1 1-4 inches thick for the inside box and 3-4 inches thick, fancy grooved lumber for the outer case. We left four inches between the cases and packed the space with dry saw-dust. The writer hatched 108 chicks from a total of 150 eggs placed in the machine before the putty was dry. We counted that it always hatched well in our own hands. The tank was large and we used water expansion for regulation. We used this machine two or three seasons and then sold it to a neighbor who made kindling wood of it very shortly.

Brooders can be made at home more advantageously as there is not so much to do and not so much real skill needed. A good brooder is essential, one with plenty of room on the floor, plenty of air space and plenty of light. Many contend that it is harder to raise chicks than to hatch them and while we do not feel that way, we are quite willing to admit that it may be so in many cases, depending on the kind of stock, feed, warmth, sanitary conditions, etc.

The writer does not want to make his own incubators, but believes in making his own brooders, (lamp and lampless), feed hoppers, drinking fountains, trap-nests, etc. It all depends whether you have the time or not. Any one can make these things if he wishes to, and save buying them. It is a real pleasure to do so if you have a place to work and can get the materials easily and handily.

Before I close I will tell of a portable fence. (I have seen one advertised somewhere.) Should think they would be handy things and while I was writing this article it came to me how to make posts to hang wire netting on. Once in a school room I had a post or standard to hang maps, etc., on, made by tacking two strips at the bottom and another across underneath. I don't know why this same thing would not answer for a post out of doors. I am going to try it. A small portable fence would be handy to place around a tree or to use on a lawn to confine a few fowls for a short time. Readers of the Poultry Keeper get many hints that they can profit by from time to time, and I sincerely hope that someone will be helped by my suggestion about the portable fence.



F. J. Thornton's Home Made Feeder.

paint tubs or pails which may be had from a contractor or painter for the asking. I bore two inch holes above the other as close to the bottom as possible, cutting out between the holes, making a hole about 2x4 inches, like Fig. 3, on four sides of the pail as in Fig. 4. I cut a piece of tin like Fig. 5, about two inches larger than the bottom to form a cone like piece, like Fig. 2, which I tack in the bottom. This throws the feed to the outside of the feeder. I then take empty tin

are picking at the feed they keep the pail swinging as it is hung to a nail in the ceiling and swings about eight inches from the floor, and it gives them all a chance to get a bite. I make a cover with cleats on under side to set down in the rim of pail and holding it in place. The cover is never fouled with droppings as hoppers generally are. If a hen flies on it, the pail tips and she slides off.

T. J. Thornton,
Pennsylvania.

HANDY SITTING COOPS FOR THE BROODY HENS.

In managing our sitting hens we take a box 3 or 4 feet square and cut it through the middle, commencing about a foot from one end and sawing to within about two feet of the other. This gives two boxes 1 foot high at lower side and 2 feet at the other. We take the bottom out and saw off the edges so it will go inside the box, then cut out a door 10 by 10 inches in one lower corner of the high side of the box and hinge it at the top, putting a button on to hold it open or shut. The top may be made of lap siding or anything that is water tight. Make it separate and hinge it on. If you want the floor up off the ground, just nail on two strips of one-fourth inch material on bottom. This makes a very good coop that costs very little, and which will keep out rats and rain. It is in three pieces, can be knocked apart and sealed, dried, disinfected and put back in order in very short time. When you have a hen go broody, take her off her nest about dark, and put her in this coop on artificial eggs and let her stay all night. The next morning open the coop so that she can

comes off to eat and drink. If she goes back, as nine out of ten will do, she may be given the good eggs. Dust the hen well with insect powder shut the coop and let her alone, except to place water and feed within her reach, inside the wire pen in front of her coop. The other laying hens never bother or lay in the same nests with my sitting hens that I have in these coop nests and I get better hatches than when I set the hen any old place. The sitting hen should be dusted well the second week and again when she comes off with her chicks. Take the hen with her chicks in a box or basket and put them away in a secure place for a day or so. In the meantime, raise the lid of her coop, take out the old straw and litter, remove the floor and scald and powder the coop with insect powder and your coop is ready for biddy and her brood until they are big enough to roost in the hen house. As for dusting powder, we use a home-made one made of one part carbolic acid, three parts of gasoline, mixed with plaster of Paris so it will be moist. The gasoline will evaporate.

Oklahoma.

Don Long,

Connecticut.

Edgar J. Wilcox.

IMPORTANCE OF PROPER FEEDING.

Feed is one of the most important factors toward getting a good supply of eggs, especially in the winter. No matter how good the houses, stock or other requirements are, without the necessary food, hens cannot lay. Meat or animal matter should form a part of the mash every day. Green food, such as sprouted oats, cabbage, etc., should be fed every day as it acts as a tonic and produces summer conditions. If you are hatching eggs from your own stock, be sure they have all the green food they can consume.

We have twenty-two Golden Wyandottes—18 pullets and 4 hens and 14 S. C. W. Leghorn pullets, making 36 in all. We do not feed by measure alone but feed upon the food they consume. In the morning, about a pint of ground grain, made up of a variety of grains, is put into a pail and covered with hot water. Then it is set on the stove and when it comes to a brisk boil, it is taken off and covered tightly, allowing the grain to steam. It is left covered for fifteen or twenty minutes and when the grain has swollen to about twice its usual size. With this I mix one handful each of oil meal, granulated bone and beef scraps, and about a quart of wheat bran. This is mixed carefully together and it should be in a crumbly mash which the hens relish. This is fed in the morning about 8 o'clock and at noon we feed sprouted oats and a light feed of the following mixture: 60 lbs. wheat; 30 lbs. whole oats; 30 lbs. buckwheat. Grit, charcoal and oyster shells are kept before the hens always. In the evening they are also given this mixture, but to it is added as much corn as there is of the mixture. It should be fed in a deep litter and a little more than they will eat as this will be consumed before the morning mash is ready.

Our hens are housed in muslin front coops and have laid well all winter. In January eggs sold for 42 cents a dozen, although in last November they were 50 cents.

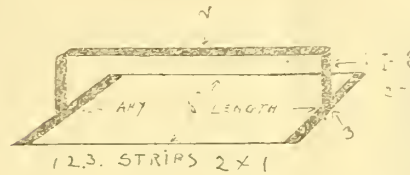
The accompanying sketch is of a feed trough. Make an ordinary feed trough



Feed Trough and Cleaner.

and to the ends nail a strip of wood 2x1 and to the top of these attach a strip of the same size and as long as the trough. Let the end pieces extend up far enough so as to allow the birds to eat from the trough but not high enough to let the hens crawl under the bar. This will prevent the feed from being wasted by scratching it out. The top piece can also be used as a handle when the trough is to be moved. We also make our roost on about the same plan as the illustration shows. Take

two boards 9 inches wide and put a cleat at each end. The cleat serves to hold the board together and also as a place to attach the two upright pieces. The upright pieces should be eight inches high although some make them smaller and some larger. Nail



Roost and Droppings Board.

the top piece to these and the roost and droppings board are complete. The roost and droppings board should be set on two pieces that are nailed to the wall and when they need cleaning they can be taken out and cleaned and then put back again. A very handy cleaner can be made by taking a board about a foot long, a foot wide and one inch thick. Cut a slit two inches deep into one edge and insert a piece of galvanized iron, five inches long. A small nail can be driven into the side of the board, through the galvanized iron to hold it in place. The galvanized iron should be stiff enough to prevent bending or it will be all out of shape and become useless.

Dry grain should be thrown into the litter, but when a warm mash is fed, the trough will be found very useful.

M. F. Uphoff,

New York.

UTILIZING TABLE SCRAPS FOR THE CHICKENS.

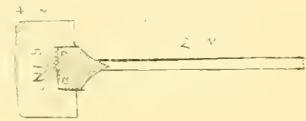
We learn something new every day, yet we are sometimes slow in grasping things that we ought to know—the knowledge of which might benefit us in many ways. For my part it took several years before I discovered a plan which I have since adopted, to utilize all table scraps and properly prepare them for us in feeding my poultry. Heretofore I had done as I and many people are still doing, dump it all out in the chicken yard where only a small part of it is eaten and the most of it trampled and wasted. I have found that chickens will not eat potato peelings or banana skins when thrown to them whole unless the chickens are very hungry, but if you cut them up and

they will devour them greedily. Observing how much nourishing feed was wasted day after day, I adopted a plan to chop such stuff as apple and potato parings, cabbage leaves and all kinds of vegetables, together with all kinds of table scraps. I first bought a galvanized pail at a cost of twenty-five cents. Into this I fitted a hard wood bottom, one inch thick. I then had a blacksmith make me a cutter or hash knife from an old hand saw, 5 inches long by 4 inches

wide. A piece of three-fourths inch pipe, twelve inches long was flattened out at one end and split apart and riveted on the side. Into the other end of this pipe I fitted a broom handle. The blade was ground sharp with corners rounded off so as to avoid cutting through the sides of the pail.

This cost 25 cents. With this hash knife, as you might call it, a rail of scraps can be cut up finely in a few minutes and with the addition of a little bran or middlings, you have an ideal meal that the hens and growing chicks relish. Pieces of bone should not be included, but mashed up with a hammer. Pieces of meat should be cut up into small pieces.

In addition to this I made two wooden troughs 3 feet long with a strip across the top lengthwise and four inches above the top of the trough, in order that the hens will not get into the feed. The reason for having two troughs is, because if you have only one, many of the hens will get but little as the bosses fight the others away and to avoid fighting I divide the food,



Chopper for Table Scraps.

placing the troughs some distance apart, which gives them all a fair chance. The troughs should be cleaned frequently and scrubbed out with an old broom. I also use wooden paddles for dishing it out. If my readers will adopt this plan they will find it will work well and they will wonder why they never thought of it before.

John W. Parsons,

Pennsylvania.

ROSE COMB WHITE ORPINGTON BREEDERS ATTENTION.

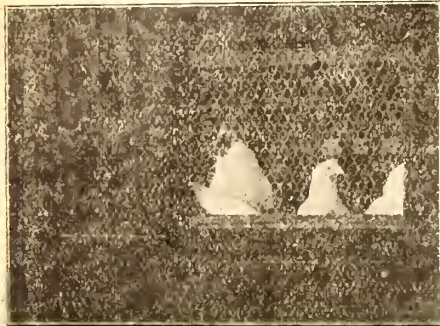
Secretary Campbell assures us that as soon as the club has 100 members the variety will be admitted to the Standard. Every fancier of the variety is urged to join the club at once as the first catalogue goes to press at once and should contain every possible name. The dues are \$1 per year and must be sent to the secretary, Milton W. Brown, Sta. L. Cincinnati, Ohio.

The splendid showing of the R. C. Whites at Madison Square and other important shows has convinced the skeptical this year that the Rose Comb Whites are now fully as far advanced as the Single Combs, both as respects color, type and size.

Those who do not yet breed the R. C. Whites are invited to send stamp for copy of the new catalogue ready very soon.

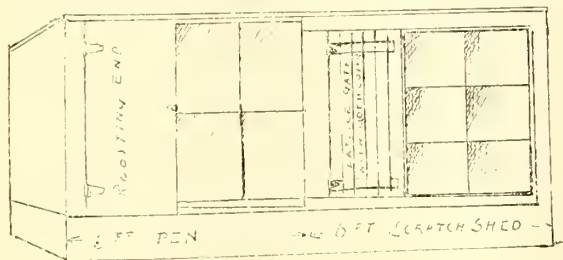
IDEAL COOP FOR A SMALL HOME FLOCK.

I have a pen of five hens and one cock, S. C. White Orpingtons, "Owen Strain." I paid \$75 for them and their laying cannot be beaten in America. I enclose a sketch of my coop. If



Orpingtons in a Philo Coop.

I needed the money I could get any price in reason for my eggs, but I don't need the money. I eat the eggs and when I look or ask other folks to look at my pen, there is a bunch of beauties to take your eye. Besides the coop looks just as nice as the birds and seven-tenths of the kitchens in Erie are not as clean as my coop.



J. R. Shade's Coop for Small Flock.

The coop is 44 inches high, three feet deep and 12 feet long, (Philo plan.) There are no partitions in it, just a twelve inch board to divide the different parts. The sash are painted green. The coop is red and the hinges, lock, etc., are black. My yard is 15 by 20 feet square. I feed mostly according to the Philo way.

J. R. Shade,

Pennsylvania.

ARTIFICIAL HATCHING AND BROODING.

To those who are contemplating starting in the poultry business for a living and who, like myself, must start economically—this is addressed.

First, if you do not almost love chickens do not start.

Second, if you do not have a natural aptitude for details, do not attempt it.

Third, if you lack grit and "gumption" and are easily discouraged, keep your capital in your pocket. On the other hand if you love chickens and can "fuss" with them and can stand discouragement there are no quicker returns for the money invested.

To those in the latter class will say, by all means, first and foremost, sub-

scribe for several good, practical poultry papers and then "read and digest." Do not try to adopt all you read but at all times let your own good common sense rule. Be slow to disagree with and condemn writers even though their stories seem utterly improbable. Remember we live in an era of surprises. Look over the advertisements and send and get different catalogs of incubators and then read them all, carefully before you invest. Do not be "penny wise and pound foolish" when you buy. When you start your machine follow the directions of the people who made it and not of your neighbors. The man who made the machine knows how it should be run to get the best results. His business depends on results attained by his customers.

Get the very best and freshest eggs obtainable and if possible see the stock that laid the eggs. They should be healthy and well cared for and preferably on range. Do not get nervous about your incubator. Save any surplus nervous energy for use after the chicks hatch. You will need it then. Do not expect a 100 per cent hatch. They are rare exceptions and win prizes. 85 per cent ought to satisfy you to start with. When your chicks are out of the machine thoroughly air and sun it for a few days and then start it again. That is what you bought it for. It will hatch them but you must do the rest. Remember an incubator chick is a little dependent, motherless object and looks to you to provide its necessities as well as luxuries. At this writing I have 85 one week old and the snow covers the ground outside. Am 35 miles from the nearest town. Under these conditions any inventive genius one may possess, comes out.

I have not lost a chick as yet and never had a healthier bunch. I gave three a good warm bath on their third day as they were very weak and I find a good bath seems to invigorate them. After the bath wrap them in a good warm cloth until dry and then turn them loose and see if they are not O. K. I keep sand and alfalfa chaff for them to scratch in as well as a pan of dust which they soon learn to use for their bath. I feed cracked wheat and rolled oats for dry feed, also steam a few alfalfa leaves and mix with corn meal, also a small onion chopped finely. Their attitude toward onion is like that of a good healthy 4 year old boy toward buckleberry pie. The ground here is only frozen an inch or so and I dig worms for them (a few) once a day. I keep plenty of good clean water at all times for them and also give them a cup of slightly warm sweet milk once a day. They are healthy and growing into money every day. It is all I can ask.

Many a reader may find faults and flaws as to my method and to those I can only say that I am giving actual facts as they exist with me and that

(with me) lead to success. Local conditions always govern the feed question, largely, and no hard and fast rule can govern all alike.

Combine chickens, fruit and dairy, if possible, and give all of them your close attention and that "wolf," all too often at the doors of many a good hard, honest worker, will cease to be a menace and your children will only know of it by hear say.

Robert Watson,

Missouri.

PLAN FOR INEXPENSIVE BROODERS.

I have been breeding chickens for the past twelve years, starting with Barred Rocks which I had for three years, then three years with Buff Rocks, three years with White Leghorns and Light Brahmas and for the last three years White Wyandottes. I find the White Wyandottes to be the best layers of all. I consider them to be money-making chickens as my egg record will show 1833 eggs from one pen of ten hens in one year.

For the morning feed I give a mash consisting of four pecks wheat bran, two pecks corn meal, one-half pound charcoal, one pound linseed meal, three pounds beef scraps, 1 pound salt. I soak enough oats for one meal in the evening. By morning it is soft, then I mix enough of the mixed mash with the oats to make it crumbly. At noon I feed some kinds of vegetable and at night Chamberlain's Acorn Scratch feed in litter, which I think makes a good egg maker. Last year I sold all the eggs laid by my three pens of White Wyandottes at \$3.00 a sitting. I have set my incubator so as to have pullets to lay early next fall. I brood all the chicks in brooders which I make myself and find they give good satisfaction. You will notice from the sketch that it does not cost much to build these brooders.

John A. Krone,

Missouri.

ABOUT WHITE DIARRHOEA.

Editor, Poultry Keeper:

I saw in the April number of Poultry Keeper where some one from Nebraska has had trouble with White Diarrhoea. I have had the same trouble too, years in succession, all caused from chicks getting chilled and after trying all the remedies I could buy I tried ground ginger, 1 teaspoonful to 1/2 pint cup of bran moistened with boiling water. Add a pinch of salt. Feed twice a day every other day or until cured. It has never failed with me even when chicks were pretty well plastered up. If chicks are kept warm but not too warm, I don't think you will have much trouble with White Diarrhoea.

J. E. S.,

Colorado.

FEEDS AND FEEDING.

By J. E. Willmarth, Amityville, N. Y.

MANY beginners have an idea that if they can strike the right breed and feed them a perfectly balanced ration, they are bound to make a success of the poultry business. That this will help there is no doubt, but this is not all there is to poultry keeping. All of the popular breeds are good breeds, by these we mean any of the Leghorns, Minorcas, Plymouth Rocks, Wyandottes, Reds, etc. In fact nearly every breed is a paying breed when properly handled. Feed has a whole lot to do with making hens lay and stock grow, in fact without proper feed no one can make a success of the business, but by proper feed we do not mean any certain ration, but just wholesome food and plenty of it. We can imagine some of the balanced ration cranks thinking to themselves that we don't know what we are talking about. But let us ask several of these people what a perfectly balanced ration is and you will find a vast difference of opinion, each thinking he knows just the proper things and just the right proportions of each and if his particular rations are fed he will tell us that our hens have simply got to lay eggs and the chicks make rapid growth.

In many museums there are vessels containing just the proportion of water, mineral matter, etc., there is in a normal man. Suppose we dump all these different things into a barrel, do we get a man out of the barrel? You can feed the most perfectly balanced ration in the world to a hen and while she probably will lay if other conditions are satisfactory, she certainly will not lay if other conditions are not satisfactory to her. And the same can be said of the growing chick. If you give chickens all they want of good wholesome food, in reasonable variety, and keep them comfortable and satisfied, you will come pretty near having a fine, husky bunch of chicks and a good egg yield from your hens.

Let us see what good wholesome food is. First and always it must be clean, fresh and inviting. What kind of feed to give is an important matter. As a rule feed the kind that you can buy most advantageously. Not that it will always give the best possible results but it will generally return you the most profit. In this country corn is one of the cheapest grains we have and fortunately is one of our very best for poultry. True it is rather fattening, where fowls do not have room or inclination to exercise its fattening properties off. But if I had to get along with any one kind of grain I should choose corn. Next to corn comes wheat. Give us wheat and corn for the grain ration and we have about all that is really necessary, but a combination of some other grains makes the ration more appetizing. Possibly we should class oats with the above grains, and a combination of the three stock is somewhat confined, corn should give us a pretty good feed. Where

not be fed so heavily as where the flock has plenty of range. Also more corn can be advantageously fed in cold weather than in hot. Regulate the mixture of above three grains according to climate and conditions and you will be doing about all you can do as far as grain food is concerned.

Other grains that may be included in the ration for variety's sake and making the food more appetizing are sunflower seed, barley, buckwheat and Kaffir corn. In fact most any kind of grain will increase the value of the ration when used in small proportions, but corn, wheat and oats should be the foundation for the standard ration, the others being sort of side dishes, very good in their way, but really not necessary for a good square meal.

Many lay great stress on the protein contents of certain grains. Some protein should be obtained from our grain ration but the bulk should come from a meat diet. Fresh ground bone is very good if conveniently and cheaply obtainable, but when considering the cost of this, we must remember that a large proportion of the weight is water, not that this moisture in this form is not helpful but the real nutritious qualities are obtainable in the dry meat and one does not have to pay for so much water when buying beef scrap as when he buys fresh ground bone. Possibly beef scrap at three cents a pound is just as cheap as ground bone at two cents a pound. We certainly would not want to pay over three cents a pound for fresh ground bone. We say "fresh" ground bone advisedly, for ground bone that isn't fresh is dear food if you get it for nothing.

Fresh butchers scraps are sometimes obtainable cheaply and these make good food just as they are. It isn't necessary to grind them or even to cut them up small, especially if stock is somewhat confined as they will get a lot of healthy exercise chasing each other around for choice bits and pulling and hauling on the larger pieces.

Green food in some form is a necessity. A good grass run supplies this want most practically, but many of us are not blessed with grass runs, and substitutes are necessary. During the warm months we have vegetable parings and trimmings, weeds from the garden, lawn clippings, etc. Any or all these are very satisfactory substitutes for grass, but where one has quite a large flock, they do not suffice. There are several different forms of vegetable matters that grows quickly. Swiss Chard is one of the best of these. But there are some poultry enthusiasts who have no garden spots and for such we advise the growing of sprouted oats. The regular oat sprouters may be used or any shallow vessel or box can be utilized. Fill them with oats, keep them damp and in a shaded spot, and you will get as big a yield as you desire during the warm months.

Add to the above plenty of cool, fresh water, some grit and oyster shell

and you have about all the necessities for a successful ration.

For general purposes, whole grains are the best, but where one wants extra quick growth and a forced egg yield, it will be found practical to feed ground foods, for these are more quickly and easily digested, and thus the fowl get the benefits from its food more quickly. But where vigor is a necessity too much mash food cannot be fed, for we must remember that it is natural for fowls to digest hard grains.

WHERE TO PURCHASE SATISFACTORY HATCHERS AND BROODERS.

A feature of the 1913 catalogue issued by the Robert Essex Incubator Co. is a lot of pictures of the different styles of poultry buildings used at the different State Agricultural Stations. These buildings include the houses used at the Storrs and Mountain Grove egg contests, also those at such stations as the Orono, Maine and Ithaca, N. Y., where poultry culture has been a real feature for a number of years past. Mr. Essex, who is one of our foremost poultrymen, has added several chapters on vital phases of poultry work, making the catalogue a book that is well worth keeping as a reference book.

The line of incubators and brooders made by the company are known as the "Model" machines and Mr. Essex' long experience as a poultryman, poultry journal editor and incubator manufacturer places him in good position to know what really constitutes a good hatcher or brooder and he has tried to have his machines embody the best points, in all styles and sizes of machines. Hatchers from the small size 70 egg machine up to the mammoth hatchers for the baby chick trade and holding thousands of eggs, are made to fill the demands of all.

In addition to the machines, a full line of appliances, such as feeders and hoppers, leg bands, egg shipping boxes, etc., are carried in stock, also remedies for all known poultry diseases, making it possible for you to purchase all such supplies you may need from this one factory.

The catalogue carries full information about all of the various "Model" machines, and is well illustrated so that buyers may see just what kind of machines these are. Many testimonial letters are given to show the satisfactory hatches made by customers in all parts of the country and no matter where you live, or what difficulties you have to hatch under, you may be sure of getting good results from the "Model" machines.

The address of the Robert Essex Incubator Company is 7 Henry Street, Buffalo, N. Y., and they will be pleased to send their catalogue free of charge to any inquirer. The value of the book as a reference book, together with the special features as mentioned in the beginning of this article, make the book well worth having and the Editor of the Poultry Keeper hopes that all interested will send for a copy of the book.

POULTRY KEEPER

ISSUED THE FIRST OF EACH MONTH
 ▲ JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
 (Incorporated) QUINCY, ILLINOIS.

Subscription Price: Fifty Cents a year; Single Copies, 5c.

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Remittances should be made by Draft, Money Order, Express Order or Registered Letters. Small sums will be accepted in United States one or two cent postage stamps.

Change of Address—When this is desired, be sure to give old and new Post Office addresses.

All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising Rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

JUNE, 1913

No. 3

Hatching seems to have been more satisfactory this spring than for several years. While early in the year we heard of many poor hatches the coming of March brought better fertility and stronger chicks. One man who does custom hatching with a 3,000 egg machine said to us: "I find that the eggs brought to me, average one-third clear eggs, one-third dead germs, one-third hatch good chicks!" Right in his section there was little improvement but in most other places better results came with spring days. Last year there were many sad stories of weak chicks; white diarrhoea chicks; deformed chicks. We have heard little of the sort this spring. White diarrhoea in little chicks is being better understood, better handled, and some plants have got entirely rid of it.

We are pleased to see the attention that is now given to the quality of the food given the hens and chicks. It is not easy now for a grain man to sell moldy corn or sour wheat. Bags of commercial chick feed are not fed without a previous examination to find out the quality of the grain and the condition of it as regards mustiness or mold. Many a hard lesson has been learned in past years from the feeding of small chicks on stale chick food. Whole brooder flocks have been killed by the feeding of such food that had been kept a year. We know one man who has learned a new lesson this past month. He used waste from the hay mow to cover the floor of his brooders. He lost every chick that had access to this litter. Why? Because he salted his hay as he put it in his barn last summer. The hay was well cured, did not dissolve the salt, did not heat. It needed no salt. This was done by a man who did it "because father did it when I was a boy." The salt rattled down in the hay, mixed with the waste of the mow and was quickly picked up by the baby chicks in the brooders. This is the second spring's chicken work by this man and we know he will never make this mistake again. Barn chaff should be just as

clean and sweet as the food you buy. Avoid any from the barn floor that has manure in it, or any horse hair, or any other doubtful matter.

Egg yield is more in the breeding than in the breed. It is more in the feeding than in the breeding. This is seen in the results that folks get. The same is true in the growing of stock. We have seen eggs sold, eggs put out to be raised by breeders, only to find scrub stock in the autumn. Many poultry folks in the small towns would be glad to have their chicks raised for them by farmer's wives but they fail in finding any one who can raise good chicks. One of the staff of the Poultry Keeper gives away every spring several sittings of his best eggs, with the agreement that he is to have in return a single bird for each sitting supplied. Seldom does he find stock that is as good as he has raised at home. Seldom does he select any birds to take home. We used to know one man who could raise splendid chicks for other folks. At one time he was hatching over a thousand chicks a year, getting two dollars for every bird that was taken by the man who furnished the eggs. One autumn he got twelve hundred dollars for six hundred White Wyandotte cockerels and pullets in this way. He could raise chicks, he could make milk and today he is out of the chicks and into cows, and the fancier has found no one to take his place.

Parcel post has not worked out well in the shipping of eggs. Over and over again it has been tried but with unsatisfactory results. The trouble is that the mail mater is still handled in the old way, everything in the closed bags, piled and tumbled, thrown from the cars. Parcel post will not do a large egg business until it handles this sort of matter as do the express—outside the bags. It has been a big undertaking, the adding of so much heavy matter to the mail and time will be needed to make the necessary improvements. It is coming and it will not be

long before packages will not be limited by the eleven pounds amount. Meanwhile we must be getting ready with improved packages, better filling, well formed egg shells. The perfect box for shipping eggs has not yet been made, but we have some that are not far from it. Direct sales from raiser to consumer by mail will be more common as the years pass.

Little chicks, as well as big ones, are hungry for green grass and clover. If you are at all doubtful at this statement of ours, try the feeding of some short cut lawn grass. Even though your chicks are on grass runs, try it on them. Until you see for yourself you will not believe that small chicks can eat so much green food. Take a brooder lot of fifty chicks and feed them a quart of short cut lawn grass. Put about half of it on the floor of the brooder and the remainder on the top of the circular hover. That on the floor will soon disappear. That on the hover top will curl and dry and be eaten in the late afternoon and the next morning. Freshly cut lawn grass is the best appetizer, the best tonic, the best preventer and corrector of bowel trouble in chicks of one week or older.

Beginners should start with one of the more common varieties. The late comers, the new fancies, should be left to the breeders of experience. There is choice enough in the Rocks, the Wyandottes, the Reds, and the longer bred fowls, for any one. Somewhere you can find the shape you prefer, the weight you wish, the color you desire. Usually you can make a good start more satisfactorily, more cheaply, with varieties that are seen in full numbers at the shows. Do not try to make a new breed or variety. There are more now than we know what to do with. If you prefer the Barred Rock and yet want more eggs than she commonly lays, do not cross her with a lighter breed but mate your females with a small male that is pure blood. Keep within the lines of the variety but select the breeders to gain what you have in mind. We acknowledge that some crosses give extremely strong and vigorous chicks, but as careful mating within the variety lines will do just as well. The barnyard and mongrel flock is now rare, crosses are seldom seen, so we advise you to cling to the breed and variety that suits your fancy. Today we have the best laying hens, the best dressed poultry, from flocks of well bred standard stock.

SPECIAL CLUBBING OFFER.

By special arrangement with the publishers we can furnish any poultry paper at one-half price, providing the order includes a year's subscription to Poultry Keeper at regular price. For instance, for 75c we can furnish a full year's subscription to Poultry Keeper and your choice of Reliable Poultry Journal, American Poultry Advocate, or any other 50c poultry paper. Make up a list of the papers you desire and let us quote you a reduced price on the lot. Address Poultry Keeper Publishing Co., Quincy, Illinois.



Your choice of 10,000 Ferris Leghorns 30% less than actual value

We raised 10,000 Improved White Leghorns this spring and you can now get your pick of the February and March hatched cockerels and pullets. These birds show splendid development, and they have the low tails, good heads, typical shape and snow white plumage that you must have in order to win. Ferris Leghorns are trapnested and will lay 175 or more eggs a year. We can furnish you with stock that we will guarantee to win at any of the large fairs. We ship on approval and insure the birds for 30 days. Males from \$2.00, pullets and hens from \$1.75 cents up. We have a number of very choice breeding birds to spare that we have used in our best matings. Write for particulars; we will be glad to send them.

We can ship eggs and chicks at once on receipt of order. Chicks \$5 for 25; \$16 per 100 in June, \$12 per 100 after July 1st. Eggs, \$1.35 a setting, \$5 per 100 in June, \$1.20 a setting, \$5 per 100 in July. Safe arrival of chicks and fertility of eggs guaranteed.

Our Mammoth 132-page Catalog is Free. Just write a postal today and let us send it and quote prices. Breed Ferris Leghorns and you will have eggs all next winter and can win wherever you want to exhibit.

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APRIL REPORT OF NATIONAL EGG LAYING CONTEST.

Up Until May First the Hens Had Averaged Fifteen More Eggs Each Than Last Year for the Same Period.—

The English Pen of White Leghorns Is Still Making a Steady Gain.—Some Suggestions as to Why the English Pen Is in the Lead.

It now begins to look like most of the pens in the National Egg Laying Contest at Mountain Grove, Mo., are going to make really creditable records. No records are being broken. However, every hen in the contest but nine has laid, and they all seem to be doing their best. No individual or pen record is extremely high, but up to May first, the hens had averaged 15 eggs each more than for the same period last year. The English pen is still gaining a little each month over the American pens. Some suggestions as to the reason for their record and their lead over the American pens are discussed in the latter part of this report. A Buff Wyandotte hen, No. 600, from Maryville, Mo., holds the record for April by laying an egg every day during the month. The hens are eating more feed than last year, especially is this true of the dry mash. Pen No. 26 Buff Wyandottes, laid 240 eggs during the month, an average of 24 eggs per hen for the 30 days, and won the silver cup for this month. Twenty-four pens laid over 200 eggs each during the month of April. Three hundred and sixty-seven hens laid more than 20 eggs during the month. Out of the 700 hens, over half of them laid more than 20 eggs each in 30 days in spite of the fact that 195 hens had to be broken from broodiness.

The ten leading pens have made the following record for the first five and a half months:

Pen No.	Eggs.
2 S. C. White Leghorns, England	1117
23 Silver Wyandottes, Illinois	948
57 Black Langshans, Missouri	914
19 Silver Wyandottes, Iowa	914
33 Barred Plymouth Rocks, Ill. ..	865
49 Black Langshans, Missouri	850
56 White Orpingtons, Kentucky.....	846
20 White Wyandottes, Arkansas ..	842
58 Buff Orpingtons, Missouri	836
30 Buff Wyandottes, Vermont	832

The ten highest pen records for the thirty days in April were as follows:

Pen No.	Eggs
26 Buff Wyandottes, Missouri	240
11 Black Minorcas, Iowa	233
1 Anconas, Missouri	231
2 S. C. White Leghorns, England.....	227

9 S. C. Brown Leghorns, Mo.	225
40 R. C. Reds, Missouri	224
44 White Plymouth Rocks, Wis.	224
55 Black Orpingtons, Ohio	221
56 White Orpingtons, Kentucky	219
53 Black Langshans, Indiana	218
32 White Plymouth Rocks, Mo.	218

The following ten hens have made good records for five and a half months, including the winter months. Their total record to May first was as follows:

Hen No.	Eggs
66 S. C. White Leghorn, England..	141
860 Buff Wyandotte, Vermont	136
600 Buff Wyandotte, Missouri	133
735 Black Langshan, Missouri	133
62 S. C. White Leghorn, England..	126
65 S. C. White Leghorn, England..	126
871 White Wyandotte, N. J.	123
656 White Wyandotte, Ark.	123
61 S. C. White Leghorn, England..	123
601 Silver Wyandotte, Iowa	122
857 Buff Wyandotte, Vermont	122

The Feeding Test.

The pen which has feed of all kinds before them at all times leads in this test, and has laid 790 eggs. Then follows the Canadian method with 765 eggs; grain feed in automatic feeders, 724 eggs; Maine method of feeding, 708 eggs, and on down to 481 eggs. The strange part of the experiment so far is that the Egg Farm method of feeding has given the poorest results. This pen is being fed mash and grain and recommended by one of the large egg farms of the east. They also are fed mustard bran in the mash as recommended by this Farm.

Pen No. 65, Saylor Method of Feeding.

Dry Mash.

- 15 lbs. ground alfalfa meal.
- 15 lbs. corn meal.
- 15 lbs. ground wheat.
- 15 lbs. gluten meal.
- 15 lbs. ground oats.
- 10 lbs. ground oil meal or high grade beef scrap.
- 15 lbs. wheat bran.

1 25c box Saylor's Poultry Powder.

The above dry mash is fed in hoppers. Three times a week we feed the dry mash in a crumbly form, to which we add 1-4 teaspoonful of Saylor's Poultry Powder to every five fowls. After the third week we reduce the moist mash to once a week. To keep them in a healthy condition, every fourth or fifth week we feed this mash again for a week, adding 1-4 teaspoonful of the Poultry Powder to every five fowls.

To give the fowls the proper exercise the following grains are fed in the litter, 1-2 ounce each of coarse cracked corn, whole wheat, and hulled oats, also sprouted oats daily. Every other day we substitute 1-2 ounce fresh cut

bone for each fowl. For their night feed the fowls are also supplied with green food, such as cabbage, mangels, oyster shells and grit always before them. Fresh water, not too warm or too cold always supplied. The feeding troughs and drinking vessels are frequently scalded with hot water.

Why Does the English Pen Lead our American Birds?

There must be a reason. Just what is responsible for this difference is yet to be determined. But when any one breeder in England or elsewhere can pick out a single pen of birds which will outlay 69 pens of American birds, and in five and a half months can get a lead of 169 eggs over its nearest competitor, we are inclined to believe that more than mere "luck" is responsible for this difference. After traveling on the ocean and land for two weeks enroute to Mountain Grove, these birds laid their first egg in about three or four days after they arrived, and have kept it up consistently ever since. This pen must have been without feed or water a good portion of the time while being shipped. They appeared very thirsty and hungry when they arrived at this station, and there was no evidence of any feed about the shipping coop. Notwithstanding these facts, and the fact that they were jolted, more or less roughly handled, and transferred several times enroute, they soon set about laying with a vengeance.

In view of the above rather startling facts the question naturally arises, "Why are these hens from across the pond so far excelling the best layers which American breeders have been able to produce?"

The average person wants to know right away whether the English White Leghorns look any different from the American White Leghorns. Yes, they do. The Leghorns from England have a distinctive type quite similar to the American Minorca. They are slightly larger than the American White Leghorns, more rangy, with larger combs, lighter colored eyes, and tails pinched or not well spread. In this difference in type some poultrymen think they see the secret of the difference in egg production. They declare that the English Leghorns have more of an "egg-type" than their American cousins. Perhaps they are right, although there is room for a reasonable doubt.

Other observers of the contest declare that it is all a matter of breeding, that while utility poultry breeding in America is just in its infancy, in England it has been studied and reduced to a science for centuries. They

No Guess Work With a "Tycos"



It does the essential thing with perfect correctness—it registers the temperature in the egg chamber just as it is. A "Tycos" Incubator Thermometer makes no mistakes; it is always accurate. You have to break a "Tycos" to destroy its accuracy. It is "aged" and tested before sold. That is why every "Tycos" is dependable. Send for Free Booklet, "Incubator Facts". "Tycos" Incubator Thermometers, each \$1.50. Incubator Hygrometers, each \$1.50.

Taylor Instrument Companies Rochester N. Y.

The Same Amount Of Feed Will Raise Each

I Bring 30¢ per Lb.

I Bring Only 15¢ per Lb.



DOUBLE PRICES


On the market capons bring double price and are cheaper and easier to raise; they require less feed and less care. Caponizing is easy and soon learned.

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simply admit that the American breeder has been out-classed, that he still has a lot to learn, either by experience and experimentation, or by taking lessons of his English cousins. The change in climate may have stimulated the English birds to better production. The change of climate would more than likely increase or decrease the production and it seems to have had the desired effect in this case. We are of the opinion that back of it all, however, is a difference in selection and breeding.

Still other investigators strongly assert that it is neither a matter of type or breeding, but that the high records which the English Leghorns are making at Mountain Grove, are due to the fact that their owners have become skilled in maturing and handling pullets so that they will lay just when they want them to lay. This is indeed some skill, especially when they continue to exert this subtle influence after their birds are four thousand miles away, and have gone for months and months! This reason would seem much more logical if the English birds had simply begun to lay before the American birds did, and then simply maintained their lead. But when, after the American birds had gotten down to business, the English birds still continued to lay more eggs each month, it fails to hold water.

One thing is certain, the English hens are ahead, and it begins to look as though they are going to stay ahead. Their owners have very evidently "caught on" to something which the American breeders have not. Just what that "something" is, remains to be seen. Most careful students of the situation, however, are agreed that it is largely a matter of scientific breeding and careful selection.

The owner of the English pen which is leading at the State Poultry Experiment Station at Mountain Grove, Mo., states that this pen of pullets was bred from females with high records and also sired by males bred from high laying hens.

We have been urging Missouri farmers and poultry raisers for several years to breed from high layers, or at least from good layers, and have also insisted that the males which head the flocks should be sons of high layers. The latter is more important in our opinion than the former. Of course, it is understood that the breeding stock

must be reasonably good size, considering the breed, and also be birds of high vitality. We feel that the average poultry breeder has been paying so much attention to color of feathers and show records that they have lost sight of the production of eggs to too great a degree. The English breeders made the same mistake several years ago, and, to revive an interest in egg production, they started egg laying contests, and this pen of winning hens is partially the result of this work. We hope some such benefit will come to Missouri and American breeders as a result of the egg laying contests which have been started by the State Poultry Experiment Station at Mountain Grove. One thing is certain, promiscuous and careless breeding will never enable the poultrymen of this country to make any progress in egg production or along any other line. Careful breeding and selection must be practiced if we are to make progress in any branch of poultry husbandry.

T. E. Quisenberry, Director.

POULTRY CONVENTION.

Massachusetts Agricultural College, July 28, 29, 30.

Monday, July 28.

2:00 P. M. Address of Welcome, Professor Edward M. Lewis, acting President of the Massachusetts Agricultural College.

2:30 P. M. Address, Artificial Incubation, Mr. J. L. Nix, Homer City, Pennsylvania, President of Prairie State Incubator Company.

3:30 P. M. Visit to the college poultry plant.

7:30 P. M. General Discussion, Problems of the Poultryman. Led by Mr. Nix, Prof. Graham, Mr. Eastman, and others. This should be one of the most profitable sessions of the convention.


Tuesday, July 29.

9:00 A. M. Address, Bacillary White


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Diarrhaea, Dr. George S. Gage, Pathological Department of the Massachusetts Agricultural College.

10:00 A. M. Address, Artificial Brooding, Mr. J. L. Nix, President of Prairie State Incubator Company.

11:00 A. M. Address, The Human Element as a Factor in Poultry Keeping, Professor J. C. Graham, Poultry Department of Massachusetts Agricultural College.

1:30 P. M. Address, Poultry Breeding, Professor James E. Rice, Cornell University, Ithaca, New York.

2:30 P. M. Chalk Talk, Standard Types and Ideals, Mr. Franklan L. Sewall, Niles, Michigan.

3:30 P. M. Demonstration in Killing, Picking, etc., Mr. C. J. Kelley, foreman of College Poultry Yards.

7:30. Stereopticon Lecture. Professor James E. Rice, Cornell University.

8:30 P. M. Chalk Talk, Some Practical Points in Type, Mr. Sewall.

Wednesday, July 30.

(This session is held under the auspices of the Massachusetts Poultry Association, with President George S Eastman presiding.)

9:00 A. M. What the Massachusetts Poultry Association is Doing, Mr. Eastman.

9:30 A. M. Address, The Composition of a Pure Bred Flock of Poultry, Mr. H. D. Goodale, Research Biologist in Poultry Department of the Massachusetts Agricultural College.

10:30 A. M. Caponizing Demonstration, Mr. Henry D. Smith, Rockland, Mass.

Poultrymen, especially those of the State of Massachusetts, are urged to attend these meetings. Further particulars may be obtained by writing Mr. J. C. Graham, Massachusetts Agricultural College, Amherst, Mass.

DETAILS OF ARTIFICIAL HATCHING.

There are many things in the poultry business to take into consideration or the work of a man who wishes to make a start at it will prove to be useless. Do not go into the business on a big scale without first having some experience or without securing the services of an experienced poultryman. Get some pure bred birds or eggs from some reliable breeder and get a better price for your poultry than you could get for the mongrel stock which most farmers have. After the good stock

has been obtained great care should be taken to breed only from selected birds. When the hatching season arrives, gather the eggs frequently, especially during cold weather so that they will not be chilled and the germs injured. Examine the eggs carefully before sitting them and use only those that are normal in size, shape and appearance. I always run my machine from two to three days before I put the eggs in. This is in order to see that the thermometer is true, that all parts work well, and to dry out the machine thoroughly. The incubator is run in the cellar, free from draughts, but with plenty of fresh air. The eggs are turned twice a day at regular periods, each morning and evening. I remove a row of eggs on the tray, then with a slight motion of the hand the eggs that have been removed are replaced. Each time I turn I take a different row so as not to keep some of the eggs on the outside and others on the inside all the time. After the eggs are in the incubator nine days I make the first test, taking out all infertile eggs to keep for the baby chicks' food, which they relish very much. The next test is made on the eighteenth day when other infertile eggs are removed. These are not kept for feeding purposes. After this test, I turn the eggs twice on the following day at the regular time. From this time on, the machine is not opened until the hatch is over. The doors are kept closed until most of the chicks are out of the shells. If there are a few chicks not out, I do not risk the whole lot, for the few which will be weaklings hatched from weak germ eggs. When I open the incubator, I take out all of the shells and unhatched eggs and leave the chicks in the machine till they are 48 hours old when they are removed to a brooder having nearly the same temperature.

N. Henry Buskirk,
Pennsylvania.

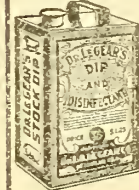
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At this writing, the new parcel post has been in operation six weeks. That length of time gives those of us who have used the system daily a very good idea of its merits and defects, viewed from our own individual viewpoint—and our viewpoints are not all alike, of course.

There has been an insistent demand for a parcel post for many years—from a portion of the public. The cause of this demand has been the alleged extortion and carelessness of the express companies. Without touching upon the merits of that question, we can now say that we have the parcel post, such as it is.

Let us examine the system as it actually is now working, without prejudice, in comparison with the express system and with previous conditions that regulated the transportation of merchandise by mail. To make the matter as clear as possible, I must ask the reader's indulgence for referring to my own business.

I sell goods by mail order all over America. The packages that I send out vary in weight from one ounce to fifty pounds. The heaviest packages can be divided as to be mailable even at the former four pound limit. The parcel post limit is eleven pounds.

One outfit that is ordered frequently weighs four pounds. At list price it is sent by express, charges collected from the receiver on delivery. I do not know what that charge will be and the buyer does not know unless he asks his local express agent for the rate on four pounds from this town to his.

The local express agent here calls for the package and puts it on the train marked with the amount to be collected on delivery. The buyer pays the express charge when he gets the package.

By the new parcel post rules that four pound package can be sent by mail only under the following conditions: It must be taken to the post-office by the seller or his agent and the postage must be prepaid and the special parcel post stamps affixed. The postage on that package varies from eight to forty-eight cents according to where it is going. As the buyer always pays the freight on anything and everything that he buys anywhere from anyone, he has to pay this postage before the package is mailed. In order to do that he must know in advance what the package weighs and the rate from the point of mailing to his post-office. This is an inconvenience that does not obtain with express shipments.

I find that many people prefer to have their order come by express, charges collect, rather than bother to find out in advance how much to add to the purchase price in order to have the goods sent by parcel post prepaid.

I can think of but two ways to obviate this very great fault in the present parcel post system. One way would be to have a flat rate per pound, the same as they do in Europe, to all points

without regard to distance; the other would be to allow packages to be mailed without prepayment of the postage, the postage charge to be paid by the receiver when he takes the package from the office.

As before stated, the buyer always pays the cost of transportation. It is either blanketed in the price of the goods or else charged for separately.

In the case of parcel post shipments that go over the country, the blanketing of the postal charge in the price of the goods is practicable and equitable only with packages of very light weight or with goods of high value in proportion to weight.

Take the case of egg shipments. Considerable hot air talk is current in the press all over the country regarding the value of the new parcel post to city and village people who want eggs and other farm truck direct from the producer. Nothing is said about the cost of the package in which the eggs, etc., must be carefully packed or about the cost of prepaying the postage.

The buyer does not know just what such truck will weigh and how much extra to add to his remittance to pay the postage. The producer is not going to pack his eggs in a special container and pay postage on the box and the eggs at anything like the regular market price per dozen. Why should he? One dozen eggs so packed will weigh over two pounds and be reckoned as three pounds in the postoffice. (Fractions of a pound are charged for as a full pound.) The local rate for three pounds is seven cents; 50 mile zone, 11 cents; 8th zone, 36 cents.

With choice eggs for hatching that are higher in price in relation to their weight, the parcel post charge may be covered in the selling price to all points if the seller so elects. He may add 50 cents to \$1.00 to the price of a sitting to offset the postage.

To my mind the new law would work out much more to the advantage of the general public if all packages could be mailed "postage due." That is, I believe, the chief reason why many people will still prefer to have their goods sent by express, "charges collect." It is much more convenient, even though it is a little more expensive in some cases. I find that the parcel post rate is considerable higher in some cases and much lower in other cases than in the express rate. The system of figuring rates by parcel post seems to differ much from the system employed by the express companies.

Suppose I want to order eggs or other farm products to be sent to me by parcel post and want to send cash with order. I may know the price of the goods but I do not know how much to add to that in order to have them come by parcel post. I do not know how much they will weigh when packed for mailing, and with many products the producer himself can not know the weight until the stuff is packed and weighed. I do not know what the post-

age will amount to and the seller cannot inform me.

No, I do not understand how the parcel post is going to decrease the cost of living unless its present rules are radically changed. I have no personal grievance against the new system. Goods that I have always sent by mail, postpaid, at list price, now go at a considerably lower average cost per parcel post. But I am a seller of goods and I understand that the parcel post was intended to help buyers rather than sellers of goods.

In regard to safety, I would rather trust eggs for hatching to the parcel post than to an express company. I think that they would be less likely to rest on a red hot steam pipe and a cake of ice in alternate watches of four hours each.

F. O. Wellcome.

ABOUT ANCONAS.

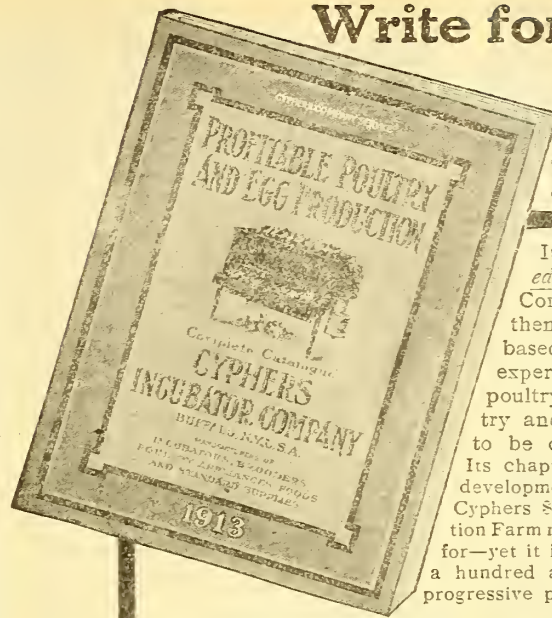
As breeders of Anconas for a number of years for fancy as well as utility on free range, commencing with the best, including Branthovers, we find them not only a handsome fowl and much sought after by the fancier, but as a farmer's fowl where eggs are the object, we find them unsurpassed. They are a pound heavier than the Leghorn and harder. The eggs are very fertile, chicks are hardy, vigorous and castily raised, maturing early and often laying at four months.

As a fanciers' fowl where is there a handsomer bird than the Ancona? In symmetry and carriage they have few equals. They are beauties, in color being white on a brilliant black background, with bright red comb and wattles, white lobes and yellow legs.

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But man and woman cannot live by news alone. The true distinction of The Chicago Record-Herald comes with what it gives over and above the news—in such features as S. E. Kiser's daily columns of humor, George Fitch's witty essays, the daily stories and pictures of "Jones's Daily Magazine," the breezy articles by Mme. Sarah

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though not too much at first or they may over-eat if not watched.

The floor should be covered to a depth of two or three inches with cut clover. They will eat quite a little of this and it helps to expand the crop which is necessary for best results. Feed little and often. We keep them in the heated brooder from 10 days to two weeks or longer if the weather is very cold. The fireless brooders are made as follows: Take a box about 2-4 of an inch thick, eighteen inches square and 12 inches high. The box need not be exactly this size but near it. This we find is a good size. In one side cut a hole about four inches square for the chicks to go in and out. Bore two half inch holes in each side of the box about six inches from the bottom. This is for ventilation. On cold nights the hole in the side can be closed by piling the litter against it while the openings near the top will give the necessary ventilation. Now the top has to be made and is

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the most important of all. Secure a one inch board eighteen inches square or if this is impossible nail two to gether. This is to fit down inside the box. Next secure some flannel and cut it into strips eighteen inches long and six or eight inches wide. Slit this for the chicks to crawl through. Tack these strips upon the board one after another until the entire board is covered.

Nail in each corner a block about an inch square for the top to rest upon. The flannel strips should come down within an inch of the floor. The chicks nestle under this just like under a hen and the strips hanging down on them keeps them warm and contented. Do not put less than twenty-five chicks in it at first as there will be insufficient heat. If the strips are long enough the chicks can crawl under the top until they are old enough to leave the brooder.

This is a very simple device but one that we find highly successful. Handles can also be attached to the sides making it more easy to handle. The bottom can be covered with prepared roofing, thus aiding in keeping it cleaner and on the roofing put several inches of cut clover or litter.

Melvin Uphoff,

New York.

ABOUT WHITE DIARRHOEA.

I am a farmer's wife away out here in this windy country called Nebraska. I breed S. C. Buff Orpingtons and have had nothing else for seven or eight years. I think they are as fine a chicken as one could ask for. My flock is culled closely each year. I have never advertised much because people come from all around here for them and this takes most of what I have to spare.

Have added Indian Runner ducks to my plant this year. They are the Fawn and White, white egg strain, and were bought of a leading Indiana breeder. I am expecting big things of them.

To prevent White Diarrhoea, before the hatch is due to come off in the spring, I get lumps of raw lime and slack it and let it settle, but have plenty of water on it. When the lime settles, the clear water is drained off and put in jugs or bottles for future use. When the chicks are ready to feed and water the first time, I put about two tablespoonfuls of this lime water to a gallon of drinking water. I use it all the time until the chicks are feathered out. I also give it to the old fowls if I notice any looseness of their bowels. I never think of letting my little chicks have water without lime in it, any more than I would think of letting them go without water of some kind. I also have plenty of

coarse sand on the floor. I find Kaffir corn one of the best feeds for either young or old chickens. The little chicks will eat it in preference to anything else right from the start.

During 1911 I raised 1000 Buff Orpingtons, which I thought pretty good for a farmer's wife who has all kinds of other work besides.

L. A. W.,

Nebraska.

SUCCESSFUL CHICK FEEDING.

Pick up a magazine or bulletin on the feeding of young chicks and the hard and fast rules are laid down, "feed five times daily for the first three weeks." It has been that way since I can remember and I have been in the poultry business for five years. All the schools and institutions advocate it and I followed the rules myself until I had confidence enough in myself to look around and draw conclusions. The question of feeding my young chicks five times a day became a night-mare to me. I could not get around half the time and when I did manage to appear on the scene to feed my youngsters it was so irregularly that in my estimation my chicks did not know my reason for coming. It began to be a task for me to feed and take care of my chicks and so I finally hit on a plan of feeding but three times daily instead of five.

Time and labor were greatly reduced by my adopting this method and not only that but my chicks seemed to thrive much better. They know when their three meals are coming and they

E. K. MARKER.



There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 50c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

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(Kellerstrass, Cook and Wagner Strains.)

	Exhibition Matings	Utility Matings,	Per 100
	Per 15	Per 30	Per 15
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Trios \$6.00 and up. Baby Chicks, 15c and up. Few cockerels at \$1.50, \$3.50 and \$5.00 each. Going fast. Can please you. Very Special—12 eggs each from pen 1, 2, 3, total 36 eggs, for \$6.00. These are \$10.00, \$5 and \$4 eggs. It's a bargain.
PROGRESSIVE ORPINGTON FARM, J. C. BEARE, Prop.
Order from this ad, to save time. May we send you our booklet. Fort Gage, Ill.

are ready to make short work of them. When I fed them five times a day they had no appetites and that every poultryman will tell you is a secret of health in chicks.

I do not find it too long for my chicks to wait from 7 a. m. till noon and then again till 5 p. m. They do get hungry, I will admit, but it stimulates the chick more than two extra feedings would to hunt around for something to eat.

We feed the so-called "Cornell Method" and find it works far better than anything we have ever tried. That is we feed their mixtures, not in the same method. The first things my chicks get are grit and water. When they have picked up considerable grit I give them a wet mash mixture. I never think of letting the chicks go without charcoal and grit and when they are half grown I find fine oyster shell very beneficial.

At 7 a. m. they receive a wet mash and just about what they will clean up. At noon they get a feeding of sprouted oats and another feeding of mash. At 5 p. m. they receive a feeding of cracked grains and enough is given to have something left in the litter for them to scratch for next day. My only change is when the chicks are all feathered I stop the noon mash and give a cracked grain feeding instead.

Louis Lafin,

New York,

box with the 80 babies and she seems as happy as if they were all hers, which they are now.

I think a good many people make the mistake of feeding a little too soon. I never feed them under 24 hours and it is better to feed even later than this than sooner. The first thing I give them is some coarse sharp sand, then the tested out eggs are boiled hard and then ground shell and all in a food chopper and mixed with dry bran until crumbly. I have used this a long time with good results. I bake corn bread sometimes but most of the time I scald the corn meal then mix it with dry bran until it is crumbly. I do not believe it is good to feed so much wet, sloppy feed. Some people object to the incubator hatched chicks, saying they are not healthy, but that is not true if the incubator has been kept regular, say at from 102 to 105 degrees and good eggs put in the incubator, the chicks will come out as stout and healthy as any hen-hatched. I think I can attend to an incubator lots easier than I could to 15 or 18 sitting hens, besides the hens can be laying eggs. I think some of the bought chick feed fed in hoppers is good also, but we are apt to get foul weeds in that way. It would be better to have your own grain crushed then you would know what you are feeding.

Mrs. C. C. Hubbard.

Indiana.

FINDS ARTIFICIAL HATCHING GIVES BEST RESULTS.

I think poultry keeping as a side line mixed in with the other duties that a farmer's wife has to perform is one of the most pleasant and also profitable undertakings that she could indulge in, but I want to tell you right here that poultry keeping is like anything else; to make a success it takes work and management. I usually raise 400 or 500 every year but I never keep more than 3 or 4 dozen over winter. I have an "Old Trusty" incubator to hatch the chickens. I raise the pure blooded Barred Plymouth Rocks and Oh what nice fries they make, besides the income that is derived. I hatch in an incubator but find the old Plymouth Rock hen the best for the brooder.

With good attention one hen can take care of 40 or 50 baby chicks well enough. I have just taken off 80 this morning and one hen has to mother them. Such gangs are beautiful but one must give them good attention but I would rather do that than have so many different lots of them. This hen just began to want to sit a few days ago. We put 2 or 3 little chicks under her last night in the nest and this morning we have her here in the

HATHING AND BROODING CHICKS

I would like to tell the readers of the Poultry Keeper some of my experiences in hatching and brooding chicks. First we bought an Old Trusty incubator, 100 egg capacity, and brooder. Had no trouble with the incubator, don't believe there is a better one made, but can't say as much for the brooder for being heated from the top the chicks' feet were always cold and they would stand and chirp all the time except when eating.

We watched and waited until our chicks were nearly all dead then concluded to try a new plan. My husband made a brooder according to his own plans and judgment. He first made a box about 3½ feet long, two feet wide and 10 inches deep, then turned it upside down and covered the top with zinc. He then made another bottomless box or frame to set over this which was about four inches deep, one side being glass. The whole thing was then lifted up on two chairs or it could be set on legs if one prefers them and a lamp set underneath. Chaff or litter is then placed on the zinc and the heat from the lamp soon warms this zinc floor and the little chicks are then placed on it. Feed can be scattered in the litter and the way the little

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fellows talk and eat is a pleasing sight. The upper box or frame has a lid, of course, with a hover fixed on the under side. When the little fellows are through eating and drinking we close the lid and they all form a circle over the heated floor lie over on their sides and sleep.

We do not feed our chicks for 48 hours, then start them on Purina chick feed, give them some water about twice a day at first but not enough that they can get their bodies wet. Self sealer can lids are good to use for this purpose until they are a week old, then we remove them from brooder place them outdoors in a sheltered place, place a sash over them and let them remain there during the day, taking them indoors in a little box over night or placing in the brooder sometimes without a lamp if not too cool.

We feed them on chick feed for about three weeks, then change to wheat, crushed corn and some bran. We never feed anything but dry feed or very slightly moistened feed. Here let me say I believe there are more chicks killed by "wet feed" than any other way. We have had scarcely any trouble with White Diarrhoea since we have been feeding dry feed. When the chicks are about a week and a half or two weeks old we begin letting them out in little brooder houses and use what is called a cold brooder made of goods box lumber with a hover of outing flannel on under side of lid.

They soon learn to run under this brooder when they get tired, sleepy, cold or scared. We carry two pieces of sod to them every day, place one with the grassy side up, that they may have grass, the other turned so

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I have my farm so well stocked with egg bred Buff Wyandottes that I am going to offer P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$5; 100 eggs, \$12. Mention P. K. in ordering.

My three books, ordered with eggs, \$1 additional.
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they may have dirt to work in. Sometimes one is fortunate enough to find a worm then there is a scramble. My little boys often take tin cans out where the ground is being plowed and hunt fish-worms for them and you may be sure both the children and the chickens enjoy the fun.

Mrs. Albert Wright,
 Indiana.

DOES NOT LIKE FIRELESS BROODERS.

As it is time for sitting incubators and hens I will tell a little of our experience. We have been in the poultry business for several years and have had lots of ups and downs with it. We have learned lots through poultry journals and a great deal more by our own experience. Experience is a dear teacher but when once learned it is not so easily forgotten. We used to depend on sitting hens for hatching and rearing of chicks, but later we purchased an incubator and found it so much more satisfactory that we discarded the sitting hens. We found that the incubator does not hatch lice as the hens do and brooders will not if properly cared for. Since we started the incubator and brooder route we have no use for sitting hens. We think the brooder raised chicks more satisfactory than hen raised chicks. Hens, if allowed their freedom, will wander farther away from their coop than we like and when a rain comes up we do not know where they are. They will sit down where they chance to be when the rain overtakes them and take the best care of their baby chicks they know how, but chicks raised in the brooder come right to the brooder when the shower comes up, and we know right where to find them.

I do not mean we use the fireless brooders. If everybody thought as little of the fireless brooders as I do they would soon pass out of existence. The very idea of putting little downy chicks in one of those fireless boxes. I do not think there is anything any more cruel than that. When we began hatching with the incubator we were like lots of others and thought that hatching was the object (not raising.) We had heard and read so much about the fireless brooders that we decided to try them out. We thought it would be so much cheaper than buying lamp-heated brooders, but it was to our sorrow. Our incubator held 100 eggs and hatched 332 fine chicks. We put them in those fireless boxes, so-called brooders, and if God will forgive me for such cruel treatment to those little helpless chicks. I certainly will promise not to do it again. I think brooding is more important than the feeding. I think a person that expects to raise chicks in a fireless brooder

has very poor judgment. We use the lamp-heated brooders and think they are fine.

L. T.,
 Illinois.

AMERICAN POULTRY ASSOCIATION ANNUAL ELECTION, A. D. 1913.—COMPLETE RETURNS.

- President.
 E. B. Thompson, Amenia, N. Y. .. 1322
 E. E. Richards, Cedar Rapids, Ia. .. 1276
- First Vice President.
 W. C. Cleekley, Augusta, Ga. 2550
- Second Vice President.
 A. A. Peters, Denver, Colo. 2540
- Secretary.
 S. T. Campbell, Mansfield, Ohio .. 2225
 John A. Murkin, Nashville, Tenn. ... 305
- Member of Executive Board.
 W. C. Denny, Buffalo, N. Y. 1661
 U. R. Fishel, Hope, Ind. 1523
 C. D. Cleveland, Eatontown, N. J. ... 1241
 S. J. Hopper, Dallas, Texas 948
 Richard Oke, London, Ont. 831
 J. M. Parker, Creston, Mont. 449
 A. F. Kummer, Butler, Pa. 290
 Robert Seaman, Jericho, N. Y. 194
 S. A. Merkle, Buffalo, N. Y. 180
 Louis G. Heller, Bridgeton, N. J. ... 95
- Time of Holding 38th Annual Meeting.
 August, 2nd week, 10th to 16th. ... 1293
 September, 1st week, 1st to 6th 447
 August, 3rd week, 17th to 23rd 335
 August, 4th week, 24th to 30th 167
- Place of Holding 38th Annual Meeting.
 Atlantic City, N. J. 1112
 Detroit, Mich. 660
 Chicago, Ill. 526
 Buffalo, N. Y. 84
 Boston, Mass. 74
- Ballot on Permanent Home.
 No. 1046; yes, 878.
- O. L. McCord,
 Election Commissioner, Danville, Ill
 May 6, 1913.

EARLY HATCHES.

Every poultry raiser should do his best to get his chicks hatched as early as possible. The spring is the hen's natural laying season and when they begin laying in winter or early spring their eggs are much larger than those laid later and also of better composition to make a healthy, vigorous chick. The early eggs are more fertile than the late ones, as the hen has just had a long rest through the molting period and the chicks from the early eggs are large and grow rapidly. Later in the spring the hens that have laid heavily are not in condition to give the size, strength or eggs that are needed to hatch the chicks that will develop properly and become profitable fowls. For these reasons late hatches tend to run down a flock, as brooders hatched from these late eggs have not the vigor needed for producing quick grow-

Special Sale of White Orpingtons

My flock of young chicks being so early and large at this time, and my incubators still doing full duty, have concluded to give the lovers of S. C. White Orpingtons chance to get winning stock for next fall and winter shows. Will furnish 100 to 150 from five to nine week old chicks, to be shipped between May 1st and May 10th—these birds all from prize winning stock. Cockerels, \$3.00 each; pullets, \$2.00. Orders booked and filled in order received, and when the number has been sold, those sending orders too late will have money returned.

See Page 34, April issue, for large ad.

F. B. DONISTHORPE, BOX P. K., GENEVA, NEB.

ng birds. Late hatches, year after year on certain farms, have so lowered the vigor that few of the birds reach standard weight and sudden changes of weather cause serious losses from disease. Late hatching a single year is not likely to do much damage, but great care should be taken to select only the best hens for breeders. I have a flock of Barred Rocks hatched the last of July. They began laying in December and kept it up all winter but this is an exception rather than the rule. If one has a flock that starts to laying late no harm will come from late hatching. The culls can be disposed of on the early market to better advantage. Some say that the early hatched pullets will molt the first fall, but such is not the case. Pullets are in a state of continual molt until they are fully matured and will not go through a change of plumage until after they have started to lay. In fact they will not molt until the next year. Think this over and if you doubt it, try it out and let us hear of your results.

Alfred Kester,

Wisconsin.

GOOD METHOD OF CARING FOR CHICKS.

The first thing in starting, is to select a breed you admire and then stay with them. Do not change to some other breed and in a short time you can build up a reputation for your variety, which would be impossible if you are constantly changing.

Nearly all makes of incubators will hatch well, but there is a vast difference in the care it takes to make them work. I was at a neighbor's a few days ago and he had an incubator running. Every few minutes he would run and look at it and turn the light up or down. Once I saw him change the regulator. The machine had been going about a week. The proper way to do, is to regulate your machine before you put in the eggs, then you will have no trouble. I bought my first incubator twenty years ago, and have had no trouble in hatching from 80 to 90 per cent of the fertile eggs. I use a fireless brooder and have had fine success with it. Of course I do not get in too big a hurry and try to hatch in January as I think the first of April is soon enough on the farm. If given proper care, the chicks soon attain broiler size. The brooder chicks are seldom bothered with lice or other

troubles. I do not allow the chicks out on the ground until they are six to eight weeks old and then I give them a small run until they become accustomed to their home. They will come back several times a day to rest and seem better contented than when raised with hens. They should always have a good supply of water and plenty of sand. When the weather is real warm, set the brooder in the shade of some trees or some low bushes.

J Walker,

Indiana.

HATCHING, FEEDING AND BROODING.

The first essentials are good strong fertile eggs from pure bred stock. To have good strong stock, the male birds should be changed every year. I use both the hen and incubator for hatching and I find my incubator more reliable than the hens as they are inclined to be fickle minded. I have a Mandy Lee incubator and test my eggs with a Magic Tester before putting in the incubator, which has been thoroughly cleaned and sterilized. Then I try to follow the instructions very closely. I have my incubator in a room down stairs where I can look at it frequently and I try to keep the temperature as near even as possible.

I notice that the weather, especially in the month of March if it is very windy, will lower the temperature or if we suddenly have a warm, mild day the temperature will rise and the eggs will become too hot unless attention is given it and the flame lowered. It does not do to set the incubator and just look at it morning and evening when we turn the eggs as so many do. The mischief can be done between time. An incubator has no thinkery so we have to supply that.

When hatching time comes I do not open incubator after the 19th day until the hatch is completed unless it should become over-heated. The heat of the chicks will raise the temperature and the flame will have to be lowered. Watch the temperature very closely. In my incubator the chicks as soon as hatched, drop into the nursery below the egg tray where they are very comfortable. I remove them on the afternoon of the second day and if the weather is cold I have a home-made indoor brooder made from a wooden shoe box about one yard long, 18 inches wide and 14 inches high. I had the tinner make a tank of galvanized iron

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4 inches high to fit in one half of it at the top of one end, leaving space underneath for brooding place for the chicks. I fill this tank morning and evening with boiling water, placing a paper and feather cushion on top of it to hold the heat. The other half of the box is a place for exercising and feeding. The top of the box is closed with two lids on hinges. The one over the exercise part has a glass in it to admit the sunlight. I am a great believer of sunlight for baby chicks and let them have all they want of it. I always set the brooder so it will be partly in the shade and the chicks will manage the rest.

After 36 hours I feed and water them. For the first two weeks they get hard boiled eggs run through a piece of screen wire, three times a day and water with the chill taken off in something in which they can not wet themselves, for right here is where White Diarrhoea commences, if they are allowed to get wet and chilled. If hatched when the weather is cold, I keep indoors until the weather is warm, giving them fine gravel and oyster shell and anything green, sprouted oats when I have it. When the weather is warm enough I put them in a fireless brooder outdoors with glass at one end to admit sunlight, with a runway attached to run out on the ground. In the other end of brooder a square hover just to fit box, a frame made of inch strips of lumber covered with muslin to fit in top of hover. If the weather should be cold place another light cover over muslin frame.

Between feedings of hard boiled eggs I give them chick feed composed of small grains which you can buy at any feed store, but after I move them outdoors and they are at least two weeks old, I drop the egg and give

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them finely cracked corn and cheese made from clabber milk, being careful not to cook it too much, feeding the cheese once a day soft and clabber milk when I have it, and Oh! how they grow.

After they become used to the brooder and runway I let them out every sunny day and they have the run of the yard and a merrier, happier lot of chicks you never saw.

Here is my way to make a coop for brooding hens. I had an old box frame. I nailed lath 1 inch apart on three sides and the bottom. The back of the coop (which I set to the north) and the top covered with solid boards and roofing to keep them dry. Then I nailed posts made out of old boards at each corner to raise the coop about eighteen inches from the ground. The idea is this, when biddy feels the air circulating around and under her she will sit standing up, and a matter of two or three days will see her broken of the habit.

Olive A. Brown,

Indiana.

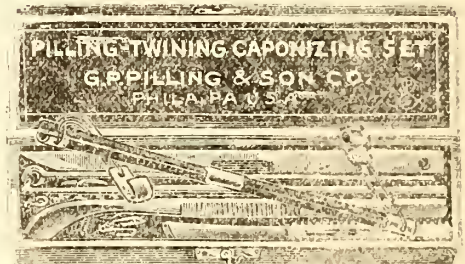
DIFFICULTIES ENCOUNTERED BY A BEGINNER.

As I have had a chance to read your paper and notice you encourage beginners to give their experience, I will give you an account of my start in the poultry business. I was at that time learning the blacksmith trade at home. I got the idea that there was big money in chickens and as we had broken land enough for a few small yards, I bought a few Buff Wyandottes, thinking they were just what I wanted and not really knowing what object I had in view, only chickens and like many others, thought the more breeds I had the more business I would be doing, so I bought ten Barred Rock pullets and eggs of several other breeds and will admit here was one expensive mistake.

I had my Rock pullets scored, which turned out with an average of about ninety, which the judge told me was a good score. He told me the kind of a cock bird to buy, but being a little short of money, and thinking the price he told me ought to get a good bird was more than I could pay. I kept asking the customers that came to the shop where I could get a thoroughbred Barred Rock cock bird. One old farmer told me he had kept them pure for years and would sell me one for \$1.50, as good as I could get anywhere else for ten dollars. I was all taken up with getting a ten dollar bird for \$1.50, so I bought and mated him with my ten Rock pullets. The consequence was when my chicks began to hatch I noticed some downy feathers on their legs and toes. Upon examination of the cock bird found little quills starting from under the scales on his legs and toes. This put me back to the beginning with one season of experience and just my old stock left to start again. I sold off all of my mongrel offsprings and decided to try again the next year.

I saw where I could get an incubator and pay for it with its own earnings, so I signed the note they sent me. As soon as they got my note here came

the incubator, then I was in the chicken business for sure. I bought 120 Rhode Island Red eggs for ten dollars. I put them in the machine after I had spent several days in regulating to the proper degree of temperature. I watched that machine almost night and day and when they began to hatch was on the job constantly, for fear one of the little chicks might need some help to get out the consequence was 27 chickens, of which 25 were cripples, the cause of which I attributed to the early eggs being infertile and chilled before being put in the machine. That killed the R. I. Reds for me. I still had my Rock hens and with a good cock bird at the head. As soon as the machine was empty I filled it with Rock and White Leghorn eggs and hatched about 75 per cent of the eggs in the machine. I raised 66 of these by having a Model brooder warmed ready to receive them when they were about 12 hours old. I then refilled the machine the third time. These chickens were about four weeks old when the third hatch was ready to come off, and as it was bad weather I was afraid to take these four weeks old chicks away from the heat of the brooder. I built another brooder to receive the hatch to come. It worked well for several days and all at once the lamp exploded which suffocated most all of the chickens, so I made up my mind if it was experience I wanted I was getting it at a tremendous rate at a



PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

pretty high cost. I began to read, to profit by others experience and soon found that one or two breeds were all I could look after.

As we lived on an interurban car line close to a good broiler and egg market I decided to try out the White Leghorn and Barred Rocks, of which the latter proved the most profitable to me, on account of being good layers, good mothers and the chicks were early to mature. I culled and weighed my broilers, making them as near even weight as possible in each crate which made them attractive on the market, commanding as high as three cents above quotations. Later in the season I picked out all disqualified birds for roasters and kept the balance for breeding and show birds, which I hired a good judge to score for me. I then began to advertise my stock. It was then I became a real chicken breeder, selling breeding stock as high as ten and fifteen dollars each.

I find there is more than one object to fight for than merely trying to see how many breeds you can keep or how many chickens you can hatch. It is my advice to the beginner to go slowly, read all the good advice of experienced writers, pick the breed best adapted to your market in the way of eggs, broilers, roasters or capons. Do nothing but an honest business, satisfy your customers and you will be a poultryman with a good income from a comparatively small investment. I think there is hardly any place where there are as many places for leakage of profits as a poultry business without proper management.

H. R. Whitney,

Ohio.

MILK FOR BABIES.

We read articles by many writers telling just how to care for and feed chickens, and one might infer from some of the articles that every chick could be raised in just one particular way, and that way "our way." I do not claim to know all about chicken raising, in fact it seems to me sometimes that I know very little, but I have learned a few things for keeps and am not above taking lessons from anyone. I take several poultry papers, all the best ones, I think, and Poultry Keeper is not the least of them. Perhaps it would be interesting to some readers of this excellent paper if I tell a few things I have learned.

In the first place, note the advice on managing incubators. Nearly all writers tell us, "Do not on any account open your incubator door after the eggs begin to pip until the end of the 21st day, but watch your thermometer closely that the temperature does not run too high." Now how shall we keep watch of the thermometer without opening the door in an incubator with an entire case of wood without even a square inch of glass to see through? The first one I bought was that kind and I don't imagine mine to be the only one. I am now running three and this same tight box is the one I have always obtained the best results from. Then we get instructions about open-

ing and closing the ventilating slides which is "Greek" to me for I have never even found one of the several makes I have examined which has any "slides."

The last advice I read to beginners was to watch your hatch closely and remove the chickens as soon as hatched. Now I have learned from three years of experience, and the beginning of the fourth, that none of this advice is safe to follow in all cases. With a hatch I took off last week I resolved to try the closed door plan, and positively would not open the door till the end of the hatch. The last night was unusually warm for the season and with three incubators running in a small room made it rather close even with an open window. There was so much complaining I knew all was not as it should be, so I broke my resolution and if I had not I probably would not have had a live chick in the morning. In this case I proved the advice not good, neither is it safe to follow the other advice I mentioned, at all times. If you keep opening the door to remove chicks in a cold room you will surely chill and kill some chicks, both in and out of the shell.

We are told little chickens must not be fed until they are 24, 36, 48 and some say 72 hours old. If your incubator is tightly closed how can you be sure they all popped from the shell in the same hour? Some may be 12 or more hours older than others, and shall we starve the first hatched on account of the later hatched, when in all probability the first ones are the strongest and the most worth raising? Then, too, the hungry hustlers will not allow the sleepy heads any comfort while they remain hungry.

I feed after 24 hours all that clamor to be fed, and leave the quiet ones still under the hover. I read in nearly

every paper at this season of the year that the first feed must always be bread soaked in milk and squeezed dry, but I could never get mine to eat it. Hard boiled eggs ground up with bread was refused, also. I have fed chick feed, fine oat meal and the like, because they would not eat anything else.

The batch I have already mentioned I am learning something new from, that is, new to me. They were set Feb. 22, and being hatched a little earlier than I usually do, perhaps might in some measure account for their peculiar and original ideas. I have them in Lullaby Brooders, which are a small corrugated pasteboard affairs made in Boston, Mass. They are to be put in any box and have a small opening through which the chicks drink from a dish placed outside. They refused to drink for two days because they could not get their feet in the water. The fourth day they gave in and spent most of the time at the fountain, but what surprised me most they refused to eat the brand of chick feed I have used for years, at the same time complaining so noisily as to be decidedly unpleasant. I have the brooders in small wooden boxes in the kitchen and more than once I heartily wished they were back in the shells. Of course I realized they wanted something and were trying to tell me in the only way they could, and I also realized they must be hungry, although I cannot tell why they refused the feed. I commenced to try everything I could think of. They ate a little rolled cracker but still cried, "not that, not that," or at least I so interpreted it, and finally I decided to try the heretofore despised soaked bread. I had none but evaporated milk, but I diluted it as for other babies, soaked and squeezed dry the bread and placed before them,

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CHOLERA KILLS 3,000 HENS Chicken Cholera has been recently discovered in the Central States where it is causing an epidemic of this most ravensous disease. Fowls look droopy and finally fall dead, causing a loss of thousands of dollars. J. C. Reefer, the poultry expert, of 1720 Main Street, Kansas City, Mo., is giving away free a booklet which tells how to prevent the spread of this terribly contagious disease. Every reader should certainly send for one of these valuable, free booklets.

Kellerstrass Strain CRYSTAL WHITE ORPINGTONS. Eggs for hatching in season. From now until fall will have good layers, (yearlings.) This year's chickens for sale. **Thos. H. Kean, Box 521, Nantucket, Mass.**

and, lo! they fairly trumbled over themselves to get it and they not only eat all the bread I give them but drink the milk which is left. Is milk good for babies? It seems to be for this lot of babies. It is interesting to see the greedy way they eat and even jump several inches to pick every crumb from my hands. We are

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Poultry Keeper Publishing Company, Quincy, Illinois

told to feed chickens very sparingly the first week or two but I allowed them to fairly stuff themselves in self defense when I discovered the way to stop their clamor. After a full feed of bread they had a good nap and then condescended to eat a little chick feed. They expect a full feed of bread occasionally and so long as I see no bad effect from the stuffing process, they will get it, but don't think I am advising every one to follow this course unless you find it the best course to follow as I have so far.

We have also been told to always select our smooth, even shaped eggs for hatching and as I do not care to waste my eggs I have always done so, and now comes Mrs. A. E. Swain in the March Poultry Keeper telling us of the fine chickens she has hatched from ridged eggs. I have a long pointed egg in one of my incubators due to hatch in just one week which at the time of testing contained a growing chick. That is another kind of egg we are told is never fertile. I shall try a ridged one too, if I find one at the proper time.

Now the moral to all this is, don't try to follow any one's hard and fast rules against your own common sense, but use your brains at all times, and remember that circumstances alter cases. My next hatch may be the better for being left alone till the end of the 21st day and the chicks may refuse bread and milk and insist on having chick feed. Whichever proves to be the case I shall, as ever be guided by whatever seems best to fit that particular case.

Mrs. R. E. Walcott, New Hampshire.

DISEASE AMONG CHICKENS.

One of the most destructive diseases that poultry is subject to is limberneck. During last summer I lost about fifty out of a very fine flock of 225 fine Barred Rocks. The disease is supposed to result from eating decayed animal

matter and as my chickens had free range of the farm they probably found something of that nature to start the disease. The stricken fowls would be found sitting flat on the ground with heads protruded and eyes closed. When disturbed they would make an effort to raise the body and head which only resulted in dragging it after them on the ground as they struggled backwards, unable to walk or open their eyes. The mouth, which would be filled with a shiny discharge, was so tightly glued by it that it was almost impossible to open it. A white diarrhoea and fever accompanied the disease. The malady was confined to the older chickens, mostly laying hens, as I often found an egg under a stricken hen. That the disease attacks them quickly is evident from the fact that fowls were found lying about within five hours after eating heartily.

Some writers seem to consider the disease very contagious, other do not, arguing that all get it from the same source as the first one. In my case I took no chances but immediately isolated the afflicted fowl and began doctoring with various poultry medicines, but found finally that my greatest success lay in administering a grain of copperas about the size of a green pea, to the sick bird every morning. This very often affected a cure when taken in time. I often followed the dose of copperas with a large spoonful of castor oil. This, I think, cleaned the bowels and healed them. I placed copperas in the drinking water for all the fowls. Of course the houses were thoroughly cleaned and disinfected and all dead birds immediately destroyed and the whole flock fed a good poultry regulator.

Mrs. E. D. Huff,

Ohio.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

CAPONS AS BROODERS.

AS I have had some very interesting experience in brooding chicks, will give a little of it, if you think it worthy of a place in your journal.

I have operated incubators with success and have three, all of one make. While I was able to get just as strong chicks from the machines as from hen hatched I never was able to brood them in any make of brooder to equal those brooded with hens. Every new kind of brooder I saw advertised I bought, but still had the same bad luck. At a certain age regardless of the best care given them they would dwindle and die. When autumn came I had more chickens under ground than on top, which certainly was discouraging as I had started to trap-nest my hens and had only a few to breed from.

During the year 1910 I had some very nice Langshan capons. One of them was making such growth that we decided to keep him through the winter to know what weight he might attain at one year old. It is a well known fact that no other poultry associates with capons. They seem to fairly hate them, so the capons get very lonesome; any kind of company is good enough for them. By chance I found they made ideal brooders.

About the time the Langshan capon was a year old a hen turkey got killed by a hawk, leaving 15 poults three

weeks old. I brought them to the house and put them in a large pen enclosed with wire netting. If any of our readers have ever raised turkeys they can imagine the wail those youngsters put up. They made me nearly insane. I would have given them to anyone who might have been foolish enough to take them. At night when I went to care for them I found the capon sitting close by the wire looking very much pleased. I paid no attention to him that night. The next day I found him the same. The little poults were as near him as the wire would permit. They, too, were lonesome. I finally decided to put him inside the pen with them. Right there my brooding problem ceased. I found he did not cluck like a hen, so took a bell from the shepherd dog, only a little smaller than a cow bell, but that was the only thing I had on hand, attached it to his neck by a small strap. In a day or so the poults would follow him around the pen from the sound of the bell. I turned him loose with them. He brought every one through. When fall came I could see no difference as to size and vitality, than those raised with turkey hens.

Since then I have used them for brooders for anything in the poultry line. They make no distinction as to

number of different breed. Poults, ducks and chickens of different ages and sizes can be brooded with capons. They all look alike to them. They allow their broods to run with them till grown. Here is where they are more desirable than hens. If a brood half grown is taken from a capon, by leaving him alone a day or so, a newly hatched brood can be put with him. I have raised three broods with one capon in one season. The death rate now is small. In 1912 I raised 250 chicks, also sold several sittings of eggs and 90 day-old chicks from 20 hens. I lost only five chicks through the season.

Rocks, Reds and Orpingtons make the best capons for brooders. For poults I like the Langshans. They seem more intelligent and better rangers and put up a good fight if a hawk or crow molests their brood. If one does not care to do his own caponizing it is well to buy them from a breeder who makes them a specialty. A good time to get them is when they get nicely recovered from the operation. At that time they can be bought very reasonably. Of course this method would not do for the big plant, but for those raising poultry on a small scale, it certainly cannot be excelled. I find I can winter a dozen capons, as they are small eaters, with less expense than I can fuss and worry over a mess of brooders. They are ready any time for a job with a little train-

Maurice F. Delano

SUCCESSOR TO

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A WORD OF APPRECIATION

I want to thank my hundreds of friends and customers of Owen Farms throughout the country who have written me the nicest letters of congratulation I have ever seen, and who have pledged me their support and patronage. It has pleased and gratified me beyond measure to have their feeling of good will towards me expressed in these hundreds of spontaneous letters, which have shown it in a way I shall never forget. Feeling expressed in these letters have been the deepest regret that Mr. Owen should feel obliged to withdraw from the business, but they have been a unit in declaring that, if this had to be, they are extremely glad to have me the new owner of Owen Farms flocks. Many of these letters have been backed up by orders for stock or eggs or both and the support accorded me has exceeded my most sanguine expectations and given me very great encouragement.

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Two carefully mated Pens in each of my varieties at each of the following prices:

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Select the price you wish to pay and send me the amount directly from this advertisement. I will send you a pen of birds headed by a line bred yearling descendant of a First Prize New York Male that I have carefully mated to four excellent one or two year old hens from our 1913 matings. You can choose age you want hens. The older ones will be a little better in average quality. The pen you order will be shipped you on approval, subject to return in two or three days at my expense if you are not absolutely satisfied that you have the best pen of birds ever sold at the price paid, and I will cheerfully refund the full purchase price.

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40c each; \$17.50 per 50; \$30.00 per 100. From BEST PENS in existence.
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ing. We do not fill him with oil or trim his wick. He does not burn our buildings. He does not keep us busy with one eye on him, the other eye and both hands taking care of dead chicks. I'm trying a few turkey capons this season and if any of our readers would like to know of my success with them, will report next fall.

Mrs. D. A. Farwell,
New York.

A FEW THINGS THAT MY TWENTY-TWO YEARS AS A FANCIEE HAVE TAUGHT ME.

First. That you may have the best poultry in the world and if you fail to exhibit and advertise very little profit will be derived other than the general market prices. The local market is far more bother than profit and is very limited.

Second. That very much of the money spent for advertising in cheap farm papers and other papers of low grade is wasted. The first class poultry papers and a few standard farm papers bring the most business.

Third. That it pays to deal on the square with customers, a satisfied customer is apt to (and usually does) bring several more good customers and our old customers keep coming back to us for more stock and eggs. I have personally known fanciers who thought it made little difference how they treated customers, but we seldom see their ads in papers nowadays. Of course there are always kickers who expect ten blue ribbon winners out of every sitting of eggs and a Ten Dollar bird for \$1.50, etc. While this class, we always will have and they are a nuisance, still we may in the long run profit by giving due consideration to them. A business built up on the square may start very slowly, but when once established, it is not only a source of much profit, but is a pleasure besides. We have friends in almost all parts of the United States, old customers, who keep up a regular correspondence with us. As to the time taken to establish a trade, our first year's advertising brought us only two inquiries and no sales. Now we could sell every duck egg we have in a season without carrying an adv. Some may say, "Why spend money for advertising, then?" Just because the business would keep decreasing year by year.

Fourth. A breeder of from ten to fifteen different breeds, is seldom a specialist in anything. Whenever we order eggs from such an advertiser the result is as a rule, a worthless lot of stuff not fit for any show. One or two varieties brought up to as near perfection as possible, will generally give one person all the work he can well

FOR HATCHING EGGS! EGGS! EGGS! GLOVERNOKS

White Holland Turkeys—White African Guineaes—White Embden Geese—White Japanese Silkies—Imperial Pekin Ducks. Great bargains in Great Birlds. Great Layers, Great Hatchers, Great Non-Related Stock. Mention Poultry Keeper.
MISS FRANCIS E. WHEELER, CHAZY, NEW YORK.

handle. A specialist is as far ahead of a trafficker or simple dealer, as a show bird is ahead of the average barn-yard fowl. A specialist takes pride in the development and finish of his birds for fancy and utility points, while the simple dealer is in it just for the dollars and cents.

Fifth. Have what you advertise and advertise what you have. Have your stationery neat and plain, avoiding all gaudy array and overdrawings. Many a person has lost a good sale for want of stationery when answering letters. It gives you standing and good business appearance.

Sixth. Always be prompt in answering all inquiries and filling order. If you promise to ship stock or eggs on a certain day, ship as you agree. You do not know how much you may inconvenience your customers by delays.

Seventh. Be very careful about mating your birds, feeding for egg fertility and cleanliness. Gather the eggs frequently, properly store them in a cool place and be very careful about packing and handling them. All these things go toward making pleased customers.

Eighth. Last but not least. Have several good poultry papers. Keep well informed. This is not only an incentive to better results, but is a pleasure. Use your Standard of perfection. Exhibit at some good show each year and be present, if possible.

Oscar Wells,

Farina, Illinois.

STARTING WITH POULTRY.

About two years ago, I caught the chicken fever. I bought 75 S. C. Brown Leghorn hens, paying 50c per head. Had a very good house for them, although it was a little too small. I got all kinds of costly feeds I could hear of and I think I got about a dozen eggs that winter. When spring opened they laid fairly well and I raised about 800 chicks to be half grown. In the lot of hens that I had bought one had the roup. I put it away from the rest and took one teaspoonful of fresh lard and worked enough calomel into it to make a stiff salve and it cured the hen. I put her back into the breeding pen and she laid well but when my chicks were about half grown, roup broke out among my 800 chicks and they died by the dozen. I could fairly pick out the chicks that were hatched from the eggs that the roup hen laid as the first to take the roup. I was surely discouraged with poultry for a while at least and my 800 chicks dwindled down to about 50 or 60 which I raised to maturity. I was ready to quit the poultry business for good and sold them at market price (10 cents per pound) and they brought \$37.00. I

was not satisfied with this experience and picked up courage to try again. I had the old house pulled down, the lots ploughed up and planted to wheat, oats and rye. A new house 20 by 60 feet was built and a new start made with White Leghorns. The house was put in the same place the first house stood and that year roup broke out again, but not so badly. I have learned that the best thing to do is to kill every bird as soon as it takes the roup or any other disease and then put a few drops of carbolic acid in their drinking water, about every other day.

I now have about 75 or 80 S. C. White Leghorn pullets that are laying well and they are beauties. I hope to raise a lot more this year. I got the very best stock I could (Blanchard-Wyckoff.) The few I had last winter laid well all winter. I like the White Leghorns best for winter layers.

Mrs. R. C. Smith,
Kentucky.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

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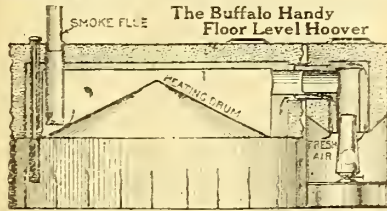
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THE TRUE INDIAN RUNNERS—POINTS ABOUT COLOR OF EGGS AND TYPES OF STANDARD BIRDS—BY A NEW ZEALAND BREEDER.

Editor, Poultry Keeper:

THROUGH the kindness of a customer of mine in California who furnished me a copy of your paper, I was enabled to read a very interesting letter you published under the name of J. W. Beeson, A. M., L. L. D., Meridian Woman's College, Meridian, Miss. on the color of Indian Runner duck eggs. I also saw printed in your paper an invitation for any reader to send you some practical experience, also I have been requested to write you on this subject or any other subject relating to that champion of layers, the Indian Runner duck. I am forwarding you a copy of catalogue and also one of the best testimonials I have ever received. The testimonial was written by an expert poultry writer and he was in the company of our head poultry instructor for the New Zealand government, when the two experts in question visited my poultry farm. You will note what our chief poultry experts and others said of my heavy laying strain of Runners, which I originated a number of years back. You will quite understand that I know what I am talking about and thoroughly understand what a true and pure bred Runner should be. If this letter of mine is at all interesting to you and would prove helpful to your many readers, you have my permission to reprint it.

I am always interested when the Runner duck is under discussion, and also the Buff Orpington duck. I am a breeder of these two great egg producing breeds of water fowls and I am sure when they are properly understood and bred to lay in America as they are in New Zealand, that both breeds will be very popular as money makers. As far as my "Wonder Strain" of New Zealand bred Runners are concerned, I have no difficulty in securing from 250 to 300 eggs in 365 days from my extra special specimens of my strain. My "Wonder Strain" was founded from a duck that gave me 320 eggs in 365 days, during her second season and she laid green eggs. This duck was as pure bred a Runner as you could wish to see and originally came from English stock. The strain

from which my "Wonder Duck" came has been in New Zealand for a great many years. We breed from the English Standard for our show birds. I could do so from my laying strain, but I would have to neglect the egg production and that I am not prepared to do. I mated my 320 "Wonder Duck" to two strains of English Standard Runner Drakes. Both these drakes had show blood in them and both produced good stock from my "Wonder Duck." I have noticed several times in your American papers, that a lot of your formal breeders do not keep the laying qualities of an exceptional layer, running down through several generations. At one time, I was doubtful myself, still I kept at it and have proven to my entire satisfaction, that it is possible and so have my numerous customers in New Zealand and Australia. I am now working on the fifth generation on my "Wonder Strain" of Runners and the same with my "Ideal Strain" of Buff Orpington ducks and find I have layers in the fourth and fifth generations that will rival the earlier generations.

As I stated before, I bred from two drakes, mated to my "Wonder Duck" and will give you some records of different lines from her, and what colored eggs they lay. It was chiefly the article written by J. W. Beeson on the color of Runner eggs that made me take up my pen to try to prove to your many readers and duck breeders that the true Runner lays both a green or tinted egg and a white egg and it is very foolish for some duck breeders to say that they are not pure bred because they lay tinted eggs. I have been greatly surprised at the wonderful claims they make. In New Zealand and Australia we have bred the true Runners; more extensively for egg production than either America or England. We have held numerous duck laying competitions and know what the ducks can do under proper conditions and improper conditions. You rarely see a Runner duck breeder out here advertising a white egg strain of Runners. I have no doubt it would be an advantage to have all white eggs, especially when it is hard sometimes

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to distinguish a Runner egg (white) from a hen's egg. I can quite understand why Americans want a white egg if the demand is for white eggs. Out here we get the same price for either green or white eggs.

I am very doubtful if it is possible to keep a strain that will always lay white eggs. I am watching very closely the results from all of my matings from generation to generation, therefore I am in position to speak. I am called the Runner Man or Duck Man of New Zealand out here, and have helped many beginners on the right track with the two breeds of laying ducks that I keep. Also I would like to mention that being a laying strain specialist in ducks. I have to watch results from the different matings and generations all the time. Therefore the color of eggs is forced to my notice. I have worked several strains in with my "Wonder Strain" during the last six years. I have one strain that I kept separate from my own and for two generations they laid white eggs and the third generation some laid white and some green. My 320 duck, as stated above, laid green eggs. A son of hers, mated to a duck that laid white eggs, produced progeny that laid white eggs. The same drake mated to another lot of the same white egg ducks, produced progeny that laid green eggs. One line for five generations, including my "Wonder Duck," laid as follows: My "Wonder Duck" laid 320 eggs in 365 days in her second year. Green eggs.

My "Wonder Duck's" daughter laid 315 eggs in her third year, in 365 days, and has laid 900 eggs to date and is just four years old. She lays green eggs.

My "Wonder Duck's" granddaughter laid 259 eggs in her second year, in 365 days. This duck would have laid 250 or more, only she met with an accident. She is laying splendidly now in her third year. She lays green eggs.

My "Wonder Ducks" great granddaughter laid 278 eggs in her first year, including two complete molts. She lays white eggs.

My "Wonder Ducks" great, great granddaughter lays a white egg and so far has laid 80 eggs and missed only a few days her first laying year.

You will notice three generations in this line lay green eggs and the last two white eggs. Another line from my "Wonder Duck" lays as follows:

- First generation, green eggs.
- Second generation, green eggs.
- Third generation, white eggs
- Fourth generation, white eggs.

Fifth generation, white eggs.
 Another line:

First generation, green eggs.
 Second generation, pen of 6 ducks, 3 laid white and 3 green.
 Third generation, 6 ducks, 3 laid white and three green.

Third generation, pen of 6 ducks, all laid white eggs, and ducks bred from this white egg pen laid green and white eggs.

The same results occurred from three different matings or I should state from three different drakes mated to this white egg pen.

I could mention other matings but it would take up too much space. Perhaps I could write further to you on this very interesting subject. I do not like to see the breed spoiled because of the craze of getting white eggs. You would have to reject your best layers and best specimens of the breed and then not secure the object. I am very doubtful whether it is possible to keep a pure white egg strain. I have brought another strain in during the last two years and have mated her to a son of my 320 duck that lays green eggs. A sister of this duck lays green eggs. The best duck that I am mating to this drake lays a white egg, yet the result was a white egg from grand daughter of these two birds on three occasions and from different matings. I am really anxious to know if it is possible to keep a white egg strain and I suppose during the next year or so, I will have formed a pretty good idea whether it is possible. It makes no difference out here whether the eggs are white or green; the flavor is the same.

The Buff Orpington duck strain that I have always lays a white or very light tinted egg. You would call it a white egg. I have often wondered why the Buff Orpington ducks are not more popular as they should suit the American market. They will forage the same as Runners and lay very heavily when eggs are at top prices. They are excellent table ducks and mature quickly. I have had them lay over 250 in their second season. Two of my strain of Buffs have laid over 120 each without missing a day. I should be pleased to write you on the many good points of either duck if what I have to say will help your many readers. A good laying strain of Runners or Buffs is well worth having, especially on the farm, but you must have a laying strain. I trust that this little talk from a breeder in a distant land will be acceptable to both you and your readers. Please remind your readers that New Zealand

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S. H. Scott,
Auckland, New Zealand.

(A later letter, under date of April 9th, 1913.)

My ideal strain of Buff Orpington ducks have just completed a New Zealand record for the breed in public test and all other breeds of ducks except the Indian Runners. They beat the province best record by 120 eggs and are being kept for a second year's test. I am sure the Buff Orpington ducks would suit your country. They are good table birds, lay white shell eggs, (at least my strain does. I have never yet bred a Buff duck that laid tinted eggs), and will forage like Runners. They eat no more and are really lovely to look at when in full feather. I am sure that when American duck men know the breed better there will be quite a boom in your county. In this breed, I consider it quite possible to breed show and utility combined. The drakes at five months are a picture to see. Of course for egg production a laying strain must be secured as I have seen Buffs that lay only a few eggs a year and that sort don't pay.

You will note that I stated that I had a line for four generations from my wonder 320 duck, that laid white eggs and I have been waiting to see if the white eggs continued for the next generation. Since I wrote you last out of a pen of six young ducks, representing the fifth generation, four of them have started to lay and all lay white eggs. It may be possible to keep to the white eggs. I am ready to be convinced, but I must carry out the tests myself and know the pedigree of both parents in each generation. Of course, it matters not whether a duck egg is green or white out here. We get the same prices and the flavor is just the same. It is a pity you have to favor a white egg from Runners, as it means duck men in your country will have to reject some of the finest and purest blooded birds that are bred. You will realize in my writing thus that I am anxious for the welfare of the breed. I am very jealous of the Runner duck as I consider I have as good a sample of Runners as any one and pure blooded and I cannot produce all white egg layers. I am sending you a slip from the largest evening paper in the Dominion of

New Zealand. You will see it is a part report of our New Zealand Conference, (second day.) You will no doubt notice that I have been elected one of the two vice presidents for the years 1913-1914. The other vice president is also a breeder.

I was very much interested in your March issue, especially in Dr. N. W. Sanborn's article on breeding for egg production. I agree with almost all he says except where he states that the trap-nest is the only way to test birds so that a man can build up a flock of layers. There are other ways and I know men in New Zealand that have splendid flocks of good layers and they never use a trap-nest. I know myself of different and reliable ways.

S. H. Scott,
Auckland, New Zealand.

GREEN FEED.

The matter of green feed for our chickens becomes a serious consideration even in summer and especially on a yarded plant. Of course on the city lot there is room where considerable green stuff could be grown if it could get a start and not be scratched out by the fowls.

In my limited quarters I solved it by digging up several square feet of ground and sowing to alfalfa then making a frame work one foot high of boards around the ground planted and stretching chicken wire over the frame, closing the chickens out but allowing them on top of the wire. A few small stakes through the center keeps the wire from sagging with the weight of the chickens. As the alfalfa grows up through the wire you will find it constantly covered with chickens eating off the green leaves.

This plan furnishes an amazing amount of green feed, as the alfalfa grows very rapidly, especially if irrigated often enough. I find that the chickens mature much quicker and lay more eggs from this simple plan, as they get considerable exercise pulling at the leaves below them as they stand on the wire. If alfalfa is not desired clover would answer equally as well.

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MY INITIATION INTO THE POULTRY BUSINESS.

With a thorough disgust for all kinds of chickens, except newly hatched, downy little chicks. I went to visit my mother in December, 1911. My mother had been in the poultry business about a year then, and was thoroughly saturated with the chicken fever, so much so that she spent her entire evenings, every spare minute she had in the daytime, and all her Sundays in reading poultry literature. I felt that my visit was spoiled, for mother could talk nothing but chicken, chicken, chicken, until my disgust deepened into contempt. I would have hurried home much sooner but the Kansas snows blocked the railways and travel was impossible so I had to abide in patience all the chicken gossip a dozen people could absorb and hear the yelps of a sick chick in a brood which hatched from an incubator in a corner of father's den. Heavens! Chickens in the house! And mother threatening to put another incubator and brooder in the big front room, the parlor, which was seldom used. Oh, how I wished I could go home quickly.

But the welping chick made me take notice of it and I decided to doctor it to make it keep still. That was my initiation into the poultry business. I gave it medicine, and cuddled and petted the little wretch until I began to get attached to it. I admired the others in the box by the window because they were always quiet, busy and happy, especially when they had plenty to eat. Mother made me feed them and my liking for the downy little sprites began to increase, much to my mother's delight. She "egged" me on, till by the time I was ready to go home she had me well primed as to how to perform with my own back yard brood of Rhode Island Reds to make them profitable.

My good neighbor welcomed me home to take charge of those 17 hens and a rooster which had repaid him for caring for them by only 19 eggs in five weeks. I did as mother directed. I put all apple and potato parings, celery scraps, chicken bones, etc., through my food chopper. This I added to a warm bran mash with a little salt and a dash of cayenne pepper and any other soft table scraps I happened to have. This mash I gave the chickens about ten o'clock. They had previously been given a small amount of green to keep them busy in the earlier part of the morning. I kept a clean drinking vessel before them containing lukewarm water colored with permanganate of potash. After the birds had eaten most of their mash I gave them a generous handful of sprouted oats which I sprouted in a box by a sunny south window in the kitchen. At five o'clock in the afternoon I fed warm fat for the evening meal. In three weeks I began to reap fruit, and ere long my seventeen hens laid sixteen eggs a day. These I readily sold to neighbors at market price and above.

My father, at home only on Saturdays and Sundays, was also much interested

in the chickens and kept the hen house in a clean condition and fitted up brooders with glass, etc., for little chicks. He culled out the best hens for breeders, put them in a separate compartment, and from their eggs we hatched nine beautiful little downy chicks on March 5, 1912. The day was bitter cold. Wind blew a gale from the northwest, and gas pressure was so low I could scarcely keep myself warm in the house. There was only one way to save my chicks. I had to bring hen and chicks into the house. Placed them in a nice straw lined box on top of the sewing machine near a sunny window in the kitchen. How my mother laughed when she heard of my having chickens in the house. Five days later the weather moderated and I put my flock into a brooder outdoors. The good old hen had to go in too for I was too "chicken hearted" to separate her from her babies. Next morning only the top of the brooder was visible above a big snow drift. Thanks to the hen the little ones never knew what the snow was. They ate air bran and hard boiled egg and scratched for chick food on the straw covered floor with all the vigor a healthy chick ever had. In short, those chicks grew as fast as weeds, and I raised the whole flock, never a one sick.

Following the same method I raised all my chicks last year and out of the seventy-nine hatched by hens seventy-five grew to at least the frying stage. Two of the other four died the first day hatched, from lack of life enough to live. The hens killed the other two.

The egg supply was very good. I sold eight sittings, two near home and six in a neighboring state; kept a sick neighbor supplied with fresh eggs, and used all I needed at home. The culls from the young flock furnished us the greater part of our table meat during the summer, and we sold a few besides. A butcher gave us a good price on our oldest hens and we kept the youngest and best to use with pullets for our winter layers and breeders.

As yet we are only "small fry" in the poultry business, yet feel we had sufficient success the first year to improve our stock and quarters for another year or two at least.

Kansas.

Mrs. J. A. Hurst.

REMEDIES FOR LIMBERNECK AND CROP-BOUND FEEDING FOR WINTER EGGS.

I want to tell of my experience with incubator chickens. I bought an incubator and brooder and in January, 1912, I set 148 eggs. I worked day and night with them and hatched 65 chicks, the first time I ever used a machine. Then I reset and thought I would experiment so after filling the tray as full as I could with small end of egg down I placed on top of the eggs as many as I could place there and get in the machine. I then had 174 eggs in machine and hatched 110 strong healthy chicks. After testing out I had a tray full of good live eggs.

I am going to try the same again this year.

In regard to limberneck I had that in my flock one year and lost 150 young ones in one week. It is caused from fowls eating maggots from some dead body. I began putting one teaspoonful of carbolic acid in one quart of drinking water and watching to be sure there were no dead fowls around and burning all dead ones. First I buried them and the maggots would come to the top of ground and fowls would scratch the dead ones out to get them. After that I would put the dead body in the ground, put wood ashes over it and then cover with earth. That did very well but I find the best plan is to burn them, then you are sure that nothing can get to them. For winter eggs I use two quarts wheat bran, one quart corn chop, and two tablespoonfuls of bone meal to one dozen hens. In the morning I give corn or wheat in litter to make them scratch and warm them up. Then I give the mash as above stated at noon, mixed with warm dish water and every two or three days add two tablespoonfuls of poultry powder. I give them corn at night or corn chop. I keep plenty of fresh water for them all the time and give cabbage, potato parings and any green stuff I happen to have.

I always have eggs when my neighbors have none. It takes work but it is certainly a pleasure to me. Then again you can't expect to get something if you don't work for it.

I'm going to try the Anconas this year and a pen of the Blue Andalusians. There is no better all around fowl than the Buff Langshan. They are good layers, good sitters and good mothers, stand confinement well as they are large and too heavy to fly over a very high enclosure.

For chicks that have become crop-bound I give one teaspoonful of castor oil and work it through the crop by squeezing it one way and another. I never have to give the second dose, but if it should need it give after 30 hours another teaspoonful and keep plenty of grit or oyster shell where fowls can get them. I never feed young chicks soft feed as it gives them bowel trouble.

Mrs. E. L. Brace.

Oklahoma.

TURKEYS.

Turkey raising in America offers practically an open field to women wishing to earn money at home, though to make much of a success of it one must be located on a farm.

I know many think them very difficult to raise but I have never found them so more than any other kind of poultry and I have been raising them for twelve years. The idea that they require supernatural care is absurd.

The beginner may start with a trio, one tom and two hens, and it is best to get thoroughbreds of the Bronze variety. Get the male bird from a place far removed from the home of females so there is no danger of their being related as there is nothing so

detrimental to the health of the young as inbreeding. On the constitutional vigor of the parents depends the health of the future stock.

The hen begins laying by the first of April, laying twelve to eighteen eggs before becoming broody, then if she is "broken up," that is, confined in a coop for a few days, she will lay again in about two weeks and the first eggs can be placed under a Plymouth Rock hen for hatching.

When the hens are about to commence laying they should be closely watched or they will wander away and hide their nests. However, they may be kept in an enclosure of two or three acres, where their nests are provided and where they may sit when broody.

When the little ones are ready to leave the nest, move the mother and her young into a coop previously provided, being careful to have it large enough to allow perfect freedom of movement.

Place corn and water within reach of the hen but do not feed the young till they are two days old, then they do well on bread soaked in milk squeezed dry, hard boiled eggs, chopped green onion and lettuce, prepared chick feed and grit.

Powdered charcoal is also very good placed in the drinking water.

Be very careful not to over-feed as this has a tendency to produce bowel trouble and more young turkeys are killed every year from this one trouble than all the other causes combined.

I keep them confined only for two or three weeks, when I allow them to roam the fields at will foraging for their food.

They must be driven home at night for a few times, but they are easily taught to come home regularly and they may be seen on any summer evening wending their way toward home and a little later the trees surrounding the barn and other buildings will be loaded with them.

Thus until the weather begins to turn cold and the insect food becomes scarce their cost is scarcely anything but with the first frost they must be fed some grain. Wheat and corn are best, gradually increasing the supply, until they are having all they will eat.

The question of superiority on profit is unquestionable when one realizes that for most of their food they forage until a few weeks before they are marketed, so I would say to all who wish to add to their income in a pleasant and profitable way—keep turkeys. Ohio. Reader.

Classified Ads

Rates for ads classified under proper headings as follows:

1 month	4c	per word
2 months	8c	per word
3 months	9c	per word
4 months	10c	per word

ANCONAS.

SINGLE COMB ANCONAS. Day old chicks and hatching eggs from birds mated for strong, sturdy stock. Prolific layers of large white eggs. Write Norman S. Campbell, M. D., Germfask, Mich. 4-4

ANCONA EGGS, winners St. Louis, Terre Haute, Peoria and Olney, Ill. \$2.00 per 15, other matings, \$1.50 per 15. P. Gregoire, Newton, Illinois. 4-3

FOR SALE. Thoroughbred Ancona pullets and cock. Rob't. Bevard, R. D. 1, Weldon, Iowa. 6-1

SINGLE COMB ANCONA EGGS. Prices reasonable. Write Golden Rule Farm, Fillmore, Illinois. 3-4

RIVER VIEW S. C. Ancona Farm, Bred to lay and win. Eggs, \$1.00, \$2.00, 15. Ole J. Lerfeld, Zumbrota, Minn. 3-4

OUR ANCONAS are bred to lay and win the blue wherever exhibited. Large dark birds of superior quality. Eggs from grand matings. Circular. Mrs. A. Guetter, Route 2, Media, Pa. 3-4

PORTERS' POPULAR BLUEBELL Anconas. Type, color, size. Illustrated catalogue. S. P. Porter, Mallet Creek, Ohio.

BABY CHICKS AND DUCKLINGS.

S. C. WHITE LEGHORN BABY CHICKS from our heavy laying range raised breeders, 8 to 12c each. Eggs, \$5.00 per 100. Safe delivery guaranteed. H. Roby, Box 163-A, Fairfield, Illinois. 2-5

WE PREPAY EXPRESSAGE. Pullets three months old, \$50 per 100. Leading varieties. Order now. Big demand. We have Madison Square Ribbons Baby chicks cheap. Cedar Hill Farm, Saugerties, New York. 6-1

BABY CHICKS AND EGGS. All varieties. Specialty Leghorns. Egg record, 260. Pekin ducklings and eggs. Safe arrival and satisfaction guaranteed. Circular. Stock for sale. Canisteo Poultry Yards, Canisteo, N. Y. 9-12

BABY CHICKS, from pure bred stock. Barred Plymouth Rocks and Brown Leghorns, \$10 per hundred. Great bargain. Satisfaction guaranteed. Mrs. E. Cristman, Sunflower Hatchery, Scottsville, Kan. 4-4

BABY CHICKS, 10c to 15c each; eggs, \$5 to \$6 per 100; Rhode Island Reds, both combs; White and Columbian Wyandottes, White and Buff Orpingtons, Barred Rocks, White Leghorns, Toulouse Geese; Bourbon Red Turkeys; Pekin and Indian Runner ducks; catalogue free. G. A. Mitchell, Freeport, Ill. 4-4

BABY DUCKS. Indian Runners, 20c. White eggs, English Walton strain. Eggs for hatching, \$1.50 per 10. Mrs. P. O. Larson, 1067 E North St., Galesburg, Ill.

BABY CHICKS from pure bred White Rocks, R. C. R. I. Reds. Price from 8 to 11c each. Catalog free. The 20th Century Hatchery, Chatfield, Ohio. 3-4

BABY CHICKS. Standard bred S. C. Rhode Island Reds, Buff Orpingtons, White Wyandottes, Barred Rocks, \$2.00 dozen. 25 chicks, \$3.75; 50 chicks, \$7.50; 100 chicks, \$15.00. Guaranteed safe arrival 2,000 miles. 15 eggs, \$1.00; 60 eggs, \$2.00; 100 eggs, \$5.00. White Orpington and Leghorns. Martin Michelson, 232 5th St., Aurora, Ill.

BABY CHICKS \$12 per 100 Eggs \$6. R. C. Reds, S. C. White Leghorns, Kellerstrass White Orpington chicks, 20c each. Booklet and testimonials free. Myron J. Morse, East Berlin, Conn. 3-4

BABY CHICKS 8 cents and up. Several varieties. Ducklings, 15c to 25c. Eggs \$1.00 to \$5.00 per 15. Satisfaction guaranteed, circulars free. Mapleleaf Poultry Farm, Saginaw, W. S., Mich. 3-4

ANCONA BABY CHICKS AND EGGS. We pay express. Jersey Leghorn Farm, 4647 South Salina St., Syracuse, N. Y. 3-4

BABY CHICKS, Single Comb Baby Leghorns, White Buff and Brown, Black Minorcas. Hatching eggs. Catalogue. Failing Poultry Farm, La Fargeville, N. Y. 3-4

EGGS AND BABY CHICKS from my Golden Nugget strain of S. C. Buff Leghorns. High scoring stock with egg records to 266. Write your wants. John Cudeans, Oconto Falls, Wis. 3-4

BABY CHICKS AND HATCHING EGGS from strong, unrelated fowls S. C. W. Orpingtons, S. C. W. Leghorns. Both combs Reds. Prices reasonable. My formula how to produce eggs, 25 cents. Mrs. S. S. Harned, Box 272, Lyon, Ill. 3-4

BANTAMS.

"MOHAWK" STRAIN Superior Black Reds, Silver Duckwings, Red Pyle Game, Partridge and Buff Cochins. Shipped on approval. Eggs. Mohawk Bantam Farm, Box J, Schenectady, N. Y. 4-4

BANTAMS. Classy stock. Sebright, Japanese, Cochins. Games. Polish. Barred Rocks, Rose Combs. Prompt shipments. Send 2c stamp for circular. A. A. Fenn, Box 77, Delavan, Wis., U. S. A. 3-4

RARE BARGAINS. Golden and Silver Sebright, Buff, Black, White and Pouter Cochins; Rose Comb Black, Red Pyle and Black Red Game Bantams. 1,000 Proper & Son, Schoharie, N. Y. 3-4

BRAHMAS.

FLORENTINO'S HIGH QUALITY Brahmans. Pullet "Dutch Lil" has set 26 pullets this year and has not lost a chick place. My birds are undefeated and win over them all. Mating list free. Write Fred Florentino, Elkins, W. Va. 3-4

HIGH GRADE LIGHT BRAHMAS. Black and eggs for sale in season. Eggs, \$3 per sitting. Established since 1887. Send for circular. Nickerson Poultry Yards, W. M. Ward, Prop., Nickerson, Kansas. 3-4

BUCKEYES.

BUCKEYES THAT WIN wherever shown. B. L. McDill, 423 West 43rd, Indianapolis, Ind. 3-4

BUTTERCUPS.

SICILIAN BUTTERCUPS and other Farms Buff Orpingtons. Best blood in America and greatest winners at Madison Square. Stock and eggs. Circular. T. H. Weller, Box 13, E. Fultonham, Ohio. 2-3

BUTTERCUPS. Hatching eggs, \$2.50 per 13. Dr. E. W. Landes, Stillwater, Minn. 3-4

SICILIAN BUTTERCUPS. None better. Eggs for hatching, \$2.50 to \$5.00 per 15. Circular free. D. S. Thornburg, Cherryville, N. C. 3-4

SICILIAN BUTTERCUPS. world's champion layers. Lay large, white eggs. Very handsome and the tastiest of all breeds of poultry. Larger and eat only half as much as Leghorns. Thoroughbred stock for sale cheap. Hatching eggs, \$2.00 per 15. Harry Woodworth, Box 505, Cheboygan, Mich. 4-4

BUTTERCUPS. 2nd at Jackson Show, 1913. Stock for sale. Eggs half price during summer months. Mrs. May Woodson, 1012 Lansing Ave., Jackson Mich. 3-4

CAMPINES.

SILVER CAMPINE eggs at less than 10c price after June tenth. Stock for sale. Catalog free. E. B. Benson, Batimer, Iowa. 4-4

IMPROVED SILVER CAMPINES. Jacobus Strain. Pure white eggs from extra fine stock, averaging 200 eggs. \$2.50 for 15. Order at once for early delivery. Mending Hennery, Box 1, Ridgefield, N. J. 3-4

CAVIES.

500 GUINEA PIGS in pairs, or extra females as wanted. Stamp for circular. Geo. R. Palmator, Troy, N. Y. 4-4

CORNISH.

CORNISH INDIANS. Exhibition stock. Fine Laced birds. Sacrifice sale. Pullet \$2.50 and \$5.00 each. Eggs, \$1.50 per 15, delivered by Parcel Post anywhere in United States. Frederick Shank, Timberline, Va. 3-4

CORNISH EGGS from prize winners. Stock for sale. Farm range, large and vigorous. D. Barnett, Waynetown, Ind. 3-4

DUCKS.

MAMMOTH PEKIN DUCKS. Big breeders from stock that has won at state and other big shows. 16 years' experience breeding and showing Pekins. White eggs always, \$5.00 per 100. Oscar Wells, Farina, Ill. 10-12

MAMMOTH PEKIN DUCKS. Extra large show stock. Silver cup and state show winners. No better stock at any price. Customers always pleased. Eggs, \$2.00 per sitting. Order early. Oscar Wells, Farina, Ill. 11

WHITE RUNNERS. 12 eggs, \$1.00. Catalog. Will Albers, Lombard, Ill. 5-4

A FEW TRIOS. White Indian Runners reduced to \$12.00. White eggs from them, \$3.00. Bob Seeds & Daughter, Birmingham, Pa. 5-2

PENCILED RUNNER DUCKS or eggs for sale. Rob't. Bevard, Weldon, Iowa. 6-1

FANCY WHITE RUNNERS. Spencer strain. Eggs, \$2.50, 12. Myrtle Stormont, Calera, Ill. 4-3

MAMMOTH PEKIN DUCKS, white eggs, 75c per sitting. Mr. J. C. Loewer, Worden, Ill. 4-1

ROUEN DUCK EGGS from prize winners, reasonable. J. R. Shimmis, R. 5, Manmouth, Ill. 4-3

I. R. DUCK EGGS for sale. Don't pay fancy prices for eggs, when you can get prize winners for \$100 per 13; \$2.00 per 30. Photo of duck if desired. Herman T. Miller, R. 5, Box 46, Decatur, Ind. 4-4

ENGLISH PENCILED, also White Runners. White egg strains. Eggs, ducklings, etc. Mrs. George W. Church, K-1, Towaville, Pa. 4-4

ENGLISH RUNNERS. Sure white eggs. Thoroughbred White Leghorns with \$4 (Youngs) cockerel. Summer bargains. Mrs. Galvia Wilcox, Spencer, N. Y. 5-4

WHITE INDIAN RUNNER DUCKS. Great layers of pure white eggs, \$3.00 per sitting. Wm. A. Peterson, Box K, Galesburg, Ill. 4-3

FAWN AND WHITE INDIAN Runners. blue ribbon winners, beautiful white eggs. Single Comb Black Orpington, Single Comb Mottled Ancona eggs, \$1 per 15. Ruby Murwin, Garrettsville, Ohio. 4-4

BARRED ROCKS. Fawn and White Runner ducks. Rocks, Pen 1, \$2, 15; Pen 2, \$1, 15; \$5.00, 100. Cockerel matings. Runners, white egg strain, \$2, 15. Mrs. E. W. Colman, Sigourney, Iowa. 4-4

WHITE INDIAN RUNNERS. Goodacker strain, two dollars for fifteen. Imperial Pekins, one fifty for fifteen. Have one hundred choice breeders. No better. Shipment made day laid. Bolser Farm, Le Mars, Iowa. 4-4

WHITE RUNNER DUCKS of the superb laying and winning quality. We will send on request best booklet on them. Eggs, \$1.00 per 12; \$2.00 per 100. Baby ducks, safe arrival, 50c each; \$4.00 per 100. See large ad elsewhere. S. H. Long, Elwood, Ill. 4-4

BABY DUCKS. Pure White and Penciled Indian Runners, 35 and 18 cents. Eggs for hatching. S. C. W. Leghorns. Mrs. H. W. Knemeyer, Ft Madison, R. 2, Iowa. 3-4

WHITE INDIAN RUNNER DUCKS. Prize winners. Pure white eggs, \$3 per dozen. No stock. T. F. Dice, Prescott, Wash. Member National White Indian Runner Duck Club. 3-4

INDIAN RUNNER DUCKS. Fawn and White. White egg strain. Eggs, 15, \$1.25; \$6, \$2.00. Loren Truex, Wakarusa, Indiana. 9-12

INDIAN RUNNER DUCKS. Fawn and White; White Leghorn and Barred Plymouth Rock eggs, 75c for 13; \$5.00 per 100. Mixed orders if desired. Baby chicks, ducklings. Mallison's Ideal Poultry Yards, Ocean View, Delaware. 3-4

FAWN AND WHITE INDIAN RUNNER DUCK EGGS. (Cook's White Egg Strain). Heavy layers. Drake to six ducks assuring fertility. Selected eggs, 13, \$2.00; 26, \$3.50. J. Thompson, 224 North 4th St., Mount Vernon, Illinois. 3-4

INDIAN RUNNER DUCKS. Fawn and White and English Penciled. Fine flock, bred to lay. Eggs from my six pens. Write for my circular. W. J. Meglitsch, Box 41, Harvard, Ill. 3-4

IMPERIAL PEKIN, ROUEN, Indian Runner, White and Colored Muscovy, Buff Orpington, Cayuga, and Wild Mallard ducks. Stock and eggs in season. Order early. Stanley Produce Co., Stanley, Iowa. 3-4

INDIAN RUNNER DUCK eggs. White and Fawn, (Harshbarger Strain.) Heavy white egg strain. Also Buff Orpingtons. (Cook Strain.) Hen eggs from prize winners. Write wants. H. H. Weller, Tioga, Ill. 3-4

FIRST PRIZE CHAMPION BUFF ORPINGTON ducks Illinois State Show. \$2.00 per 12. White Runners. Stock scored 95 1/2 to 97. Eggs, 12 for \$4.00. Catalogue free. Fred Oertel, Brighton, Ill., Box O. 3-4

WHITE INDIAN RUNNERS, with upright ray carriage. Prize winners. Great layers large white eggs, 13, \$3.00; 100, \$18.00. Circular on feeding and raising ducklings free. B. F. Morgan, Independence, Ind. 3-4

FISHEL'S STRAIN WHITE Indian Runner ducks. Eggs, 12 for two dollars. Southern raised, lay earlier, are harder; Fawn and White one dollar for fifteen. National Duck Farm, Letohatchee, Ala. 3-4

MAMMOTH PEKINS, (Rankin), very large. Eggs \$1.25 per 12; 100, \$6. Buff Orpington ducks, (Dunrobin). Eggs, \$2 per 12; 50, \$6. C. McFerren, Belleville, Ohio. 3-4

ENGLISH PENCILED INDIAN RUNNERS, (Walton Strain.) Great layers pure white eggs. Score 92 1/2-94. (Klein.) Booking a limited number sitting, 13 eggs, \$3.00; 26 eggs, \$5.00. P. W. Whitlock, Mt. Vernon, Ill. 3-4

GOLDEN, FAWN, WHITE Indian Runner ducks, (Harshbarger Strain). Eggs Pen 1, \$2.00, 15; utility, \$1.50, 15. S. C. Rhode Island Red eggs, \$1.00, 15. Mrs. J. W. Long, Newton Falls, Ohio. 3-4

FAWN, WHITE AND PENCILED Runner Ducks. Bred to lay. Winners at Pittsburg, Columbus and Youngstown. Eggs, \$1.50 to \$5 per sitting. R. F. Lower, Columbiana, Ohio, R. D. No. 2. 3-4

INDIAN RUNNER DUCKS, Harshbarger, Newell and Wingert strains. Prize winners. White egg layers, \$1.00, \$1.50, \$2.00 per 15. C. J. Flemming, Box 173-K, W. Bridgewater, Pa. 3-4

WHITE INDIAN RUNNERS, Spencer strain. The best money can buy. No brassiness, absolutely white. Standard size and good carriage. Eggs, \$2.00 per 12; \$10.00 per 50. Abbie Stover, Fredonia, Kan. 3-4

WHITE RUNNERS. Racy bodies, fine head points, \$3 per sitting. Mammoth Pekins from range eggs, \$5 per hundred. Selected pen ducks from 8 to 1 pounds, \$2 per 11. R. C. Brown Leghorns prize winners, eggs, \$2 per 15. Cockerels for sale. Carl Farthing, Salem, Ill. 1-12

GUINEAS.

PEARL GUINEAS. Eggs, \$1.00 per 15; \$2.00 per 36. J. L. Hoak, R. 30, Spencerville, Ohio. 4-3

PEARL GUINEAS. Stock and eggs for sale. Stamp for circular. George D. Warner, Route 3, M-daryville, Ind. 44-3

HAMBURGS.

HAMBURGS, Silver and Spangled. Always a winner cock in first pen, never beaten five shows. Barnett Bros., Waynetown, Ind. 3-4

HOUDANS.

HOUDANS, McAvoy Strain. Eggs, \$1.25; stock reasonable. H. A. Aune, Baldwin, Wis. 2-6

LANGSHANS.

WHITE LANGSHAN EGGS from great laying strain, reasonable. J. R. Shimmis, R. 5, Monmouth, Ill. 4-3

WHITE LANGSHANS, Farmer's friends. Handsome as Orpingtons and noted for health and winter laying. Stock for sale. Eggs, \$1 per 15; \$5 per 100. R. H. Moore, Nelloe, Ohio. 3-4

BLACK LANGSHANS. Eggs for hatching \$1.50 sitting; \$5.00 per 100. Slow and utility. A. W. Ash, Lafayette, Ind., R. No. 8. 3-4

EXTRA BIG BONED, greenish glossy, black eyed Black Langshans. Scored 92 to 96. Cockerels, \$5; eggs, 15c. H. Osterfoss, Hedrick, Iowa. 3-4

SHENK'S LANGSHANS win. weight, lay, and pay. Bargains in cockerels and pullets. Laid in the winter and laying now. 15 eggs, \$1.50; 30, \$2.75. Free catalogue. Clarence Sherk, Luray, Va. 3-4

LEGHORNS.

SINGLE COMB WHITE AND BROWN Leghorns. Choice stock, good as the best. Eggs \$1.50 for 15; \$2.50 for 30. Good hatch guaranteed. Ella Glina, Cincinnati, Iowa. 3-4

MEADOWBROOK S. C. White Leghorns. Eggs and baby chicks for sale at farmer's prices. Farm raised. Quality guaranteed. Frank E. Roberts, Mt. Erie, Ill., R. 1. 3-4

ROSE COMB BUFF LEGHORNS. "Tecktonius Strain." Bred for heavy winter egg production. 30 eggs, \$3. E. B. Stacy, 929 South Cedar St., Lansing, Mich. 3-4

SINGLE COMB BROWN LEGHORNS. Five matings. Range flock. Circular free. Cockerels, \$1 up. Charles Siemers, Peru, Ill. 3-4

EGGS FOR HATCHING from hardy northern grown Single Comb White Leghorns, at farmer's price. Catalogue free. Maple Grove Farm, Smithville, N. Y. 3-4

EGGS THAT WILL HATCH, from pure bred, farm raised, Single Comb Brown Leghorns. Heavy laying strain. \$1.00 per 15; \$2.50 per 15; \$4.00 per 200. Will F. Erbman, Versailles, Indiana. 3-4

S. C. WHITE LEGHORNS. Large, vigorous, free range. Bred especially for winter eggs. Eggs, \$1.50 per 15; \$6.00 per 100. Infertile ones replaced free. Stock for sale. J. F. Ricksecker, R. D. 4, Canal Dover, Ohio. 3-4

BLANCHARD-WYCKOFF Single Comb White Leghorns, 30 eggs \$1.25; 100, \$2.50. Hens, \$1.00 this fall. Catalogue free. William Albers, Lombard, Ill. 9-12

SINGLE COMB BROWN LEGHORN eggs from 150 high scoring hens mated with good cockerels. Heavy laying strain. Eggs, \$1.00 per 15; \$2.00 per 50; \$3.75 per 100. Satisfaction guaranteed. Hawkeye View Farm, Selma, Iowa. 6-1

SINGLE COMB BUFF LEGHORNS for profit and fancy. Eggs and stock for sale. Arthur Worthington, R. 7, Manitowoc, Wis. 6-2

SNAP! Rose and Single Comb White Leghorn eggs half price now. Winners everywhere, scoring to 96. Fine hens, three for \$2, to close. List free. Harry Alton, Chaseburg, Wis. 3-4

SINGLE COMB BROWN LEGHORN eggs for hatching. Columbus and Seymour winners, \$1.00 and \$2.00 per 15. Frank Hustedt, Jeffersonville, Ind. 3-4

NINE CENTS EACH for White Leghorn chicks hatched in Mammoth Candee Incubator from our excellent breeding stock. Safe arrival guaranteed. Eggs five cents. Free circular, Novova Farm, Silver Springs, Md. 3-4

PURE ROSE COMB BROWN LEGHORN eggs. Prices reasonable. Write B. D. Runyon, Golden Rule Farm, Fillmore, Illinois. 3-4

WOODROWS POULTRY FARM, Oskaloosa, Iowa, 1,000 S. C. White Leghorn selected breeders from prize winning stock. Eggs, \$5.00 per 100; \$40.00 per 1,000. Orders filled day received. 3-6

\$3.50 PER HUNDRED eggs from 211 egg Single Comb Brown Leghorn hens. Fertility guaranteed. World's leading layers. Price smasher catalog. K. K. Welday, Seville, Ohio. 1-6

ROSE COMB WHITE LEGHORNS, Cockerels, hens now. Baby chicks and egg orders booked now. Circulars. P. Augustin, 3, Orland, Ill. 3-6

(WYCKOFF-BLANCHARD) Single Comb White Leghorns. Prolific layers of large white eggs. 15, 75c; 50, \$2.25; 100, \$4.00. Fertility guaranteed. Prospect Hill Farm, Glenelg, Illinois. 2-5

SINGLE COMB WHITE LEGHORNS, bred from heavy layers, mated to cockerels scoring 93, bred from Young and Eastling stock. Eggs, \$1.00 per 15; \$1.75 per 30; \$2.50 per 50. Orle Elrod, Indianola, Iowa. 4-3

50,000 Leghorns, all varieties, stock, eggs, day-olds, poultry, collie, hare. Catalogue, stamp. Falling Poultry Farm, La Fargeville, N. Y. 4-4

HIGHLINE POULTRY FARM, Single Comb White Leghorns. Baby chicks, \$10.00 per 100. Eggs for hatching, 15, \$1.00; 100, \$5.00. Safe delivery guaranteed. O. L. Peyton, Pisgah, Iowa. 3-4

S. C. BROWN LEGHORNS. Eggs for hatching, \$1.00, 15. Satisfaction guaranteed. Guy Giles, Route 3, Skowhegan, Maine. 3-4

WYCKOFF-LAKEWOOD S. C. White Leghorns. Farm raised. Baby chicks, twelve dollars per hundred. Hatching eggs, (95 per cent fertility guaranteed) one dollar per fifteen; five dollars per hundred. B. A. Suttles, Blanchester, Ohio. 3-4

S. C. GOLDEN BUFF and Snow White Leghorns. Eggs, \$1.50 to \$3.00 per 15. J. A. Herrman Odell, Neb. 3-4

PEDIGREED S. C. BUFF LEGHORNS. Stock and eggs bred from hens with records between 219-267, mated to 250 record blood. Winners in large shows. Bargains in breeders now. Dr. L. Hesley, Widdicombe Bldg., Grand Rapids, Mich. 3-4

ROSE COMB BROWN LEGHORNS. Stock and eggs from first prize winners at two Missouri, two Illinois state shows; Indianapolis, Centralia, etc., seven silver cups, first cockerel, seventeen times in nineteen shows. Oscar Wells, Farina, Ill. 10-12

ROSE COMB BROWN LEGHORNS exclusively for 16 years. Prize winners wherever exhibited. Eggs, \$3.50, 100. Baby chicks, 100, \$12.00; 50, \$7.00; 25, \$4.00. Mrs. S. J. Bejding, Northboro, Ia. 3-4

ROSE COMB BROWN LEGHORNS, Kulp's 242 egg strain. Bred for size, quality, vigor, egg production. Eggs from high scoring farm range stock. 15, \$1.00; 100, \$4.00. R. H. DeVault, Bloomfield, Iowa. 3-4

SINGLE COMB WHITE LEGHORN eggs for hatching, 75c per 15; \$4.00 per 100. Bred for size and egg production. R. H. Eichhorst, Downers Grove, Ill. 3-4

SINGLE COMB WHITE LEGHORNS. Utility first, last and all the time. Eggs for hatching, \$1.50 per 15; 100, \$7.00; 1,000, \$60.00. Lynden Poultry Yards, H. Oordt, Prop., Lynden, Wash. 3-4

WANTED. Solid Buff Leghorns, hardy, large eggs. Prolific females, vigorous, long-bodied males. Prize winning stock, 25; egg pedigree for sale at reasonable prices. J. C. Benedict, Chevy Chase, Maryland.

ROSE COMB WHITE LEGHORNS AND WHITE WYANDOTTES. Cockerels, eggs and baby chicks. Mrs. Viola Young, Greenwood, Wisconsin. 3-4

SINGLE COMB BUFF LEGHORNS, pen 8 hens and cockerel for \$10.00. Eggs from winning stock, \$2, \$3, and \$5 per sitting. Baby chicks. Mrs. M. E. Gifford, Sherman, New York. 3-4

S. C. BUFF LEGHORNS specialty. Great layers, large, white eggs. Hardy, farm stock. Eggs, \$1.50 per 15; \$2.50 per 30; \$5.00 per 100. Mrs. W. H. Bundy, Sabula, Pennsylvania. 3-4

SINGLE COMB BUFF LEGHORN eggs, 15, \$1.50; 50, \$4.00; 100, \$7.00. Ferndale Poultry Farm, Goodview, Virginia. 4-3

ONLY ONE AND TWO YEAR range-bred Single Comb White Leghorns that lay throughout the past winter are mated this year. Eggs, \$1.00 per 15. Kimbrough Leghorn Farm, Orland, Ill. 4-4

ROSE COMB BROWN LEGHORN eggs for hatching. Heavy laying strain, healthy, vigorous stock. \$1.50 and \$2.00 per sitting; \$8.00 and \$10.00 per hundred. Satisfaction guaranteed. Ward W. Dasey, Frankford, Delaware. 4-4

SINGLE COMB WHITE LEGHORNS. Selected eggs for hatching, \$4.00 per hundred; 75c per 15. Range raised. Chas. Henry, Atlantic, Penna. 4-3

SINGLE COMB WHITE LEGHORNS. Any number eggs, or strong chicks properly hatched from selected second laying birds. Wyckoff and Young strains pure. Eggs, 4 cents; chicks, 8 cents, up. Fertility and safe arrival guaranteed. Booklet free. R. T. Ewing, Atlantic, Pa. 4-4

S. C. WHITE LEGHORNS, headed first prize cockerel Ft. Wayne Show, 1913. Stock and eggs. Send for mating list. Oak Grove poultry Farm, Kimmell, Ind. 3-4

MINORCAS.

ROSE COMB BLACK MINORCAS won all firsts Toledo show last two years. Mating list free. J. S. Bal, Station A, Toledo, Ohio. 4-3

FOR SALE, ROSE COMB BLACK MINORCA EGGS, 15 for one dollar. Good layers, big white eggs. D. H. Sharp, Agent L. N. R. R., Sebree, Kentucky. 3-4

SINGLE COMB BLACK MINORCAS, (Northup) and (Pape) strains. Eggs and stock for sale. Price list free. H. U. Lachelt, Markesan, Wis. 3-4

MINORCAS, S. C. Black Minorcas, baby chicks, hatching eggs, cockerels, Catalogue. Falling Poultry Farm, La Fargeville, N. Y. 3-4

ORPINGTONS.

S. C. WHITE ORPINGTONS won firsts Searcy, Ark., Pine Bluff, Arkansas. Arkansas State Fair, Hot Springs, Ark., in 1912. Eggs, Pen No. 1, \$2.00; No. 2, \$1.00. J. W. Peebles, Searcy, Ark. 1-6

SINGLE COMB WHITE ORPINGTONS, Owen Farm and Kellerstrass stock direct 1 cock, 4 yearling cockerels, 7 hens and 11 pullets, \$1.50 each, if sold at once. Elizabeth H. Marshall, Morven Farm, Markham, Va. 4-4

SINGLE COMB BUFF ORPINGTONS, Cook and Bridgewater stock direct. Pens and free range stock. No scrubs kept and all unhealthy fowls killed. Eggs for hatching, \$1 to \$5. Stock for sale. Price subject of correspondence. Elizabeth H. Marshall, Morven Farm, Markham, Va. 4-4

SINGLE COMB BUFF ORPINGTONS, cockerels for sale. Large, vigorous. Eggs, baby chicks. Stock free range. Prices on application. Breeder Buffs exclusively. Rocky Ford Poultry Yards, R. 1, Gahanna, Ohio. 3-4

CRYSTAL WHITE ORPINGTONS. Eggs from exceptionally good pens. Guarantee to please. W. E. Crane, Tilden, Neb. 3-4

KELLERSTRASS WHITE ORPINGTONS exclusively. Eggs from Pen No. 1, \$2.00 per 15; No. 2, \$1.50; No. 3, \$1.25. Safe shipment and fertility guaranteed. A. W. Fisher, De Soto, Iowa. 3-4

SINGLE COMB BUFF ORPINGTON eggs for hatching. Strong, healthy birds and exceptionally good winter layers. \$1.00 for fifteen; \$5.00 per hundred. Parcel Post prices on application. Wm. Melcher, Ashton, Iowa. 4-5

A PRIZE WINNING and egg laying strain of Single Comb Buff Orpingtons imported stock. Eggs, \$2.00 to \$5.00 per sitting. Mating list free. L. B. Crew, Creighton, Neb. 3-4

KELLERSTRASS WHITE ORPINGTONS. Eggs half price, \$1.50 per 15, from stock bred and mated for show or utility. Satisfactory hatch guaranteed. J. G. Gibson, Media, Ill. 4-4

SINGLE COMB WHITE, BUFF, BLACK ORPINGTONS. Winners first prize championships Illinois State Show, 1912-13. Eggs, 15, \$3.00; 30, \$5.00. Mating list free. Paul Scheffel & Sons, Box B, Brighton, Ill. 3-4

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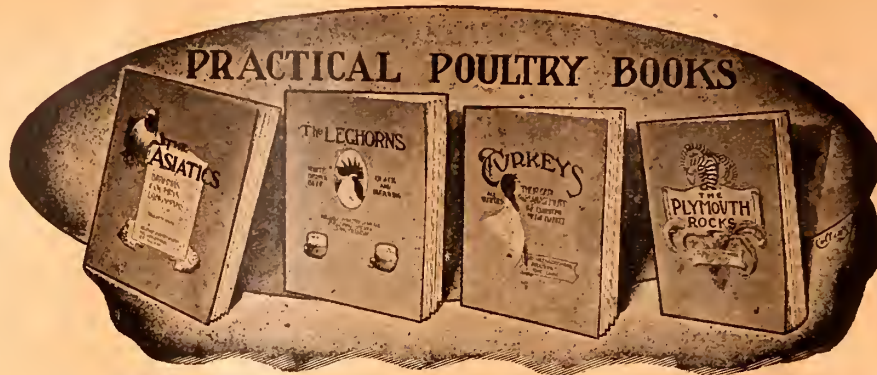
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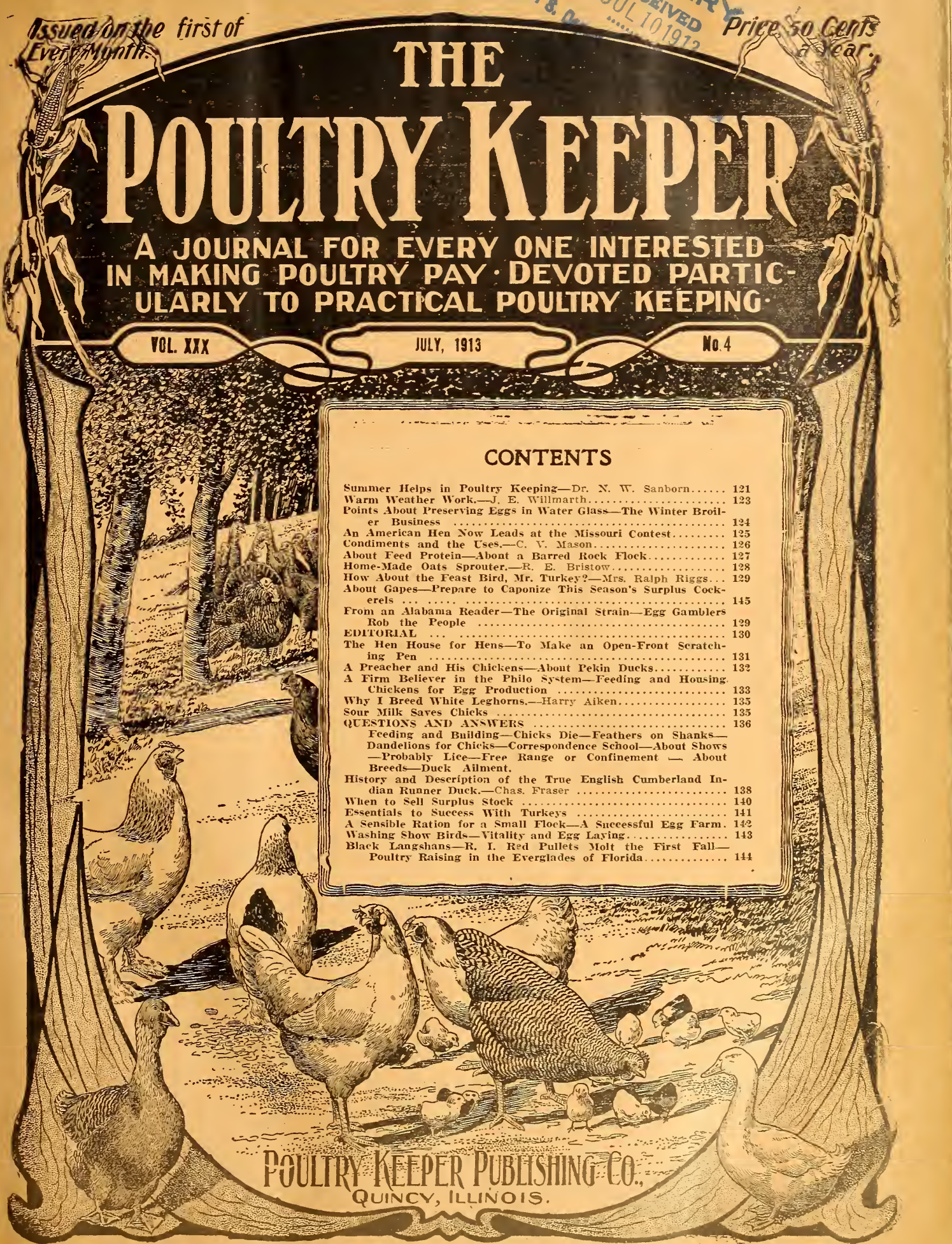
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JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY

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SUMMER HELPS IN POULTRY KEEPING.

Dr. N. W. Sanborn, Holden, Mass.

THE summer season is favorable to the poultry owner. There are less troubles to overcome than in winter. There is much to be thankful for, and one can well adjust himself to handling hens and chicks. We have to keep in mind the ravages of red mites, the dangers of high temperature in mid-summer and the sudden heavy showers.

Summer Foods.

We are favored in the ease of getting green food all through the summer months. In winter we have to work hard to sprout oats or use the less valuable cut hay or clover or alfalfa, or depend on cattle beets. With the single exception of sprouted grains we have nothing in winter to equal the fresh cut grass or clover in summer. It is hard to get good, fertile, hatchable eggs in winter because of the lack of succulent food in the ration. All through the months when grass is green and is high enough to be cut to advantage, we have the one food that is necessary to getting the perfect egg and maintain (with the other foods) normal health in the stock of the poultry yards.

From the time that the grass begins to grow in sheltered places in April till the frost spoils its food value in October, it can be had for the cutting. The June grass, orchard grass it is called by some, gets an early start, and the second crop grass can be depended on, way into the autumn. A valuable food product that is wasted are the lawn clippings that is left where it falls, too often. Even poultry people of my acquaintance have seemed to be unaware of its value for good. I once had a neighbor in town, a man who kept as many hens as I did then, who took the month of June for his vacation. His house was closed, his family away, someone hired to care for his hens for the eggs they laid. When he came back his lawn was high with grass. It must have been from four to eight inches high, thick and green. He had it cut by scythe, then the mower run over it and looked about for an easy plan of getting the grass

out of his way. I was driving into my place and the neighbor called out: "Want this grass for the horse?" "Glad to use it!" I said, but to myself I said: "for hens—not horse." From that large town lawn I got over four hundred pounds of the nicest feed I ever owned. It was good hay weath-



The above is a fine specimen of "Regal Strain" White Wyandottes, bred and owned by Jno. S. Martin, Box 408, Port Dover, Ontario, Canada. Of the eleven pens laying more than 100 eggs each at the present Missouri Egg Laying Contest, five are Wyandottes.

er, I dried it green and sweet, put it into bran bags and stored it in the loft. When run through my clover cutter it made better food than anything I was able to buy that winter. All this time I was feeding, daily, the clippings from my own lawn. To the rear of the common lawn cutter I had an arrangement of cloth and wire, home made, to catch most of the lawn grass as it fell from the knives of the machine. The ordinary length of cutting went into the pens of the laying hens, while for the chicks I ran the machine over grass that had been cut two days before. It was "short cut" for the

chicks, "long cut" for the hens, and they would eat every day. It was during that year that I made the best egg record I ever got from a year's ownership of the bunch of good hens, and I give much of the credit to the constant feeding of green grass in summer and steamed hay in winter.

This summer, even on the farm, with wide yards and large range for the growing chicks, I feed all the lawn cuttings I can get. It's good food, it's cheap food and it brings the eggs and maintains the health of the flock.

Heat.

Do you realize that little chicks need a much lower temperature in summer than in spring and fall? Brooders that I run at 100 degrees in March and April, I keep at eighty in June and July. Lower temperature and more ventilation in summer than in spring-time should be the rule. A brooder lamp that needs filling daily in April will run three days in June and five days in July. I have been away from the farm for over four days at a time in mid-summer and left word that the lamps need not be thought of while I was absent. There is a big saving of oil in summer as compared with the freezing days of March. Then a good grade of oil helps out on summer care of chicks. I have one brooder now, out in the grass field, that had the lamp filled and the wick adjusted and lighted, that has been running four weeks. In all that time the wick has not been touched, neither trimmed nor scraped, yet it burns brightly and maintains equal heat. This lamp is filled from the outside of the brooder and the flame is to be seen through a mica window and it burns day and night, week in and week out, with filling as needed. It is a comfort to have such a lamp and to use oil of high grade. It may also interest you to know that this brooder has been in use for thirteen years and has not been

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taken under cover from the weather for five years. Yet it was so well made that it does as good work as when first received from the factory. You will agree with me that it is a good brooder, when I state that I have thirty-five chicks in it now that were put into it four weeks ago, not one chick is missing from any cause. I like the good brooder much more than the good hen to mother my chicks. I like it better in any season, but especially through the hot days when lice and mites injure so many chicks.

For summer use, the low down, outdoor brooder fills our needs. Give it the shade of an apple tree; have the door open on grass sod and the chicks will nearly take care of themselves the next three months. Add the dish of cool water, the hoppers of feed that make up a balanced ration and you are well fixed to raise summer chicks with the least possible labor. Open the door early in the morning, close it as soon as the chicks are retired for the night, balance up the food the chicks get on the range with the dry mash and whole grain and see the feathers come out and the birds increase in weight. Do not forget the warning that it will not do to give these summer chicks the same piece of ground that was used for spring hatched chicks. Let the range be clean, sweet and fresh and the ground around the brooder free from droppings and vermin and summer chicks are a delight. The half grown chicks have no place near the latter ones. Chicks that are full feathered need their own yards—the cockerels in one, the pullets in another. Give the big chicks all the room you can, but favor the summer hatched chicks.

Late Summer Hatching.

What about getting out some chicks to sell for dressed poultry next March, April and May? If you can sell big roasters in the spring months at good prices it may be well to consider the getting of some late summer chicks. Hardly anything is lacking. Hardly any money need be spent now. The incubators are unused, the brooders are no longer needed for the June hatched chicks, the chick fountains and dishes are not in use. It all depends on whether you have house room for the birds through the winter and whether your market will pay the price needed to cover the expenses of this lot of chicks. I know folks who are making more money out of these August and September chicks than anything else on the farm. They are in a section where the marketman will come to the door, buy birds alive, pay from one dollar and seventy-five cents to two and one quarter dollars, and take the birds off your hands. There is a good little profit in four or six hundred birds sold April 15th at two dollars each. Careful feeding and growing these chicks will give you larger ones than you generally get out of the flock that the old hens appears with in September. Late hatched chicks, raised in the old ways, seldom come up to the standard weight and size. But if you will give the late hatched summer

chicks modern feed and care and a fair chance, they will be worth trying out this summer. Be sure of the market before you fill your machine and be sure you have staying qualities of your own that will last through the winter. Generally the cockerels are caponized, but both cockerels and pullets are sold for eating.

Range of Field.

Summer time offers the chicks many a chance to range the fields where the wheat has been cut. The buckwheat is growing, the corn is shooting up, or the asparagus shoots cast shade. There is stray grain to eat, bugs to chase, worms to eat. Green food is abundant in the shade of the corn. Weeds so small that you have to look to see them are sprouting all through the top inch of soil, but the bright eyes of the chicks see them all and make cheap food of it all. The rank growth of buckwheat or corn gives shelter and protection from hawks and crows, shuts off the intense heat of noonday and prevents some of the brassiness in the birds of white plumage. The cut over grass field offers the tender, new growth, gives a good chance to catch the bugs and supplies a stimulus to exercise. The nearby pasture gives additional range and is helped by the chicks to give more abundant crop the next year.

Shaded Runs for Yearling Stock.

Many a village lot and most farms, have trees that can well be included in the runs of the laying stock. Put a wire fence around these and give the larger space and shade to the summer layers, or the breeding stock you are going to take over to next year. I make all the use I can of these runs with trees in them. The breeding pens are doubled up, two or three pens being united by the early days of July and given free use of these cool groves or small clumps of trees of any sort. One yard has a quarter acre that is set out to plum, cherry, quince and crab apple trees, twenty feet apart with peach trees put in as "fillers." In this yard, at the further end, are a number of wild cherry trees that have been left till the new fruit trees are big enough to give full shade. In four years time the cherry trees have grown to ten to twelve feet high, the quince gave some fruit the third year, and the peaches have a little fruit set this season. Next August the wild trees in the yard will be cut close to the ground and the space all given to growing good fruit and laying hens.

Another quarter acre yard has the wire fence around a lot of big maple, ash and butternut trees. This yard is not near the hen house but is connected to it by a yard that is about ten feet across, extending from house to large yard. This yard has the collection of years of leaves among the roots of the trees, giving splendid scratching and supplying lots of worms and bugs to round out the ration that I supply in the houses. It will not take much thought or effort to make the summer layers more comfortable than under the old plan of the close house and bare yard. Almost anything will be better

than nothing, for shade. Berry bushes, asparagus, currants, wild cherry, birch—something, is at hand. If you cannot do better, make much of late planted sweet corn. Crosby, Evergreen, or higher growing corn, will make quick growth, if the hens are kept out of the yard till it is eighteen inches high. Corn grows rapidly in the summer days and soon is making good use of the droppings in the soil, while it is sheltering the hens or chicks.

Even out in the big run where the chicks have free range, you can plow and grow corn. I have a half acre that was in June grass. It was cut the second week in June, cured and put into the barn. Then the ground was plowed and put into white flint corn. This was a long strip forty feet wide, running way across the chicken field. No fence was put up to keep out the chicks. Full quantities of seed was used so as to make sure that the chicks would not get too much of it. The chicks did eat some of the tender stalks as they came through the soil, but there was plenty of it. It soon grew above their heads, and gave a fine run for digging and dusting, scratching for worms and raising sprouted weeds for immediate consumption. There is no run like that of a corn field. Whether the corn is planted late as I do, or whether it is the regular planting of the year as done by others, it cannot be improved on. The asparagus grower can well put out a few broods of chicks up and down the rows, just to have them eat the beetles that infest the plants, as well as cultivate the land for him. The damage that they may do to the crop is far less than the good they do.

The penning of summer chicks under the apple trees that have infected fruit is worth doing. I have wiped out the "railroad worm" in several badly infested trees in this way; the chicks picking the fallen fruit to pieces and eating the worms. Spraying will not catch the railroad worm, but the hens and chicks will do it nearly every time. One year will not clean them up, but in two or three years the fruit will come almost free of this tough customer. Summer conditions are right if made good use of.

Doctor J. D. Scouller, one of our Danville, Illinois, readers, sends us a clipping from a paper published back in Scotland, giving an account of prizes at a poultry show. The varieties shown are the familiar Wyandottes, Orpingtons, Leghorns, Minorcas, Rhode Island Reds, and Bantams such as seen at the American shows, but in addition prizes have been awarded on cross-bred hens for laying purposes. In sending the clipping, Dr. Scouller says: "Please notice the prize for cross-bred hens for laying purposes. It was such a notice years ago that made me cross breed, and the result I sent you, which was published in your paper. I do find that first crosses, even today, give me more eggs than the thoroughbred hens. I have a craze for experimenting, which please excuse."

WARM WEATHER WORK

By J. E. Wilmarth, Amityville, N. Y.

THE breeding season is past with most of us. Chicks are all hatched and most of them are of an age where they apparently require but little care. The old breeders have been placed on free range, or are allowed to run together. Business is slack and what money is coming in is required to pay the feed bills, which are constantly growing in size, in proportion and to the increase in size of the young stock.

All of the above tends to discourage us and we are apt to grow careless. True there is but little to interest and encourage us at this season, but we must think of the future and if we are slack at this time, we will be pretty sure to regret it next fall and winter. There is a whole lot of work necessary if we are to make the most profits from our poultry. There are those little chick coops and brooders. Are they out in the open where the rain and sun can have full force on them? If they are cared for they will last much longer and be in better condition when we want to use them next spring. Put them under shelter. If you have no building in which to house them, pile them up neatly against some building, placing old boards or rails under them and build a temporary roof over them. This is better than no shelter at all. We must not forget to clean them and make any necessary repairs before doing this for here indeed will a "stitch in time save nine."

How about the large houses? Are they comfortable or are they stifling hot during the day and at night the hens sitting with wings out-stretched and mouths open, panting for breath? If such is the case, your building lacks ventilation. Even when we open all the doors and windows, we often lack sufficient ventilation. During these hot days and sultry nights we must provide for a circulation of air. An opening at the rear of each building will answer if the stock does not have to stay in the direct draught.

It is also a good time to clean the house and white-wash the interiors. Any spare time you have can be well utilized in making any repairs that may be needed. It is a good time also to overhaul the fences and gates. Wires may be loosened, a staple will probably hold it in place. Some posts may be loose. Replacing the entire post is often not necessary and good stake-driver down along side it and nailed to the old post securely, will often prolong its usefulness a few years. A

sagging gate often can be remedied by simply reversing it, placing the hinges on the side where the fastener was and vice versa, or possibly a brace will be necessary or a few nails will strengthen it sufficiently. These little things, attended to promptly, will save many a big job later in the season.

Now we will come to the stock. Those



COCKEREL IN FIRST PRIZE PEN, BOSTON, JAN. 1910.
BRED AND OWNED BY OWEN FARMS, VINEYARD HAVEN, MASS. U.S.A.

surplus old males? Well, the sooner they are disposed of, the better off you will be. It is also a good idea to work off the old hens as fast as you have a profitable call for them. While they will probably lay enough to pay for their keep during the summer, still the market is glutted in the fall and better prices are generally obtainable at this season. By selling them a few at a time, as the local market demands, most breeders can get better returns. Of course a few of the best breeders must be carried over for use next spring and these should be given every advantage to go through the warm months and the molt in good shape, so as to be in good breeding condition another season. Disposing of the surplus birds promptly gives them a better chance, as it is practically impossible to give breeding birds too much room at any season of the year; in fact most of us have to do the best we can, for seldom do we have surplus space to spare.

Are those youngsters coming along

rapidly? Keep them going, but don't over-do it. Feed them all they will eat but keep a close eye upon them and at the first signs of their slacking up on eating, cut down the ration and provide a change of menu. The idea is to get all the food into them that you possibly can without over-doing it and throwing them off their feed. It requires quite a knack in feeding growing stock for the best results, to give them just enough. Hopper feeding is advocated by many. This is excellent for breeding stock, but for market stock or where we want extra rapid growth, hand feeding is better for we can get them to eat more by the latter method than by having food before them all the time. In the latter method, where they are used to it, they will generally only eat enough to give them an ordinary rate of growth, while by feeding by hand and noting them carefully, giving each time just what they will pick up eagerly, they will eat a larger quantity and will grow considerably faster.

Where one is striving to improve his flock each season he must be very careful in culling or one is apt to kill off what would eventually make the best breeders. Especially is this true of the American and larger breeds, for often the most awkward, raggedest feathered cockerel in the lot will turn out the finest grown bird. Of course we can pick out prominent defects, as soon as they are large enough to market, such as feathers on clean legged breeds, single comb on rose comb breeds, crooked backs and otherwise deformed ones, off-colored ones, etc. All these can be safely and profitably marketed at an early age, thus giving the balance a better chance. Another kind to cull out are those very forward cockerels that feather out rapidly, show prominent head points, and start to crow at an early age. Such birds may give promise of excelling in Standard points, but they will always be undersized and the sooner they are gotten rid of the better.

We might also say a word about culling out the old stock. At this season many are molting, or at least are in rather poor feather and often some of our best birds are in this condition. Care should be taken that we do not accidentally send to market a valuable breeder or exhibition bird, because of her poor appearance. It is a fine idea to mark our best birds each winter when they are in full feather and thus not run any risks of these expensive mistakes. It is a good idea to give these birds every advantage possible during the summer months. Let them take things easy. If they wish, let them sit a couple of weeks. By all

means do not force them for laying. Cut their feed down gradually until they are on about one half to one-third of their regular grain rations. Supply plenty of green food. Always have cool, fresh water before them, and see that they have shade to shelter them. Such treatment will bring them along in good condition and will also induce an early molt. They will be in full feather before cold weather and in fine health to take up breeding duties early in the season, and being strong and in good condition, will produce fertile eggs that will hatch a large percentage of vigorous chicks.

Domestic fowls suffer more from heat than from cold, yet we are apt to pay much more attention to cold weather care than to hot weather care, for the simple reason that the direct returns during cold weather are greatest, while the immediate returns during the summer are often at the zero point. But it is the future that we must consider, and it is this good summer care that will greatly increase our profits next winter.

Possibly we can give you an example of much quicker results from this warm weather care or rather lack of care and this is in the health of the stock. Often both old and young stock are over-crowded, especially the latter, for they grow very fast while their quarters remain the same; hence they are soon over-crowded. They get overheated at night, start out early the next morning, get slightly chilled, but running around get warmed up. No direct damage is apparent, but they get a slight cold, add to it each day and pretty soon we have a sick chicken, or possibly this cold is not severe enough to be apparent, but when the cool nights come in the fall, a sudden drop in temperature or a nasty wet spell, brings on an attack of roup, to which the chick has been made subject by mistreatment, where if it were in the best of health it could stand the bad spell of weather with no serious inconvenience. At this season truly does a "stitch in time save nine."

POINTS ABOUT PRESERVING EGGS IN WATER GLASS.

Use only fresh eggs. Take male birds from flock, so eggs will be infertile and germless.

The trade name for water glass is Silicate of Soda, and it may be purchased through your druggist at 75c to \$1 per gallon. Use one part of water glass to nine parts of water. Boil the water first and let it cool before mixing. Use none but good, clean eggs.

Store the eggs in a wooden or earthenware vessel, in a cool dry cellar and keep covered with a cloth to keep out insects and dirt.

Eggs so preserved are not strictly fresh eggs and should not be sold as such as they can be detected. Many families put down a home supply of eggs in this manner, thus giving enough for fall use when the old hens are coming through the molt and before the pullets have started to lay.

THE WINTER BROILER BUSINESS.

By F. J. Gross.

Of the splendid prices it is possible to get for broilers during the winter and early spring months, it is unnecessary for us to dwell upon. We doubt whether there is a poultryman today who has not looked at the prices quoted with longing eyes, but the successful breeder knows only too well what a delusion and a snare those prices have been.

They know too that the sale of broilers is not the only profit to be derived from raising chicks during the winter months. They know that half of the chicks raised will be pullets and they know what early hatched pullets are worth too.

The poultry press is full of advice about getting the incubators going early so as to have a nice lot of early hatched pullets and cockerels for the winter shows. That advice is easy to give. It is also comparatively easy to hatch the chicks, but the one great problem is to raise them.

Thousands of dollars have been lost by breeders of this country in their efforts to raise these early hatches. Other thousands of dollars have been invested in equipment for raising them, only to be discarded because it was impossible to successfully raise chicks at that season. Something is wrong, and that something had to be discovered before chicks could be successfully raised during the cold winter months and early spring.

Just why the chicks died by the thousand regardless of the splendid care and attention they received, was a mystery. It was no trouble to keep the temperature at the proper point in the hovers. Feed of every kind was given them, but in spite of it all White Diarrhoea took its toll. Leg weakness got a share and some of the chicks just seemed to die because the breeder wanted them to live and thrive. Those that pulled through were so few, and, owing to the improper conditions under which they were raised were of little value except as broilers, and although the prices obtained for them was very high, the breeder could count his losses in dollars and cents to say nothing about time.

About six years ago, Mr. N. P. Husted, one of the most successful commercial poultrymen in the country today, began to study the problem. Mr. Husted was in California for his health at that time, and as he did not believe in medicines to any great extent he took up his favorite out door work and began raising chickens. As he did not go into it on a large scale he had ample time to study it thoroughly, and he conceived the idea of raising chicks in large numbers in an open room without hovers. Of course as this idea was entirely new he was laughed at for his notions. Why "Dad Palmer" had raised chickens for sixty years and never heard of such a thing. It was preposterous. Chicks simply could not be raised unless they had something warm touching their backs. That's the way mother hens raised

them. Mr. Husted, however, contended that it was possible, and after a few trials in a small way cast about for a stove and fuel which could be depended upon to maintain an even temperature in the brooder room without constant attention day and night.

He devoted no little part of his time to studying White Diarrhoea. While not a physician, he had had enough of them tell him that fresh air was the best medicine possible, and he worked along that line, not so much to cure the scourge, but to prevent it. After repeated experiments he found that White Diarrhoea was nothing more or less than a ptomaine poisoning from carbon dioxide. The chicks can get this in but two ways. The best and surest way to infect a lot of chicks is to keep them in small compartments without ventilation. The other way is to give them moldy or decaying feed. Remember, in either case it is the same poisonous element which brings on White Diarrhoea — Carbon Dioxide. Give your chicks pure, fresh, warm air, and fresh wholesome grain, and green food, and you will not have White Diarrhoea on your farm.

This discovery more than ever convinced him of the necessity of raising chicks in large numbers in an open room without hovers. He knew that it would not do to supply the heat through the floor, for that would cause leg weakness. He also realized that it would be necessary to have a stove in which it would be possible to control the heat to a fraction of a degree.

The Simplex Brooder Stove, however, solved the problem. It is now possible to successfully raise winter broilers. There is no secret about it. Just plain pure fresh warm air combined with intelligent attention does the trick. Let a Simplex Brooder Stove furnish the heat for the abundance of air nature provides, and give your chicks the same feed and treatment you do your later hatched chicks, which always do so well, and you will be successful.

That the broiler business will be profitable from now on is a certainty and the sooner you find it out for yourself, the sooner you will get the largest possible profit from your poultry operations.

If you would like more information about this system of brooding write to the Simplex Brooder Stove Co., 142 Fourth Street, Grand Rapids, Mich.

E. I. RED RECORD FOR FOUR MONTHS.

Editor, Poultry Keeper:

My forty Rhode Island Red pullets commenced to lay the first of January and up to the last of April, with no special care, but a warm, clean house, they laid as follows:

January, 192; February, 384; March, 770; April, 765.

Mrs. Ellen R. Moore,
Pennsylvania.

AN AMERICAN HEN NOW LEADS.

In the National Egg Laying Contest the English Pen Is Still Gaining, However—S. C. Brown Leghorns and Barred Plymouth Rocks Tie for the Honors for May—Black Minorcas Make Great Record for May.

One Buff Wyandotte Pullet Lays Every Day for Sixty-Two Consecutive Days—Preparation for 1914 Contest.

THE American breeder have at least one thing to be proud of in the National Egg Laying Contest at Mountain Grove, Mo. A Buff Wyandotte hen from Vermont now leads all other hens with 167 eggs to her credit for the six months and a half or a total of 197 days. An English S. C. White Leghorn hen has held first place from the beginning of the contest. This English pen holds the pen record with a total of 1338 eggs for this period. This pen has also laid about one hundred soft shelled and unmarketable eggs, which, if they could have been credited with, would have put them far in the lead. Only nine hens in this pen laid marketable eggs in May and they are not so far ahead but what they can easily be caught. The total laid in May was 12,455 eggs and this runs the grand total to 59,975. May was the hottest month experienced at this place for more than ten years. We lost two hens as a result of the heat and this hot, dry weather is affecting our egg records considerably.

A pen of S. C. Brown Leghorns from Fulton, Mo., and a pen of Barred Plymouth Rocks from Sioux City, Ia., tied for the silver cup for May, each pen laying 239 eggs. Two Buff Wyandotte pullets, No. 860 from Vermont, and No. 600 from Missouri, each laid 31 eggs in the 31 days. The last mentioned pullet has laid 62 eggs for 62 consecutive days. She will have to lay 20 more eggs to equal Lady Showyou's record of last year.

The pens which have thus far laid more than 1,000 eggs are as follows:

Pen No.	Eggs.
2 S. C. White Leghorns, England.....	1338
19 Silver Wyandottes, Ia.....	1108
23 Silver Wyandottes, Ill.....	1105
57 Black Langshans, Missouri.....	1095
20 White Wyandottes, Ark.....	1044
49 Black Langshans, Missouri.....	1043
33 Barred Plymouth Rocks, Ill.....	1041
30 Buff Wyandottes, Vermont.....	1033
56 White Orpingtons, Ken.....	1018
9 S. C. Brown Leghorns, Mo.....	1013
26 Buff Wyandottes, Missouri.....	1007

It will be seen from the following that every pen of Black Minorcas made a great record for May. The pens laying over 220 eggs each for the month were as follows:

Pen No.	Eggs.
9 S. C. Brown Leghorns, Mo.....	239
29 Barred Plymouth Rocks, Iowa.....	239
11 Black Minorcas, Iowa.....	235
17 Black Minorcas, New York.....	235
26 Buff Wyandottes, Missouri.....	235

8 S. C. White Leghorns, Calif.....	225
5 Black Minorcas, Missouri.....	225
10 Rose Comb White Leghorns, Missouri.....	222
2 S. C. White Leghorns, England.....	221
32 White Plymouth Rocks, Mo.....	221
40 Rose Comb Reds, Missouri.....	220

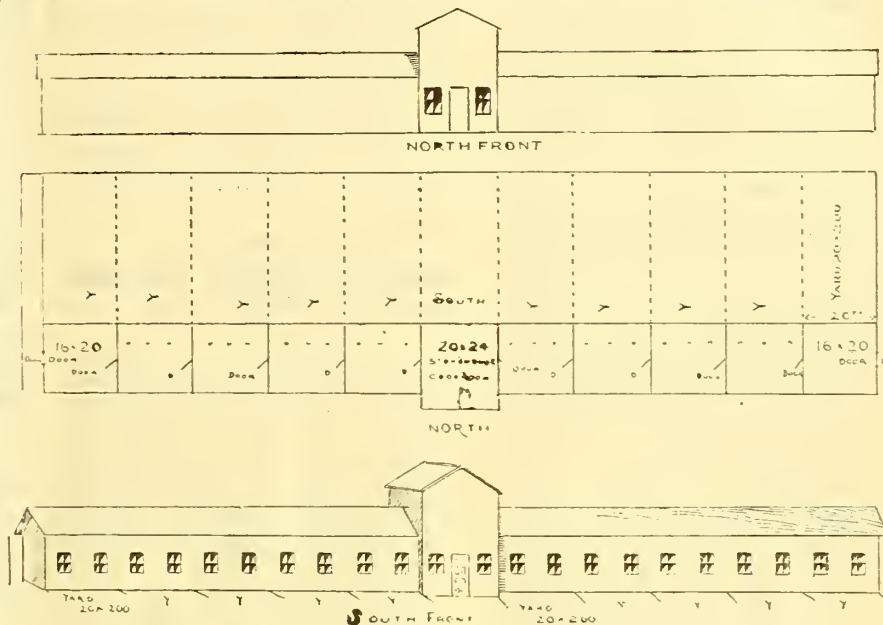
Two pens tied for first place, three tied for second place, and two tied for third place for the month.

The highest individual record for the first seven months last year was 156 eggs. For fifteen days less time this year three hens have already exceeded that record. Lady Showyou had laid one hundred and fifty eggs by the

early maturing pullets. Liberal prizes will be offered. All of the leading varieties should be represented in 1914. Write the experiment station at once for a copy of the rules and regulations governing this next contest. Liberal premiums will be offered for the best record made by each variety, also sweepstake prizes, and a silver cup for each month. The best breeders of each variety and the specialty clubs should see that their varieties are properly represented.

The Feeding Test.

The pen which is being fed according to the Canadian method went to first place this month and the one with feeds of all kinds before them at



Multiple Plan for Laying Pens With Runways and Center Storage House.

last day of May last year. The highest records thus far this year are as follows:

No.	Eggs
860 Buff Wyandotte, Vermont.....	167
66 S. C. White Leghorns, England.....	166
600 Buff Wyandotte, Missouri.....	164
735 Black Langshan, Missouri.....	154
62 S. C. White Leghorn, England.....	154
65 S. C. White Leghorn, England.....	153
61 S. C. White Leghorn, England.....	150
871 White Wyandotte, N. J.....	148
55 R. C. White Leghorn, Mo.....	145
67 S. C. White Leghorn, England.....	144
857 Buff Wyandotte, Vermont.....	144

Third Contest for 1914.

The Third National Egg Laying Contest will begin at the Missouri State Poultry Experiment Station at Mountain Grove, December First, 1913. Requests are being received every day for places in this contest. Only three pens of ten hens each, or a total of thirty hens of each variety, will be accepted. An absolutely square deal is insured every contestant. Not an egg will be sold from any pens for hatching. Each pen should consist of ten

all times dropped back to second place. Each pen consists of five S. C. White Leghorns and five Buff Orpingtons. The pen fed according to the Canadian method has laid 930 eggs, and the one with feed of all kinds has laid 928 eggs.

Pen No. 66—Egg Farm Method

This pen is being fed according to the method recommended by a large eastern commercial egg farm. The mash being fed was manufactured by this farm and was bought direct from them. This pen is also fed a mustard bran which is highly recommended by this farm. So far it is 282 eggs behind the above pen which leads in the feeding test.

This pen is fed as follows:

Grain.

Winter—4 parts cracked corn, 2 parts wheat, 2 parts oats.

Summer—2 parts corn, 4 parts wheat, 2 parts oats.

Feed a little less than 1 quart to ten hens only at night feed. No grain in morning.

One pound of mash to each ten hens. Use mash and green cut bone.

Add five heaping teaspoonfuls of mustard bran to the mash for every ten hens.

The Missouri State Poultry Experi-

ment Station has just issued Circular No. 2, which reads as follows, and is applicable to other states about the same as it is to Missouri.

SWAT THE ROOSTER.

He Spoils One-Half Million Dollars' Worth of Missouri Eggs a Month, From June to October, Each Year.

"Swat the Rooster," should be the motto of every Missouri poultry raiser for the month of June. In fact, conditions are such that the governor would be fully warranted in issuing a proclamation designating the first day of June as "Rooster Day," and urging the farmers and poultry raisers of the state on that day to kill, sell or separate the roosters from their flocks.

Absolutely millions of dollars worth of Missouri Market eggs are spoiled every summer because they are fertile, and it is the Missouri farmers and poultry raisers who are losing this tremendous sum each year. The eastern egg buyers have discovered by years of experience that one out of every five eggs coming from this state is a bad egg and they make the price to us and our egg buyers accordingly. So it is the producer who loses, after all.

After the hatching season is over, there is no longer any reasonable excuse for keeping the males with the laying hens. Some people imagine that the hens lay more eggs if the roosters are allowed to run with them. This is a mistake. On the contrary, careful experiments have shown that a flock of hens will actually lay more eggs if the males are not allowed with them.

Because the deterioration which takes place in an egg is not easily visible to the naked eye, as it is in fruits, vegetables, etc., people do not realize the fact that it is one of the most perishable of all food products. This is especially true of the fertile egg. A fertile egg kept in a warm room will become unfit for eating purposes almost as quickly as milk. It is a mistaken idea that a fertile egg has to be in an incubator, or under a hen, in order for the germ to begin to develop. A very large per cent of the eggs candled out every summer by the carlot shippers and the wholesale egg dealers are fertile eggs in which the germ has started to develop, and then died when subjected to a lower temperature, thus causing decay to set in. A fertile egg, kept in a warm room or hot country store for even twenty four hours, will be unfit for food, on account of the growth of the germ.

Infertile eggs, laid by hens with which no male is running, will keep in any condition for two weeks, or even longer, when subjected to a temperature which would spoil a fertile egg in twenty-four hours. To illustrate this fact a cake was recently baked at this experiment station in the making of which infertile eggs were used, that had been in an incubator for fourteen days, subjected to a temperature of 103 to 104 degrees. The cake was eaten with a relish by a dozen men, who pronounced it first-class in every respect.

When the farmers of this state get

to producing infertile eggs during the summer months, they will, as a result, eventually get a much higher price for their eggs. Until they do this, there is not much hope for an improvement in prices.

In conclusion, it may be said that there are five simple rules, which, if carefully observed by our poultry raisers, will increase the selling price of Missouri market eggs to the extent of several million dollars a year, and make them sought after in the fancy egg markets of the world, instead of being, as they now are, practically shunned by these markets. These rules are:

1. Give the hens clean nests and plenty of them.
2. Gather eggs at least once daily, (twice daily during hot weather.)
3. Keep eggs in a cool place.
4. Market eggs at least twice a week in warm weather.
5. Kill, sell or confine all mature male birds as soon as the hatching season is over. "Swat the Rooster!"

T. E. Quisenberry,

Mountain Grove, Mo.

CONDIMENTS—THEIR USE AND ABUSE.

To stimulate, or not to stimulate, is a question which has not as yet been definitely settled by poultry writers and poultry raisers. By condiments, in connection with poultry keeping, we mean the use of the different kinds of egg powders—sold by many firms, also mustard, pepper, ginger, etc; all calculated, by stimulating the ovaries of the laying hen, to increase egg production.

There is no doubt that the use of these prepared foods and spices will increase the egg production, for a time at least, of a flock of hens. Poultry writers, however, are still far apart as to whether fowls are injured by their use, and whether the increased production is only seeming and the hens, after the first effects have worn off, will fall below their average before the tonic was given.

Some successful poultry keepers tell us to never use a condiment of any kind, while others just as successful, say that used with good judgment condiments will pay big dividends on the small sum, (in the case of one widely advertised egg food, less than one cent per hen per month.) However, condiments should not be fed continuously, but should be given at intervals with plenty of time between each period of feeding for it is certain that any stimulant or tonic, if taken steadily, will after a time lose its effect and if condiments are fed to hens persistently without any let up the money spent is probably worse than wasted.

We have fed condiments pretty steadily for several years and believe that used with moderation they have a place in poultry keeping. We are of the opinion that each keeper of poultry can tell whether it would be to his advantage to feed condiments by keeping track of the percentage of eggs his hens are laying.

For instance: We consider 45 or 50 per cent a fair egg yield from pullets in the winter months. It has been our experience that a flock laying this percentage, when few egg powders, spices, etc., may possibly be forced above 50 per cent yield, but then trouble begins, hens become egg bound, have liver trouble, acute indigestion, etc., and the extra eggs do not pay for the hens we lose.

When a flock of matured pullets, properly fed and housed, are laying less than 50 per cent in the winter we believe it is profitable to feed condiments to bring them up to that figure; also, that the same can be fed without injury to the fowls. It may be said that a flock of pullets described as above will lay without forcing but often we have found that pullets in condition to lay will sing and scratch half the winter before getting down to business, when a little spice or egg food would start them laying almost at once.

In the month of April and May we can see little use for condiments. This is the natural laying period and to stimulate the hens at this time is much like putting the whip to a horse already doing his best.

Hens to be used for breeders should not be forced. However hens that have laid but few eggs until spring opens in March and April do not make good breeders; they are usually too fat. The first few eggs a hen or pullet lays, (in the case of the hens, after the molt), as a rule will not hatch. For this reason we find it advantageous to have our breeders laying well in January and February and think a little tonic helps to put them in good breeding condition without hurting the fertility of the eggs. Condiments can also be fed the hens at molting time.

Have tried feeding some of the advertised powders to growing chicks but could not see that any good came of it and believe that growing stock is better off without condiments or very rich food.

One firm which sells quantities of an egg producing powder and tonic lays stress upon the following: A poor ration well digested is better than a good ration poorly digested. There is lots of truth in this statement and believe most of the standard egg foods, powders, etc., sold by reliable firms are prepared with a view to aiding the digestion and strengthening the organs generally.

We have found that by feeding condiments moderately we can feed less of the heavy protein foods, gluten, beef scrap, oil meal, etc., and still get as many or more eggs than we could by feeding as rich a ration as the hens could stand, without breaking down.

Condiments are regarded with disfavor in some quarters, chiefly because the users, seeing that their effect was to increase the egg yield, went on the principle that if a little was good, more was better; forcing their hens beyond their strength and bringing on the various ailments consequent therefrom.

C. V. Mason.

Vermont.

SELECTING INCUBATOR EQUIPMENT.

Now Is the Time to Plan for Next Season, and When You Do Plan Be Sure to Have All the Information.—Here's a Way to Select Your Incubator With Safety.

Now that the grand rush of the hatching season is over, and work on the plant has assumed the easy routine of summer, poultrymen are beginning to take stock of their operations. They are casting up balances of the past six months' income and outgo, and making plans for next winter. For the man who makes a real success with poultry must be always on the outlook. He must note changes in prices and market conditions; improvements in methods and any deterioration of his equipment. He should plan for the next year with his eye on the experiences of the past season.

One of the first and most important things he should take into consideration—this progressive poultryman who is seeking to expand his business and increase his profits—is his incubator. His entire operation depends on his hatching equipment, and no part of his plant will repay so well a careful and thorough investigation. This investigation should be made with the records of the past season's hatches at hand, and any faults that appeared should be rigidly traced back to their causes.

Not only should defects be scrutinized, but the general cost of hatching. In this day of careful management and cutting down of costs at every stage, there is only one system of incubating that can be run at a minimum of expense. This is the mammoth incubator system, and the man who, with such superb equipment available as the famous Hall Mammoth Incubator, continues to use the old style oil heated machines is either conducting his plant on a losing basis as far as unnecessary expenditure is concerned, or has too small a number of birds to be considered in a commercial sense.

The Hall Mammoth Incubator is the ideal hatching equipment. It is built on principles that are safe and absolutely reliable. Its fuel cost is much lower than that of oil machines of equal capacity, and its large hatches of strong, healthy chicks cause it to be the most profitable incubator on the market.

Now is the time for the poultryman to plan for his increased capacity next year. Or to replace his present system, if it has not been all that he desires, with a better and more efficient one. But the consideration of the new installation should not be delayed. Now is the time to begin planning, for many reasons. The incubator concerns will be rushed during the late summer months and the early fall, and shipment will be delayed if the order for equipment is put off until that time. And the purchasing of incubating machinery should not be made hurriedly, but every phase of the situation gone into thoroughly.

Every poultryman who is planning

any changes whatever in his hatching equipment for next season should certainly secure a copy of the Hall Mammoth Incubator Company's catalog of incubators and brooding systems. The book is called a catalog, but it is very much more than this. It is, in fact, a thorough and most authoritative text book on hatching and raising chicks. It is written by men who have made a study of these problems for years and who are thoroughly conversant with every phase of the poultry business. These authorities discuss the problems of heating, regulation of temperature, means and methods of ventilating and other important questions in a manner that is at once interesting and most valuable. No poultryman, whether he intends to purchase Hall Mammoth Incubating Equipment or not, should be without a copy of this book. It will give an insight into the principles underlying the poultry business that means better methods and larger profits.

Write the Hall people for a copy of their catalog today. A postal will bring it to you—a handsome 64 page book, filled with valuable information and well illustrated with diagrams and photographs. Address the Hall Mammoth Incubator Company, 176 Southern Ave., Little Falls, New York.

ABOUT FEEDING PROTEIN.

Every one is saying his say about the right kind of feed. All have it right and conscientiously think they are right. Think about this! I lately read an article written by an editor that said, in regard to feeding little chicks: "Dry feeding for chicks is becoming more popular each season and the preponderance of evidence is in favor of it, against mash food, and cracked grains were much better than even the dry mash."

My idea is that you can make a perfect balanced ration of either cracked or ground grain, but are the hens going to eat the grains as you figure them? I have seen hens that would not eat oats and some that would not eat sunflower seed, etc. You can lead a horse to water but you can't make him drink, so you can feed a hen a balanced ration of cracked grains but you can't make her eat it in balanced proportions as will a horse or cow, but you can balance a ration of ground grains or dry mash and she will get a balanced ration at every mouthful.

Many people don't know what constitutes a balanced ration. Ask a sixth grade school boy what and how many elements of food there are and he will answer: There are five, viz. protein, carbohydrates, fat, phosphorus and lime. Did you ever buy a bag of either mash, chick feed or hen feed, that said anything about the last two in their analysis on side of bag? Practically all try to urge the poultryman to use all the protein he can. Some go so far as to say that the more protein you feed the more eggs you get. They seem to think a hen is more of a perpetual transformer than anything else, and her machinery wont wear out.

Ask some farmer if there is such a

thing as feeding a grain separator more than its capacity and he will tell you that if you crowd it too much a lot of grain will go into the straw stack, so it is with a hen. It has been proven by numerous chemical analysis that a hen cannot possibly assimilate more than 13 per cent protein. And still some advocate letting fowls have access to all the meat scraps they can eat, so I find that by feeding less protein and more phosphorous they can be fed cheaper and will lay better and hatch a larger percentage of stronger chicks.

I have been feeding with this in view since last October and found excellent results. One pullet laid every day the last 17 days in December without missing, then laid 21 in January. I was getting most of my protein from galatine meal and the kind I wanted was not available at that time and I was obliged to use some that was about 11 per cent lower in protein and much higher in fiber so the only remedy I could think of was to put in meat scraps, so I put in a little to make up the deficiency in protein and thought the fiber perhaps wouldn't hurt, and to my sorrow this hen with several others, got sick and did not lay an egg the first 14 days in February. She today, June 8th., layed her 98th egg since January 1. Of these I have set 66 and hatched 58 strong chicks. Now this sounds impossible, I know, but if required I will sign a sworn statement that this is an absolute fact, and more strange than ever many of these eggs were three weeks old when set. All were set in one machine. The first 17 were set and hatched 14, then 16 were set and all hatched, then 15 were set and 14 hatched and last 18 were set and 14 hatched.

I don't mean to say that there is no good material in meat scraps but this happened to be a bunch a little off and it surely put me off more than a little. I have feed meat scraps three times in my life and had had luck each time, but I am sure I will never do it again. How can anyone manufacture feed, fit for any living thing in the form of meat scraps at a profit for himself, for the jobber and for the retailer and sell it at 3½ cents per lb. with the cheapest kind of cattle selling on the market at 6 to 8 cents? It may be good for a bazzard but none for my chickens.

Chris McIntire,

Illinois.

ABOUT A BARRED ROCK FLOCK

Editor, Poultry Keeper:

Enclosed you will find an egg record of my Barred Plymouth hens and pullets for the year of 1912. There may be lots of poultry raisers who have better records from their poultry, but I thought I would send mine so that the readers of the Poultry Keeper could see what I have been doing in the past year. This record is for sixty five Barred Plymouth Rock hens and pullets. I had twenty-five hens and forty pullets. Seven of these hens were set in March, nine started sitting in April, eighteen were set in May and I set

seventeen in the fore part of June, which gives the reason for the drop of eggs in June.

From these hens I hatched 189 Barred Rock chickens, about 70 Indian Runner ducks and nine Bourbon Red turkeys. The first hens that I set had poor luck. I think it was because the eggs were chilled. Out of the 189 chicks I raised to maturity 150; from the 70 ducks I raised 55, but had poor luck with the turkeys, only raising one to maturity. I did not lose one from sickness, except the turkeys, which died off one at a time. A large flock was caught in a heavy rain, drowning nearly the whole flock.

From this flock of poultry I received \$155.17 and spent \$33.09, leaving a net gain of \$122.08, besides all the eggs that were set and what we ate. We have a family of six at home and we eat a dozen eggs for breakfast every morning during the spring and early summer. By having a net gain of \$122.08 I find that I have a gain of \$1.87 per hen for the flock of 65.

We raise nearly all of our feed and it cuts down the expenses a lot. It pays to raise your own feed, if you have a farm to do it with. We have a farm of 280 acres and therefore we do not have to buy much feed. We raise corn, wheat and oats for the chickens, horses and cattle. We are keeping now about eighty chickens, nine Indian Runner ducks of the white egg strain, four Bourbon Red turkeys, two Pearl Guineas, seven horses and fifty-four head of cattle. My chickens paid me better than father's cows last winter.

This year I expect to build another open front poultry house and keep a hundred chickens of my favorite breed, the Barred Plymouth Rocks. I have tried several different breeds but find that I like the Barred Rocks the best of all, so two years ago I sold everything but the Barred Rocks and am now raising them exclusively.

The Barred Rocks are a fine all 'round fowl. They are good sitters, make fine broilers and roasters and also lay lots of eggs if given the proper feed. They are also a nice exhibition fowl, a little harder to breed for prize winners but still I would not give them up for any other breed of poultry. It takes more time and thought to mate up a pen of Barred Rocks than most any other breed.

Many different breeds come to the fairs and poultry shows but one always sees more Barred Rocks than any other kind. Whenever I go to a county fair I always want to go to the poultry houses first and I always stay the longest in Barred Rock alley.

The egg record is as follows:

	Eggs.
January, 1912	139
February, 1912	531
March, 1912	1092
April, 1912	1347
May, 1912	1188
June, 1912	810
July, 1912	662
August, 1912	348
September, 1912	338
October, 1912	239
November, 1912	20

December, 1912 116

Total 6830

In November I changed their feed ration and they stopped laying for a while. When you have a good ration it is safest to stick to it and not change for if you are not careful in changing from one to another your hens will stop laying for a week or two.

Roe W. Wheeler,

New York.

HOME MADE OATS SPROUTER.

Editor, Poultry Keeper:

In May, 1913, issue of Poultry Keeper, Page 57, Mrs. B. F. Lent asks about a cheap oats sprouter. Here is the plan of the one we used on Maple Shade Farm the past winter, with good results, and with this box affair and as absurd as it may seem, we sprouted oats six inches high in six days.

First we took a long tight box which we set on end, nailed cleats on each side to hold the trays for oats. The trays we made two inches deep with galvanized screen for the bottoms. When nailing cleats in the box, allow for space between the trays for the growing oats. In the bottom of the box we placed an incubator lamp and about 2 1/2 or 3 inches above and suspended on iron rods we placed a flat one gallon syrup can with a screw cap and a small hole punched in the top side. This can served as a water tank and the water heated by the lamp helped to retain even temperature in the sprouter. On the top of this tank we later set an open pan filled with water to furnish moisture. On the front of the box we swung two doors, an upper and lower door so either the trays or lamp could be tended independent of the other. In each side at the bottom of the box we cut holes two inches in diameter, also one in the center on top. These holes serve as draughts and are supplied with slides so the draughts can be adjusted to suit the operator.

This completed the sprouter, which did not cost over 50c in cash and was built by the lad of the farm home from his first year in college. Should we build another we would make tight bottoms in the trays so as to hold water as water is what helps largely in the sprouting. We thoroughly soaked the oats before filling the trays, filling a tray each day until all the trays were full, then emptying and refilling as they came in rotation and to see the hens go after the sprouts when the snow was several feet deep was satisfaction enough to pay for an oats sprouter of several times the cost of this one.

J. R. Snively,

Michigan.

STARTING IN A SAFE MANNER.

A good many people wish to know whether there is money in the poultry business.

Anyone can answer that question in the affirmative: there is money in any business. All of us will have to admit

that, but how to get the original investment out and still have the business in good shape financially is the question that troubles many of us.

In some respects the poultry business is not different from any other business.

Any intelligent man or woman who raises poultry and exercises care, good business judgment and plenty of good common horse sense, can make it a success.

Whether an amateur or an old timer in the business; read and study what the men who have made good have written, but do not try to experiment with everything you see, only choose those things that suit your conditions and locality. This is where your horse sense will serve you to a good purpose.

Could you change from your line of business, say if you were in the office of a lumber company, as bookkeeper, and make good as the superintendent of a large iron foundry? No, not one in a hundred could do it.

It's the lack of knowledge of the important details in any business, which throws quite a few men.

Go into the poultry business slowly, get good healthy stock, build up-to-date houses, feed only fresh sweet grains and mash, keep everything clean and above all keep down the lice and mites.

One good way to get in right is to start with a few birds and a good house, then don't spend any more of your money, make the chickens pay for all improvements.

Where one fails, if he has followed this method, he loses only his time and the original investment.

B. E. Bristow,

Virginia.

FOODS FOR GROWING CHICKS.

The Knollenberg Milling Company, Dept. A, Quincy, Ill., report splendid sales of their H P Chick and Growing Foods. These foods are correct and happy combinations of animal and vegetable Protein which supply the young and growing chicks with all the necessary food elements for steady growth from babyhood to maturity. Their foods are reliable, perfectly balanced, and made especially from scientific formulas for complete nourishment and quick development. They are ideal foods for putting young stock into exhibition form. Our readers will do well to write this old established company for full particulars and catalog of these famous High Protein Poultry Foods.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscription to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

FROM AN ALABAMA READER.

Editor, Poultry Keeper:

I have been a reader of Poultry Keeper for several years and certainly have enjoyed reading the many good articles from time to time from northern writers mostly. I have often wondered why there were no writers from the Sunny South. I was glad when I saw a letter in Poultry Keeper from Tennessee. I take no other poultry journal except the Poultry Keeper and don't think I need any other. My neighbors take others and I have read them but would not give the Poultry Keeper for all of them. I have kept the R. C. Rhode Island Reds for four years and I have eggs the year 'round.

I was surprised to read such a report as Mrs. Huntley gave in the October issue of Poultry Keeper. The two pullets she told of surely were some culls some breeder had sold to the market. I am in the poultry business only on a small scale and keep 20 to 30 hens on a city lot. I first started with a lot of mongrels but I soon found they were all loss and no profit so I sent them to market and bought a sitting of White Rocks and White Wyandottes which hatched well and I raised some fine birds from them but they were a dead loss when it came to egg production. However I do not blame the Rocks and Wyandotte breeds of birds for this failure, but lay it to the lack of proper care on my part which caused me to bundle them up and put them on the market for what I could get out of them. By this time my poultry fever had run high and I was determined to secure a good laying bird so I ordered eggs and stock from an Iowa poultry farm and by the way this firm treated me fairly and squarely, too. At this time I also began to take the Poultry Keeper and have learned a great deal by reading its pages. I enjoyed reading Mr. H. L. Rose's letter from New Jersey. His experience was very much like my own, also I appreciated the good advice given by Mrs. Baker, of Colorado.

I believe that if Mrs. Huntley would get a good strain of Reds and properly care for them she would not want any other breed if she likes eggs. I got 100 dozen eggs in December, January, and February, 1911-1912, from 25 Reds and it was the hardest winter we have had for years. I don't say that the Reds are the only breed that lay for the egg contest at Mountain Grove, Mo., will show that all breeds have good layers. I am expecting pen 107, R. C. Reds, to be the winners. Mrs. M. E. Henderson, of Tennessee, should put those Rocks that don't lay until nine or eleven months old out of the way and get a breed that will begin to lay at five or six months. I have 18 R. C. Red pullets that were hatched March 9th, and they began to lay Sept. 22 and still hard at it and when I place a Red on the table we have a full dish. I will say that Alabama is a fine place to raise poultry. We have about three months winter and the thermometer seldom goes to zero.

I have five pullets and one cockerel

of the Kellerstrass White Orpington strain that I will give a test along with my Reds. I thought that I might some day change my breed from Reds to White Orpingtons but they will have to do business if they beat the Reds. Will say that my Reds get only ordinary care as I have very little time to look after them, but I do have time to keep my poultry house clean and scratching material on the floor.

T. P. Auderton,

Alabama.

THE ORIGINAL STRAIN.

In mating, select your male bird strong where the female is weak and females strong where male is weak. Bear in mind that every show bird is not a breeder because it won first prize, for it is not always the case, though sometimes it may be so. As you are no doubt better acquainted with your birds than anyone else, it is your problem to solve the weak points and this with care.

First, you should know what it takes to produce a perfect bird and try to overcome any defects to make them perfect. You must know that it is very seldom you can get the same mating to produce both males and females of quality to win, therefore it is necessary to have two matings, one for males and the other for females.

To introduce new blood is a mistake made by many. When the flock is running down and you think they need new blood I think it is proper to renew from the same strain, providing the strain is satisfactory. Don't introduce new blood every year. However, some breeders think it necessary to get cockerels every year to mate their pens, which is all right if they are of the same strain: I have seen strains that could have been improved by introducing new blood, but to breed show birds from them would be almost impossible. It is too much like trying to get something for nothing.

Some breeders make hucksters of themselves, as they want to win and buy a show cock from one strain, a cockerel from another and hens from another so on down the line, and intend to raise show birds from these winners. Anyone practicing this method will do so to his sorrow, for he surely will reach the point where he will be unable to know what strain he has and it is an important thing to know.

We have heard remarks made at shows that the breeders had most of the breeds perfect. In my opinion they only have the foundation laid, a good start indeed, but there is more to be put on the foundation and other problems will be solved within the next dozen years.

O. S. Gerber,

Missouri.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

EGG GAMBLERS ROB THE PEOPLE

Some of the Philadelphia newspapers have been making a strong fight against the egg gamblers who have been holding up the prices to famine prices.

One of these papers declares that the speculators in cold storage eggs are on the verge of a great smash, however, which promises to wipe out the fictitious margin of 30 to 40 per cent in prices and that they are straining every nerve to hold the retail price above 40 cents a dozen, whereas eggs should be retailing for 25 to 28 cents a dozen. The storage houses are said to be filled with eggs which stand the wholesalers and speculators an average price of 22 cents a dozen.

The article goes on to say that the banks and money lenders who have backed the egg gamblers in this cold storage speculation, are becoming uneasy and have commenced to put pressure on the speculators to recall the loans. In order to prevent a big break in the price of storage eggs, it is further asserted that it has been necessary for the gamblers to close the market to fresh eggs by notifying the producers and dealers in the west falsely, that there is no market in Philadelphia and New York because the speculators are loaded to the roof with storage eggs. The chain stores of Philadelphia, numbering upwards of one thousand, by reason of affording the principal direct outlet between the wholesaler and speculators, to the consumer, have been reaping a rich harvest by selling eggs as high as 40 cents a dozen, which they bought at 22 cents. All these are virtually cold storage eggs, that have been separated meaning that the larger eggs have been separated from the smaller ones. The consumer is led to believe that he is receiving fresh eggs at 40 cents a dozen, when he is really getting storage eggs.

According to the reports from forty warehouses in Philadelphia, there were, in the early part of November, 3,520,000 crates of eggs in cold storage, of 232,000 more than at the same time last year. Smaller warehouses held 500,000 additional crates, awaiting the opportunity to turn them loose upon the consumer at fancy prices. This meant that 1,447,207,200 eggs were being held by the speculators beyond reach of the consumers, until such time as the gamblers who were speculating upon them, were able to unload them upon the public at top prices. The real crisis in the situation will be precipitated, it is predicted, when the banks make a call upon the gamblers for their loans.

The same thing will happen then that occurred two years ago when the banks called in their loans and the warehouses disgorged their accumulations, sending prices down pell-mell. And yet the fact remains that there is an actual shortage of fresh eggs, due to hens molting. The speculators have apparently counted on this to aid them in their operations.

M. F. Reeve.

Pennsylvania.

POULTRY KEEPER

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A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
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All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising Rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

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No. 4

Eggs in process of incubation need a certain amount of air. Supply a less quantity of air and you get fewer chicks and those that hatch are less strong. Better too much air than too little. The hen that is set in a small box seldom leaving the nest, brings off few chicks of quality. Incubators, and incubator cellars, need airing in order to get good hatches. The incubator that is built to save oil by little change of air is a dangerous piece of furniture for the poultryman. One of our eastern experiment stations is working on the problem of ventilation of eggs during the hatch and is getting results that will surprise folks when it appears in bulletin form, and will be able to present data that will be useful to builder and user of incubators, alike.

The announcement is made that the egg contest that has been jointly handled by the North American, of Philadelphia, and the Connecticut State College, at Storrs, will not continue after the end of the second year's contest. The Connecticut College will continue the testing much along the past lines and will profit by the practical experience that has been had. The North American will hold its contest on a large plant near that city, and will endeavor to improve on past efforts. At the Connecticut contest, in addition to the egg record work will will also be some experiments along the lines of feeds and feeding. These feed experiments will be on birds entered for that purpose and not made with the pens entered for egg testing as in past seasons. The numbers of the birds in the pens will be doubled, giving ten females to a flock instead of five. The pens that are six by twelve feet are amply large for the ten, and the larger flock will make possible the safety of the combs and wattles in the below zero weather of mid winter. Five birds did not make up a flock of sufficient size to keep warm when on the roost in the severe weather of 1911-12, but did work out well the mild winter that has just gone by. It has seemed wise to the Connecticut

College to continue the contest without the confusion that often happens when there is a double head to the affair.

Queer statements are sometimes made in poultry affairs. One of our advertisers had a letter in the spring time, reporting results of several sittings of eggs in which were these words: "I am on to you fellows, I know you boil your eggs before you ship them!" And another letter that claimed ninety per cent infertile eggs received, said: "Could it be possible that the eggs were taken from the incubator? I notice they are all pencil marked!" These folks forget that sellers have to ship good stuff or loose customers. To make a friend is to gain a constant buyer. We venture to say that the average seller of eggs for hatching is more honest than the average buyer. The seller has a reputation to make and to hold. The buyer is often one who dips into the poultry game for a single season and is then out of it. More than half of the buyers of eggs for hatching have little if any experience. One buyer demanded that the shipment of eggs be duplicated because he hatched only two chicks from forty eggs and that they both died within two days. A little inquiry brought out the facts that when this man received his eggs by express he had neither broody hens nor incubator on hand. It was three to four weeks before he could put part of the eggs under a hen and the others into an incubator. Eggs do not always hatch a hundred per cent at home, but after being picked up, packed, standing the exposure of express travel, being held under unknown conditions for over three weeks, we should consider any hatch a good one. It would not be satisfactory but it would not give any claim on the shipper to replace the order. It is not always possible to settle disputes as to the sale of eggs for hatching, but we have come to the conclusion that there is one way out of the difficulty: to replace the shipment for half price if the hatch does not satisfy the buyer. If a breeder ships out eggs that

he would use himself, that he has reason to believe are fertile; the buyer should also be willing to take part of the "chance" that he would in using eggs gathered at home. No rule will fit all cases, but this agreement is one that we recommend to our readers as worthy of use.

There seems to be more opportunity to increase income from reducing cost of care and feed, rather than in the getting of higher or better prices for the products of the poultry yard. The too highly concentrated feed ration may seem to give a larger egg yield for a while but it certainly costs high at the time and costs still more when the hens begin to break down from its use. A ration that includes more green food and more roots, is less high priced. It gives a satisfactory number of eggs and your birds are not candidates for the "boneyard." A hen is a live creature, not a machine and the hen cannot be run as a machine to any permanent advantage. All through the hot months, that are with us, the laying stock and the growing chicks need the juicy leaf, the cut grass and clover, the waste from field and garden. Practice the daily feeding of green stuff until frost cuts it out of your ration.

The later hatches seem to have been better than for some years. There seems to be a fair average number of chicks in sight as we get about in village and country. Chickens have lived well, the number of deaths reported being less than for five years. A few breeders have written us or told us that they have lost more chicks than usual; some lots being all lost. There have been some large losses of day-old chicks in the express, usually from lack of air because of piling up of box on box. The shipper blames the express company and the express company thinks that the chicks were "improperly packed." Chicks and eggs are certainly perishable goods and need the best of packing as well as the best of handling in the express. It is good judgment to select with care the style of package to send eggs or chicks in. June gave many fine days that helped the growth of the chicks at large. Wide range and good food, alone, will not produce sturdy chicks. You need the sunshine, the clear air, the dry nights. June, this year, has been a rare month for poultry purposes.

We have a special offer of "Poultry Keeper" for three years to any address in the United States, upon receipt of One Dollar, or we will send the paper for one year to three separate addresses. Either of these offers means one subscription free of charge. In sending in your own subscription, by making a little effort right in your own neighborhood, you can get two others to send in their subscriptions with you and get all three subscriptions for one dollar. This will be a material assistance to us and will be appreciated.

THE HEN HOUSE FOR HENS.

Is the hen house for man or for fowls? Is the first aim in building a house to satisfy the taste of the owner or to provide for the nature of the laying hen?

In reply to these questions I wish to set forth a few facts. The first consideration in building a house for laying hens is to meet the demands of the laws which govern the physical nature of the occupants. Among these demands may be mentioned sanitation, exercise, warmth, privacy, convenience. The second consideration is to provide for the owner's economy (in time, labor and material) also convenience (in feeding, cleaning and gathering eggs.)

There are four general physical habits of the laying hen. She scratches, feeds, lays and roosts. Therefore she should have room for scratching, feeding, laying and roosting.

There are four general characteristics of the laying hen to be considered. She is affected by the weather, she is easily excited, she chooses privacy, and selects the highest point in the house to roost. Therefore she should have a house to meet the changing conditions of weather (cold, heat, darkness, and light.) Also the house should furnish a retreat, privacy, and the highest point for roosting.

I can show best how all these considerations are met by mentioning a house which I built in my back yard at the parsonage in David City, Nebraska. The house has met every requirement and has tested one hundred per cent efficiency in egg production.

To provide for a surplus of 20 pullets of a flock of 38, April 30th hatch, I built a house 6 by 8 feet, ground floor, at an expense of twelve dollars for material. The first floor was put one foot below the surface of the ground. Then above are the feeding, laying and roosting floors respectively. Windows are set at half angle to catch the direct light and heat rays of the sun for the scratching and feeding floors. The cloth ventilation is placed at one end of the fourth or roosting floor. Litter, feed and water are placed from the south side. The eggs are gathered and the roosts are cleaned through drop doors at the north.

The twenty pullets in the newly planned house laid 363 eggs during December, while the 18 pullets of the same hatch in an old style house of twice the dimension, equally warmed, lighted, ventilated, layed one-third less eggs per pullet on the same rations during the same month. How is the difference accounted for? Simply the newly planned house meets all the conditions governing the nature of the laying hen. It also provides economy and convenience for the owner.

This house can be built by any one, portable, any length, and for any number of fowls. It is especially adapted for the "fresh air" method, and for an open summer house. In the brooding season it is convertible into three houses; namely, the two lower floors will provide for two flocks of chicks, while the upper two floors will remain

the quarters for the laying hens.

I would be glad to hear from those who have used the four story house, and hear the testimony of others.

Robert A. Harrison,

Nebraska.

TO MAKE AN OPEN FRONT SCRATCHING PEN.

If any one of the readers of this magazine is cramped for room and desires to convert an ordinary small chicken house into a curtain or open front scratching house, it is a very easy matter to accomplish. Where it is not possible because of a lack of room to add an open front run alongside the regular pen, it may be done by placing the scratching shed annex on in front. That is exactly what I did with two small houses and the change gave the fowls lots of room where they could disport themselves in all kinds of weather, secure from snow or rain storms and giving atmospheric conditions exactly like being out in the open air.

I have never had a foot of glass in my houses, nothing more than unbleached muslin screens stretched and tacked upon frames which are hinged at the top, so that they may be raised and hooked up to the roof by day and dropped at night, when the weather becomes stormy and cold. The inner windows, which were originally the front ones before the annexes were built, are also provided with drop screen frames, covered with burlap or unbleached muslin. The doorway has a drop curtain with a roller at the bottom and may be easily rolled up and held up by a looped cord fastened upon a nail.

I give you the dimensions of two of the converted houses, as samples of what may be done at very little expense. The first, or larger house is 13 feet, 6 inches long, and the second 6 feet, 8 inches in length. As originally built, the front was the same height for both six feet. The new front is 5 feet, 6 inches high, with a 6 inch slope from the back. The larger house now has a scratching shed front, 3 feet, 9 inches wide, and 13 feet, 6 inches long, with two screens at front, hinged to drop and held up by wire hooks and eyes. The inner screens are fixed the same way and where the inside door formerly was, is hung a burlap drop curtain with a broom handle roller for night duty. The annex to the smaller house is 6 feet, 8 inches in length, with one screen. The side is three feet wide by 5 feet, 6 inches high at front. There has never been any frost on the roof or side of either house, during the coldest weather when the thermometer dropped below zero and when water in the drinking vessels froze into a solid cake. Nor has there been any sign of a frosted comb on any of the chickens. Such would be apt to be the case where there are glass windows. The muslin and burlap screens afford a circulation of air, without draughts.

M. F. Reeve,

Philadelphia.

No Guess Work With a "Tycos"



It does the essential thing with perfect correctness—it registers the temperature in the egg chamber just as it is. A "Tycos" Incubator Thermometer makes no mistakes; it is always accurate. You have to break a "Tycos" to destroy its accuracy. It is "aged" and tested before sold. That is why every "Tycos" is dependable. Send for Free Booklet, "Incubator Facts", "Tycos" Incubator Thermometers, each \$1.50. Incubator Hygrometers, each \$1.50. Rochester, N. Y.

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FRANK CROSS, M. M. F. R.
Montague, Mass.

Box 512,



RHEUMATISM

A Home Cure Given by One Who Had It

In the spring of 1893 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. If, after you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free? Don't delay. Write today.

Mark H. Jackson, No. 310 Alhambra Bldg., Syracuse, N. Y.

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It furnishes strength and feather making material enabling hens to moult and lay at the same time. Send for our new valuable poultry booklets giving prices.
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CORN HARVESTER with Binder Attachment cuts and throws in piles on harvester or windrow. Man and horse cuts and shocks equal with a corn Binder. Sold in every state. Price \$20.00. W. H. BUXTON, of Johnstown, Ohio, writes: "The Harvester has proven all you claim for it; the Harvester saved me over \$25.00 in labor last year's corn cutting. I cut over 500 shocks; will make 4 bushels corn to shock." Testimonials and catalog free, showing pictures of harvester. Address, NEW PROCESS MFG. CO., SALINA, KANSAS.

A PREACHER AND HIS CHICKENS.

In the January issue of Poultry Keeper I read an article by Wm. N. Staley, "A Word to Working Men" which led me to review my experience in poultry keeping.

Two years ago I began taking my first poultry journal and through it became daffy over scientific poultry raising and on the move every two or three years I have been unable to engage in the business on a very large scale. In the year 1910 I started my poultry plant with three hens. I increased the flock to fourteen, bought a small incubator and made coops and roosting house. From this start I sold eggs and broilers enough to pay for incubator, provide eggs for the table and 49 broilers for family use and leave a \$15.00 profit. I raised all chicks in the Philo brooder coops and in the fireless brooder. My loss of chicks in the fireless brooder is so small that I have never taken it into account. I brooded chicks this way, out of doors with snow all around the coop and the weather 5 degrees below zero and sold them in nine and ten weeks weighing two and a half pounds. After what seemed to me such a promising beginning the powers that be decreed that I move some 175 miles which made it necessary to sell all stock, coops, etc., and a new beginning was made.

Second year I started, 1912, without a single hen, or a married one either. I had a small incubator so bought some eggs and started the machine February 10. Froh 50 eggs I hatched 28 chicks. Two died, I killed two, leaving fourteen and sold this bunch at ten and twelve weeks old for \$14.50. The next hatch came off April 16. This hatch I kept for our winter layers, also some R. I. Reds of a later hatch. My oldest pullets began to lay Sept. 26, when five months and 10 days old and since that almost every day I have been getting eggs. Twenty-three pullets up to January 11 have dropped 270 eggs. For these I get forty cents per dozen and could sell ten times as many as I can spare at the same price. Part of the time it has been 24 degrees below zero. I keep pullets in Philo Economy coops. I feed oats, wheat and corn in deep litter; bran with one part corn meal, chare and shell, grit and bone meal is kept before them all the time. Feed here is very high and has cost me \$48.70; eggs for hatching, \$5.10; baby chicks, \$1.80; lumber, also very high in price, \$10.00; total \$65.60.

Income from chicks as follows: Chicks sold, \$14.00; chicks eaten \$13.50; Eggs sold, \$4.50; Eggs eaten, \$4.50; total, \$36.00.

Chicks my debtor, \$20.60. Yet I consider that I am in the lead for the pullets are just at that age when they will begin to lay in earnest, besides I have coops worth \$15.00; three or four dollars worth of feed; 23 pullets, 2 cocks worth at least \$18.75. This added to the income would make \$73.75, a balance in my favor of \$8.15, which I consider not bad for now I will have my own eggs for hatching. If I make not a cent on my small flock I am still

ahead for our meat bill has been cut 50 per cent. So with Mr. Wm. Staley I would say to the laborer, "Go thou and do likewise."

The above records are from just pullets, no blooded stock, just chickens just wait until I have an opportunity to get the best then look for my record of success.

Wm. M. Johnson,
Colorado.

ABOUT PEKIN DUCKS.

Editor, Poultry Keeper:

I will give a few pointers on the care of Pekin ducks. I have been raising them ever since I can remember. We live on a creek and can't let our young ducks run at large until they are fully feathered; it don't hurt the growth of the ducks but they will get on the water and just keep following the creek and go clear away. Have lost a few that way so we keep them yarded until fully feathered. Have hatched them under hens and in an incubator but can tell no difference in the two ways.

I sprinkle them two or three times while sitting with warm water and on the 24th or 25th day I take a vessel with enough milk warm water in it to float the eggs in and put them in it, several at a time, all that have live ducks will move in the water and the rotten ones will sink to the bottom. This softens the shells and makes them easily pipped.

When they are forty-eight hours old I feed them fresh baked corn bread and give them fine gravel and plenty of clear water to drink. Then I begin feeding them mash made of bran and ship stuff. They must have soft feed and plenty of gravel and good clean water. Wash out and refill their watering vessels often. I feed them lettuce for green feed and they certainly like it, and I also keep them on a grassy plot, too. When they are fully feathered I turn them out on the creek and feed them all the shelled corn they will eat.

Ducks hatched last spring began laying in October and laid till the middle of November. I never heard of the like before. They began laying this year in January. I think the meat of a good fat young duck far ahead of turkey.

Any time from the middle of March till July 15th is a good time to hatch ducks. I don't think the early hatched grow to be any larger than the late hatched but they begin laying sooner.

Mrs. H. Hoechstebach,

Missouri

Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind, or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 15th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

A FIRM BELIEVER IN THE PHILO SYSTEM.

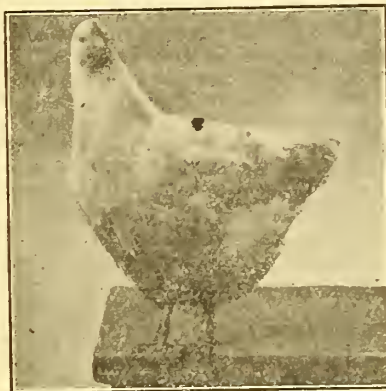
I have for nine years with the exception of a few months been a subscriber to the Poultry Keeper. I read many other poultry papers also but Poultry Keeper is my stand-by. It was reading its columns that first enthused me to the raising of thoroughbred poultry. I had always raised chickens in the good old way. I began in the spring by setting the first old biddy that had made up her mind to sit and that was not very early either for they did not begin to lay until the first warm days of spring, (winter eggs were almost unknown) and then we just kept on setting hens in the hay loft, under the manger, in a barrel in the wood shed, in an old stove in the back yard, in fact almost any place where old biddy decided she wanted to sit. Then it was a broken egg in the nest every now and then and the remainder of the eggs must be washed and cleaned. Yet often nice bunches of chicks were taken off, and they would look so healthy and promising and although I had powdered the hen well while sitting and perhaps had given her a greasing when I removed her from the nest, yet in spite of all, the little chicks would begin to droop and die and by a careful examination would find they were lousy and now the pretty little downy things must be greased and make them look so badly. I have greased 300 without stopping.

I had so often been told that incubator chicks were not strong and very few incubators were being used in our community and most of those who had ventured to buy used them about one season and then they were offered for sale. But for all that, I reasoned that an incubator would hatch the chicks early so that they would have time to mature before winter and that if the chicks were kept away from hens they could not have lice, and if they were kept off the ground for the first few weeks they would not have gapes. So with all these drawbacks removed the chicks surely would grow faster. My first venture was to buy a 200 egg "Old Trusty" incubator and a lamp brooder. Of course the brooder was not large enough to accommodate all the chicks from one hatching so part were put with hens. It was early and the ground cold and the chicks soon had White Diarrhoea and had lice also.

Those put in the brooder did the best and started off well but in a few weeks they had leg weakness and the lamp was a great deal of trouble. I got to reading about the Philo System which was practically a new thing at that time. I purchased a Philo System book and studied and thought and read until the next January when I bought lumber and the other necessaries and had a carpenter make three brooders on the Philo System plan. I was the first person anywhere in our part of the country to use them and many were the misgivings of my friends. Put the little downy things out in those coops without any heat. Cruel! But I had

studied until I felt sure I knew how to care for them.

I took the chicks right from the incubator and put them in the little brooder boxes, covering them with a soft feather pillow and then let them sleep and rest until they were old enough for their first feed. I then made little runs by the south window in the dining room where I gave them close attention for two or three days. Putting them to bed whenever they began to huddle and at the end of that time they had learned where to go to get warm and my troubles were over. They were then placed out of doors in the Philo coop with a muslin over them to keep the wind off and though the weather was sometimes very severe and snow was on the ground, the chicks were always happy and many reached two pounds in eight weeks. People came that first year from far and near to see my chicks. Now almost every farmer in the neighborhood has an in-



Prize Winning White Rock Pullet Winning second prize at Palestine, Ill., show, last January. Owned by Mrs. Robt. Young, Palestine, Ill.

ubator and a few Philo coops, and most of them are successful though quite a number fail by not knowing how before they begin. They are not willing to pay 25 or 50 cents for a good poultry journal and could not think of paying Mr. Philo \$1.00 for his valuable book but will get you to tell them all you know and call you up on the phone a dozen times a day when you are busy with your own chickens and after they have talked half an hour they will finish up by saying, "I expect you are busy and I'll not bother you but I thought you had had so much experience and had read so much I thought you might be able to help me."

I like to get information from my fellow poultryman and I like to give all I can, but there is a happy medium. I like to help those who help themselves. I am making my article too long but perhaps I will come again and give you my method of feeding and caring for little chicks, for it is all a mistake that incubator chicks are not strong, it is in knowing how to care for them. I shipped baby chicks this season as far as the state of New York and the purchaser wrote me they arrived bright and lively without the loss of one.

Mrs. Robt. Young,

Illinois.

FEEDING AND HOUSING CHICKENS FOR EGG PRODUCTION.

In writing this article on so vast a subject, I am giving you some of my own experience which I have obtained with much patience and many a day's hard work. I want to say right here, for the benefit of the beginner, do not give up if you fail in your first attempts but stick to it. By my failures I learned more than by my successes.

Feeding chickens for any definite purpose should begin with the first day's feed. The most important thing about egg production is the building of the hen for her work. I start my chicks with bread crumbs and hard boiled eggs, breaking them over to bran, oatmeal and some good brand of chick feed by the latter part of the first week.

When they are about three weeks old I begin feeding mash, which is composed of one part green feed (alfalfa hay in winter and fresh green grass or vegetables of some sort in summer) two parts bran, one part ground corn and one part ground oats. This I feed at noon, breaking them over to wheat and oats in the morning and cracked corn in the evening just as soon as they can eat it. When they begin to get their feathers I begin feeding beef scraps in the mash in proportion to the size and age of the chicks; this they get every day thereafter. I have read articles on feeding where the writer tells us to feed beef scraps three days in a week, etc. My idea is that a chick or a hen out on free range in summer, when worms and bugs are crawling every day, will not say to the insect, "This is my day off. I'll let you go." Not much, but she will pick it up, even if it is on a Sunday, so I think beef scraps should be fed every day.

The stock which I intend to keep for laying I let out on free range. This stock I feed one part wheat and one part oats for the morning feed, a mash feed composed of three parts green feed, two parts bran, one part ground oats, one part ground corn, one half part beef scraps. Some one might ask the question, is it necessary to feed green feed in mash to chickens on free range? I would say, for best results, yes. It is surprising to see how anxious they are for their feed. They eat it just as readily as those confined, and eat just as much of their own finding. I believe green feed is important for frame building, which is one of the greatest secrets of egg production. The feed for the evening is cracked corn. If your chicks are hatched in March (heavy breeds) or April (light breeds) they should be ready to house by September 15th or October 1st.

I have my own style of coops. They are a style of which I never read or heard of before. They are nine feet long by six feet wide. The studding in front is six feet high and in back four feet high. They are built on concrete foundations with a ground floor. I notice so many coops built up off the ground about two feet, allowing a space underneath for the birds to get

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 Hot water; double walls; copper tank—best construction. Write for Free Catalog.
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LICE KILLER Lice killing compound made. Works like magic. Simply put a few drops in nests and hang bottle in coop. Powerful evaporating vapors go into feathers, cracks and crevices. No painting, spraying or dusting. Easy to use. Circular free. Pound bottle prepaid \$7. Money back if it fails. Agents wanted
W. H. Metzger Co., No. 45 Quincy, Ill.

on the ground. My impression is that this makes it very hard to keep it clean.

My coops have a board floor two feet above the main or ground floor of the coop; this floor is built against the back wall and extends out four feet towards the front, leaving a space two feet between the raised floor and the front of the coop. This floor is built the whole way across the length of the coop; this floor is covered with about six inches of litter into which their grain feed is thrown. At the east end and one foot higher than the scratching floor I have the roost platform the whole way across the width of the coop. I have a frame covered with one-half inch mesh wire all the way along the front of the scratching floor to keep them from scratching the litter down over the side. There is a nice place underneath the roost platform for a nest, the other nests I have built in the northwest corner of the coop; two in number, one above the other.

By having my coops built this way it makes it possible to get at them to clean them out when necessary. I do not let my hens out over the winter season at all. In the front of the coop I have one door two feet wide by four feet ten inches high with a wire netting door inside with a spring to keep it closed as I have the outer door open during the day. It has one row of windows below, one with glass, one with muslin, these are six light size (eight by ten inch lights) one row above, two with glass, one with muslin, two light size (eight by ten inch lights.)

The reason for these two rows of windows is to allow the sun to shine over all parts of the coop. The lower window allows it to shine on the lower or main floor while those above allow it to shine on the scratching floor and the roost platform.

With all the experience that I have had in past years I am satisfied there is no coop that will serve me better than these I have now. I can stand in them on the stormiest days and do not feel any draught. I have them covered over with roofing paper on the outside except the front, which is boarded with tongued and grooved boards.

My hens, this season, are coming up to those I had last season and maybe a little better. I have three pens of pullets, two with ten hens and one male and one with eight hens, no male. One pen is composed of two year old hens, even in number, with one male. From this pen I hatched the most of my stock. With from one to two hens out of each pen for chicks, I am getting from three to four dozen eggs per week, per pen.

Pen No. 3, eight pullets, laid 18 eggs for November; 135, December; 162, January; 135, February. From February 1st to March 3rd there were only six hens in the pen, two were out on hatching duty.

Pen No. 5, ten pullets, laid 17 eggs in November; 184 in December; 202 in

January; 158 in February. This pen had two out during the month of February.

Pen No. 6, ten pullets, laid 61 eggs in November; 200 in December; 191 in January; 165 in February. One hen out since January 17th.

Pen No. 7, seven two year old hens left over from a pen of ten which averaged 183 eggs for the year November 1st, 1911, to November 1st, 1912, have been laying right along. In November they laid 77 eggs; in December, 61; in January, 80; in February, 85. This pen missed about five days since November 1st, 1911. These were mostly during molting.

The question may arise in some one's mind about the fertility of these eggs. I would say I have had better fertility this season than I have had for five or more years.

Pen No. 5 are pullet and cockerels mating, the cockerel is about seven weeks older than the pullets. I hatched 17 chicks from 19 eggs in an incubator from this pen.

Pen No. 6 are pullet and cockerel mating, the cockerel is about seven weeks younger than the pullets. The fertility does not seem to be quite as strong in this pen as in No. 5.

As for the health of my birds I can say I have very little trouble. I clean my coops every week and that has a great deal to do with their health. I will give three principles which I think are the secret of health. These points are clean, dry and weatherproof coops. If these three principles are carried out I don't believe there will be much trouble with the health.

Besides the alfalfa which I feed in the mash in the winter I boil the potato parings from the house and use these with the water in which they are boiled to scald the hay. I give each pen a head of cabbage about twice each week.

While these are about the general principles which I carry out in my poultry work, yet there are one hundred and one other little things which are just as important as these larger ones that each and every one of us must learn from our own experience as we go along with the work. To the beginner I will say, start with a small flock and grow with it. If you start too strong your flock will get ahead of your experience. That is the greatest failure some poultrymen have made.

Jas. A. Seaber,
 Pennsylvania.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year is sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

WHY I BREED WHITE LEGHORNS.

When I started in the poultry business the greatest question in my mind was the choice of a breed. There were plenty of breeds to choose from. Some practically valueless as egg producers, some otherwise. It was of the "otherwise" kind I wanted to make my selection.

I wanted a breed and strain that could be depended on to meet any and all chicken requirements that could possibly be concentrated into one flock of birds. During my search I traveled a great deal and read more than I traveled. My eyes were constantly on the outlook for a good article, either in the poultry press or the poultry pen.

My birds must be hardy and easy to raise. They must be prize winners at the shows and also fill the egg basket in the shortest possible time. They must show superiority on the table as well as on the nest. They must be pleasing alike to the eye and the pocketbook. After studying all the good breeds I finally decided on the White Leghorns as coming nearer to my Standard of Perfection than any other.

This noted breed of chickens, originating in Italy and they have, like the Italian race, been able to adapt themselves to every climate and spread to every corner of the earth. In the old world, in the new, in far-off Australia and New Zealand, the White Leghorns are one of the leading and most popular varieties. Although one of the oldest breeds in existence, they have been able to hold their own with all new breeds that have sprung up and their popularity has not decreased in the years of competition with new varieties. On the contrary their numbers have increased steadily, and today their reputation as veritable egg machines is world wide.

The White Leghorns are better fitted by nature for the purpose for which they were intended than the Black, Brown and Buff Leghorns. They grow larger, and, having white pin feathers, present a more marketable appearance. They lay large eggs; in fact, their eggs are larger than those of any variety except the Minorca. They are more tractable and consequently easier to manage and to prepare for the show room.

Their popularity in America is proven by the show reports from all parts of the country. The number of White Leghorns exhibited outnumbered in nearly every instance the other varieties of the Mediterranean and Asiatic varieties, and often at the New York show they outnumber all other varieties. Their snow white plumage, upright carriage and active appearance make them one of the chief attractions in nearly every show room in the country. Few varieties of standard bred fowls have attained such universal favor among poultry fanciers.

In short their attractive color, beautiful form and graceful carriage at once gives them a place among the prime favorites of the coop in the competitive show as well as on the table of the preacher and the crate of the egg producer.

"Donisthorpe's Single Comb White Orpingtons

Having BROKEN UP MY PENS FOR THE SEASON YOU ARE NOW TOO LATE FOR EGGS, BUT NOT FOR YOUNG BIRDS, and these are from the very best blood America and England can produce. Let me know what you want and I will give you special prices.

F. B. Donisthorpe, Box P. K. Geneva, Neb."

SOUR MILK SAVES CHICKS.

The fact that many of the largest and most successful poultry plants in operation in the United States are stocked with White Leghorns furnishes proof that they are one of the most profitable breeds in this country today. One has yet to hear of a plant that ever failed when this variety has been kept, while the history of successful poultrymen cites many who pinned their faith to this breed.

They are active and hardy and without doubt flourish best in close confinement of any known breed. Their eggs hatch the largest per cent of all breeds, because of their hardiness. The chicks run forth from the incubator or brooding hen as alert as matured song birds.

Young cockerels often crow at the early age of six weeks. Pullets will frequently lay when $4\frac{1}{2}$ months old when properly cared for. It is my firm belief that on account of their phenomenal growth they will produce more meat, by the end of ten weeks after hatching than any other breed of this class, and even some of the larger breeds. The White Leghorn is cheaply raised. The amount of food required to raise one American or Asiatic fowl will bring two Leghorns to maturity.

The White Leghorn rooster makes surroundings cheerful on account of his hearty crow. He has an ever watchful and faithful care of his flock, going into the feed bins and nests calling his hens to business and rations. No wonder the White Leghorn hen is the greatest egg producer of the poultry yard.

All in all, the White Leghorn is the bird you want to breed for more chicks, more eggs, more meat, more activity, more cheer and less vermin and smaller rations than any breed in the world.

As to which of these two grand White Leghorns (the Single or Rose Comb) I would rather breed, would be hard to decide, for I have the utmost confidence in each. They have both proven to me time and time again their merits. Both are full of ability to fulfill the needs and desires of every poultryman be he fancier, utility man or both. This is being demonstrated every day to me in my pens.

I also selected White Plymouth Rocks when I started, and I have a reason for so doing which I shall relate to Poultry Keeper readers later.

Harry Aiken,

Wisconsin.

One of the main causes of death among chicks is white diarrhoea. This is very prevalent and investigations have shown conclusively that the original source is often from parent stock. Many chicks have the disease when hatched, and others contract it from them, through feed and forage in infected litter or grounds. This transmission from chick to chick is common during the first three or four days, and this is the period of great danger, especially among chicks of low vitality.

The symptoms are a whitish discharge from the vent, which results in "pasting up behind." The chick becomes listless and sleepy, loses appetite, the feathers become ruffled, breathing labored, and they constantly peep or chirp. They may die suddenly or gradually waste away.

This disease is being most carefully investigated by the Agricultural Experiment Station at Storrs, Connecticut, and the third report of their investigations has been published. This report recommends the feeding of sour milk as the best thing to use for a preventive of this disease. It advocates feeding sour milk from the very first and keeping it before the chicks constantly. The acidity of the milk acts as a germicide. Moreover the milk is an animal product which chicks require in some form and it is a great factor in the growth and vigor of the young flock. Of course the commercial chick feeds now so common are fed and pure water supplied, but in addition sour milk is kept before the chicks constantly, the vessels being cleaned and refilled daily during the first few weeks.

Farmers and poultry raisers should feed sour skim milk constantly, at least after chicks are a few days old, as a preventive of this dread disease, and to stimulate their growth. It also increases egg production in the laying flock. Numerous experiments have demonstrated that skim milk and curds, or cottage cheese, are among the most stimulating feeds for poultry of all kinds, except very young chicks. Many claim that sweet milk is much safer until the chicks are at least a week or ten days old. There is a constant supply on nearly every farm and it should be universally used for the farm flock.—(Exchange.)

1. Your chicks probably have lice. It looks more like the ravages of the red mites than of body lice. Examine the chicks carefully and if you do not find lice of any kind on them look to the coop. The red mites do not stay on the chicks but hide in the coop during the day and suck their blood at night. You should give your chicks something more than commercial chick food, as this is not a complete ration. They need meat and bone and plenty of greens. Without greens they cannot digest their food and will soon refuse to eat or become sick. Even when they do eat they do not get the nutrition from their food.

2. There is no doubt that free range hens will do the best. Usually those who keep their hens confined get the most eggs as none are lost and they usually give the hens better care. When we know the hens are dependent on us for all they get we are more apt to care for them as they should be. Then when hens are confined they have to eat just what we give them and we can give a ration that will bring the best results. When hens are on free range they pick up much of their food and some of it may not be the best for egg production. On the whole, however, free range is preferable where one can give it. By good care and keeping a close watch on the hens we can get about as many eggs, and they will cost less.

ABOUT BREEDS.

1. Should Frizzles have Rose or Single Combs?

2. How many different colored Frizzles are there? I have the Whites and have been told that there are many colors. Please name them.

3. Is there such a breed as the Buff Minorca? If so, are they very profitable?

4. I had a Buttercup male that had big sores on its back that were fire red. When these sores came the feathers would all come off his back. I had to kill him. Please explain what caused it.

C. C. B.

Connecticut.

1. Frizzles should have single combs.

2. They should be solid color of black, white, red or bay, but the birds must match when shown in pairs or flocks. Mixed colors are not desirable or recognized by the Standard.

3. There are Buff Minorcas, but they are not recognized by the Standard. They are not largely bred and we do not know as to the profit which can be derived from breeding them. To make them profitable as a fancy fowl they will need considerable booming.

4. The bird probably had chicken pox. We do not know what caused it. This disease usually starts on the head, but it has been known to develop on the body.

DUCK AILMENTS.

1. What is the trouble with my Indian Runner ducks and remedy? When they are one to three weeks old and apparently doing well, they will squat, stagger about and fall over and kick, or may tip backwards. Some die in a few minutes, others get up and have other attacks and die after two or three days.

2. When they are one to three months old they get weak in the legs and walk on their knees or feet will stick out behind. The attack may last a few minutes and then they get up and run and may fall. Most die after a few days. They never refuse to eat. Have been raising Indian Runner ducks for three years and always have this trouble, losing half I hatch. Have tried all kinds of feeding mixtures, but all to no purpose. Some say it is from too much corn. I do not think so. The ducks have the run of a grassy yard and plenty of water. Have tried with just water to drink and another year water to swim in but the results are the same.

S. A. C.

Illinois.

1. This is probably vertigo when sometimes affects young ducks. They are sometimes attacked by the large gray body lice on the head, in which case they will appear apparently well and suddenly turn over on their backs and die. Dementia is fatal to young ducks. The remedy is to

better conditions. Feed little or no hard grain, plenty of greens and a full supply of meat. If you find the large lice on their heads apply head lice ointment. You can make a good one by rubbing a little flowers of sulphur in vaseline.

2. This is leg weakness. There is no specific remedy. Avoid fattening foods and add considerable bone meal to their mash. Corn might have this effect when fed in large quantities.

WHITE DIARRHOEA PREVENTED AND CURED.

The first thing necessary for the prevention of White Diarrhoea in little chicks is perfect health in the hen. This insures high vitality in the egg and this in turn a perfectly healthy condition in the chick at the hatch. It is safe to say that nine-tenths of the chicks which die of White Diarrhoea are hatched with the disease in their systems. To eradicate this condition, we must begin on the hen which lays the egg.

Elsewhere in this issue the Nabob Remedy Co., Box 2, Gambier, Ohio, tell of their wonderful discovery, **PRESCRIPTION NO. 4.**

They claim that this prescription if fed as directed will keep the fowls in such perfect health that the eggs will have such high vitality that your chicks will naturally be free from the dread scourge of White Diarrhoea at hatching time. This is nine-tenths of the battle.

The following is a sample of letters coming into their office daily:

Reesville, Ohio, 3-12-13.

The Nabob Remedy Co., Gambier, Ohio.

Gentlemen:—Inclosed find 25c for a box of remedy No. 5. I am using your No. 4 and find it all you claim for it.

W. A. Linkhart.

About one-tenth of White Diarrhoea is caused after the chick is hatched by overheating, chilling, bad feeding and uncleanness.

The Nabob Remedy Co. have discovered a remedy which will prevent the disease arising from any of these causes, if it is given as directed from the first feed. White Diarrhoea and Cholera are very similar in their symptoms and both succumb to the same treatment and both are prevented by the same means.

Prescription No. 5 is the remedy which has been recommended by the Colorado Agriculture College as the one best remedy for cholera, and it has been found to be a true preventive of White Diarrhoea.

The prescription may be had for 25c with the guarantee that your money will be refunded if you are not satisfied after using it all.

When once the dreaded scourge has broken out nothing has been found so successful in combating it as Prescription No. 3.

Letters like this are coming into the office of the Nabob Remedy Co. daily:

Hamilton, Ohio, 2-23-13.

The Nabob Remedy Co., Gambier, Ohio.

Gentlemen:—Last season I bought one dozen of your Prescription No. 3 tablets from the Buckeye Supply Co., and found them all that you claim for them and even more. Kindly send me price per dozen boxes.

A. C. Gardner.

This Prescription No. 3 has been on the market for three years and thousands of boxes have been sold under a money back guarantee, yet the company claim that they have never been called upon to refund a single penny. They are so confident that if you once use Prescription No. 3 that you will not be without it thereafter that they will send you a big box for 25c and refund your money after you have used it if you are not satisfied.

Five pounds of Prescription No. 4 costs \$1, but to introduce their remedies to every poultry raiser, the company agrees to send 5 pounds of Prescription No. 4 and a big box of each of No. 3 and No. 5 all for \$1 and refund you your money after using them. If you are not satisfied. Every poultry raiser should take advantage of this wonderful offer.

The company will send their circulars free for the asking.



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To Everyone Interested in Incubators and Brooders. Say whether interested in 60, 120, 175, 240 or 360 egg size. I'll also send my Special Low Price Freight Prepaid, Introductory Offer on my Ideal Incubators. Write for book now. Address J. W. MILLER CO., Box 19 Rockford, Ill.



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Rose Comb Beauty Epworth Strain Rhode Island C. B. Hanna, Box P. K. Epworth, Iowa.

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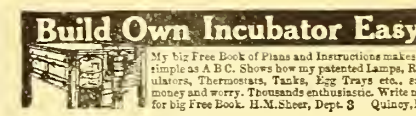


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The new way to make hens lay. "The Golden Egg" tells all, free. A Humphrey Bone Cutter on free trial. **HUMPHREY Glass St. Factory, Joliet, Ill.**

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My big Free Book of Plans and Instructions makes all simple as A B C. Shows how my patented Lamps, Regulators, Thermostats, Tanks, Egg Trays etc., save money and worry. Thousands enthusiastic. Write now for big Free Book. H.M. Sheer, Dept. 3 Quincy, Ill.

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Prices will be made that must move them. Write me your wants. Specials at \$1.50, \$3.00, \$5.00 each. Satisfaction guaranteed. Progressive Farm, J. C. Beare, Fort Gage, Ill.

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Free from roup and all diseases that mean a loss of poultry profits. You can stop these diseases by destroying the germ that starts them.



ROSS GERM DESTROYER
A standard Poultry Germicide. Give it regularly twice a week in the drinking water. It will tone the system, regulate the bowels, enrich the blood and make a strong, vigorous flock. We'll send a bottle post paid for 35c. Write for yours today.
R. & S. Mfg. Co., Dept. B St. Joseph, Mo. 1502-1504 So. 10th St.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

HISTORY AND DESCRIPTION OF THE TRUE ENGLISH CUMBERLAND INDIAN RUNNER DUCK.

THE original Indian Runner ducks as introduced into England, are known as the Cumberland, Fawn and White Runners. In the United States they are referred to as the penciled, or English Penciled Runner. They are also referred to in this country as the Dark Fawn Runner, so many names for one variety of Runner are very confusing and a standard name should be used exclusively in this country for the English Runner. We have recently received letters, asking us to explain the difference in the two varieties, the English penciled and the Cumberland Runner, and which laid the most eggs? In England the duck was always known as the Fawn and White Runner, and was never referred to as a penciled Runner. It was only after the mongrel Light Fawn Runner stole the name of this pure bred fowl that some other title had to be looked for, so as to distinguish it from the American product. The English Runner is the only original Runner, and all other runners have been bred from these birds. Some new blood of Runners has recently been imported into England; we do not refer to these, but will take them up later.

The English duck is a Golden Brown or Fawn color, having different shades of fawn on each feather, which is called penciled. The fawn in the drake is a lighter shade, and has no penciling in his fawn feathers. The white markings are the same in both duck and drake. They have a cap marking on the top of the head, also cheek markings under the eye. There are white feathers at the base of the bill about 1-8 of an inch wide, extending all around the base. The head marking extends from the white line at the base of the bill over the crown of the head, to a point about one inch back of the eye. The head or cap marking is divided from the cheek marking back of the eye, by a white line extending from the neck up to the eye. The color of the cap and cheek markings in the duck are fawn, same shade as the body markings, while in the drake, it is of a bronze green. The present American standard calls for a dark head in the drake.

The neck is white, extending well down to the upper part of the body. Body is fawn, except about half way between the legs and breast, the lower half being white, and some white under tail. The primary and secondary feathers in the wings are white. The fawn in the wings making a heart shaped figure on the back of the bird when the wings are folded. The fawn on the duck is of a uniform shade all over, but the rump of the drake is a bronze green, as called for in the 1910 American Standard of Perfection.

Legs should be long, and set close together, this is the only duck known with legs set close, and does not waddle. This gives it the proper gait, from which it gets its name, Runner. The legs are orange in color.

The bills in the young ducks and

drakes are orange in color, the ducks bill soon changing to a dark green color, while the drake has splashes of green on the bill as he matures. The bill should be strong and heavy at the base, straight from crown of head to point of bill, dished bills, and Roman convex bills are defects. Eyes should be set high in the head; the top of the eye being on a line with the top of the skull, and should be hazel in color. Carriage and type are the important points about the Indian Runner duck; without these they are eulls and mongrels. The best birds have best carriage, type and markings. The neck should be long and slender, showing the outline of the wind-pipe and cords. The body is long and slender, its greatest diameter being in the center and tapering both ways, showing no indication of keel. When at attention, the bird should stand very erect, as shown in the cut of the Runner; at other times the Runner does not stand quite so erect, ranging from 45 to 70 degrees.

The English Cumberland duck in its purity has never been known to lay anything but a pure white egg. They hold the worlds record for laying in contest. They are light eaters, and this makes them one of the most profitable fowl to keep; their eggs selling at an advance in the market over any white egg strain of fowl. There are a great many mixed breeds of Runners in England, and the best type and pure bred birds are in a very few hands. Our Mr. Richardson was a member of the firm of Simon Hunter for a number of years, and for ten years was sole owner of that plant, the largest and best equipped in the whole of England. He has been breeding Indian Runners for going on 30 years, and he has bred some of the very best birds in this variety. Winning at the largest shows in England and on the Continent, defeating the so-called authorities on this variety; most of them new in the business compared with this man of experience.

From Runners shown in our large shows, and pictures of Runners claimed to be imported birds, only proves the statement true that there are a great many breeders in England who have not pure bred Runners, as most of these birds show that they are not well bred. Some of the English breeders who are advertising, "The Worlds Best" have not won a first prize on pure bred Cumberland Runners in England, at the very large shows for several years, although they have entered a number of their birds. No one can have the "World's Best" unless he has first prize winners. If a person will deceive in one statement, he is guilty in others, and look out for the man who makes claims of having all the best in this variety of Runners. The smaller breeder makes claims on the strength of the larger breeder's claims, and when it is learned that these claims have no foundation, then there is trouble. The writer does not know of

a breed of fowl that has had the vicissitudes of the English Runner, since its introduction into the United States some 15 years ago. No doubt that the original Runners brought over first were mixed, and not pure bred birds. At any rate they were almost immediately crossed with other ducks after they arrived in this country, thus we have the origin of the American Light Fawn and White Runner, which by some fluke, was admitted to the American Standard in 1905. A bird, newly invented, laying green eggs, taking precedent over the real Runner of 60 years breeding in England. The Light Fawn Runners lack both carriage and shape, the essential feature in the pure bred bird. Owing to these conditions, a great many buyers have been imposed upon and mongrel ducks have been sold to them as pure bred Runners, the American Poultry Association Standard helping them to carry on this work. The people have awakened to the fact that they want the pure bred bird, which the poultry press of the day is helping to prove, the real position that the pure bred Runner should occupy. The American people do not want Runner ducks that lay tinted or green eggs, no matter of what breed or mixture they may be, they want a pure white egg strain. We have it in the English Cumberland Runner. Do not let any one deceive you into buying any strain or birds, domestic or foreign that lay or have laid tinted eggs. There has been too much commercialism in the Indian Runner industry. Some breeders would try to ruin the best Runner in the world, in order to introduce some mongrel breed, which they claim have been made up from the original root blood from India, only recently imported into England. It makes no difference what a duck is made up of, if it lays a green egg, we do not want it, although at this time I think it would be well to quote from a letter relating to the Indian importa-

P. K. MARKER.



There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 65c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper Marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

tion, which these people claim to have made.

The letter I refer to was written to a party in the United States and is from the Assistant to the Agricultural Advisor of the Government of India: "With reference to your letter of the 15th Dec. to the address of the American Consul Gen., Calcutta, a copy of which has been forwarded to me. I beg to say that it is possible that the word "Indian" Runner duck is a misnomer as far as India is concerned.

"There are ducks in India resembling Indian Runners, but they are probably descended from imported birds. Nothing in the nature of definite breed of ducks is obtainable in India as there are as yet no fanciers who have taken up the selection of birds of type.

I am, Yours truly,
Signed, A. C. Dobbs."

Another English breeder, who has been in the Runner duck business for a number of years, and who also helped import some of this new blood, sends out his circular stating, "These yards contain gems of the first water." He entered several of his Runners in the Crystal Palace Show in 1912 and he did not get a place on them. This breeder further states: "Intending purchasers are warned that these are not the kind and type of duck favored as Runners (meaning the new blood, known as Fairy Fawn) by the English Judges Bygott, Silvester, Stainthorpe H. Abbott, Moysey, etc., nor do they conform to the standard of the English Poultry Club. They are not the sort being strongly advocated by American dealer and writers in the United States poultry press as American and English Standard Bred Runners, etc. They are a distinct breed and type of an altogether different shape and character to these." If the latter part of this statement is true, and they are a distinct and different type and character bird from the Cumberland duck, what right have these breeders to cross them with the Cumberland Runner, introducing the green egg, and selling them, and also showing them in our large shows, as the Cumberland Runner. They are a mixed breed just as much as the Light Fawn is a mixed breed, and the only feature to recommend this new Runner, is its upright carriage. We have reviewed a number of the attacks made on the original Runner duck, by parties who have an axe to grind, and a little change to make on the side.

It would not surprise us to read advertisements in the near future that will run about as follows: "Wait for our New Fangled Strain of Runner ducks. We are about perfect. Greatest ever. A certificate of stock, and \$100.00 bond given with every sitting of eggs. Our birds originated from stock directly imported from the moon."

The English Cumberland Runner has stood the flood-tide of all mixed and new breeds, and today is more firmly grounded in its stability than it has been for the past 75 years, and the quality and type of the bird, by careful breeding, is better today than it ever was. No one can tell at present, where the original shipments of Run-

ners came from, and it is a question, if the original source were now discovered would they improve the present Runner? To answer this question, we might ask another. Do you think you could improve the carriage, shape or laying quality of our Prize Winning White Leghorns, by introducing new blood from Italy, where the Leghorn is a much inferior type, although this was the original country from whence they came?

One party writes that he will sell a lot of these New Variety (Fairy Fawn) Runners, which he will guarantee to lay green eggs, for the price of expressage from the originator in England, to the United States. Another breeder states he bought some of these Fairy eggs and after the Fairies got their feathers, and he saw what they looked like into the pot they went. He did not wait to see whether they laid green eggs or not.

Years ago some of the old breeders of Indian Runners, claimed to have shipped Runner ducks from England to India. The letter which we have quoted from the official in India, confirms this claim, although some of the breeders in England have been trying to discount this statement of Runners having been shipped to India. If there had been native Runners in India why would the fanciers send all the way to England for ducks which they would have had in their own country? We hope, however, that the real source of the original Cumberland duck will be discovered before long, not that it may improve the old stock, but that as a matter of history, the matter will be settled.

A good formula for feeding Indian Runner ducks for eggs is as follows: 100 lbs. bran, 100 lbs. corn, chops or meal, 100 lbs. white middlings, 50 lbs. alfalfa meal, 50 lbs. beef scraps. In cold weather mix with hot water and feed. In a box keep mixture of 2-3 grit and 1-3 shell, with plenty of good bedding for them in the house. The ducks should only be fed twice a day, and if they have good range in summer, once a day will be plenty to feed them.

Do not feed chicks or young ducks that are just hatched for 24 to 48 hours after they are out of the egg. The duckling can be fed on biscuit meal, stale bread, and a pinch of sharp sand. Soak in skimmed milk which has been boiled, and feed sloppy for the first 10 days. Also give plenty of earth worms, if you can get them, if not a little meat scraps. Then gradually stiffen to a crumbly mixture, not a sticky mass, add additional beef scrap to this mixture. Do not feed this on the ground—put in dishes or on a board. The better way is to feed about 5 or 6 times a day at first and gradually decrease as the duckling grows. In the water pan put some coarse sharp sand, this should be cleaned at least once a day.

At the end of the 5th or 6th week you can pick out your best birds and the others you can fatten for market. Turn the birds out, and let them forage for themselves, and do not feed them too heavily.

Water is necessary. The end of a large barrel to allow about 4 inches of water will answer, if you have no running stream. A bath in very essential and keeps them in good form. Young ducks should never be allowed in the water, give them enough to get their bills under water and wash their nostrils.

At the fall and winter shows we made 20 entries on Indian Runner ducks and they were awarded 20 prizes, most of them firsts, and also a number of specials. At the Atlanta, Ga., show where we made 7 entries, we won on every entry, also won the silver sweepstake cup for greatest number of points won. At this show there were over 600 Indian Runner ducks entered. This we think was the greatest entry of Runner ducks at any show in this country.

In breeding Runner ducks, you are getting away from disease that is so prevalent in rearing chickens; you are not troubled with mites or lice; no gapes, or white diarrhoea in the young stock, and fighting among the male birds. The Indian Runner ducks have everything to recommend them. Get the best quality you can afford, and you will never part with them.

Charles Fraser,

New Jersey.

HOW TO KILL RATS.

Editor, Poultry Keeper:

Without knowing just how it may be in other parts, down here there is a very close connection between keeping poultry and rats. It's a struggle to see who gets the chickens. Therefore, being young at the game, I write to suggest that we have a rat catching or destroying experience. I have tried several methods but Mr. Rat seems to be the master. Since everybody has more sense than anybody, perhaps, I might learn where I fail in this battle.

F. Latus,

Canada.

(Editor's Note.)

If the chicks or hens are kept in pens and runs, much can be accomplished by the use of cement floors and wire netting. With small brooders and coops, baby chicks may be made absolutely safe against rats, cats, hawks or anything else in this line. Rats multiply very fast and even if you have your quarters free you are likely to get new importations from your less careful neighbor. Rats are cunning and will not have much to do with baited traps, but steel traps may be buried and concealed with light trash, such as dried grass clippings, etc., and put near their holes or runs and rats may be outwitted this way. Many of them may also be shot by small repeating rifles. Extermination should be kept up continually. Poisoned bait may also be used, but there is danger of something else eating the poison. There are also remedies to inoculate the rats with contagious diseases, one of which is advertised in the Poultry Keeper. Possibly some of the Poultry Keeper readers may have other ways of combating these pests which they will give us for publication.

WHEN TO SELL SURPLUS STOCK.

Success or failure in any line of farming depends as much upon the marketing of farm produce as upon the producing of the stuff. A good many farmers who have been successful in getting out a bunch of early-hatched pullets, make the mistake of marketing them as broilers when they would be worth much more as layers next fall. As a rule, it does not pay to market these early-hatched pullets, even at fancy broiler prices, because it's these that must be depended upon to produce next winter's eggs.

Then, again, there are some farmers who do not know that there is a good market, at fancy prices, for early-hatched cockerels weighing between a pound and two pounds apiece. I have in a good many instances realized more for "broiler" cockerels, weighing a pound and over, when marketed in April, May and June, than I would have received for the same birds had they been fed until September or October. I have raised many a flock of early chicks, marketed the cockerels as broilers at the proper time and realized enough from them to pay for their feed and that of the pullets up to laying age.

I have always found it advisable and profitable to sell the cockerels, especially the early-hatched ones, just as soon as they can be made to meet the requirements of the market at the time. During April and May I have realized as much as \$8 per dozen for 1-1b. cockerels, and in exceptional cases more. During June, and often until late in July, from \$5 to \$6 per dozen for broilers weighing around 1½ lbs. each may be obtained. In one special market we are realizing as much as 60 cents per lb. for 2-lb. broilers as late as August. You can rest assured that the end of the season will see no male birds on our place, except those intended for breeders. The plain truth is that they will bring more at about 2 lbs. than in the fall when weighing twice as much.

There is a handsome profit in rearing chicks to two months old to sell for 60 cents or more, and but little or none at all in keeping them to four or five months old and selling them for about 30 or 35 cents. For these reasons it behooves all farmers and poultrymen to dispose of their cockerels promptly.

Then again, the pullets are thus afforded more room, grow better and lay earlier. It is safe to say that a flock of pullets from which the cockerels have been removed before they become troublesome, will come to maturity a month earlier than will one in which the cockerels are allowed to run all fall and summer.

Then, besides the cockerels, there are always a number of old hens. It never pays to overstock, so enough old stock should be sold each year to keep the flock down to whatever size can be most profitably kept. Like the cockerels, old hens can be sold to best advantage early, or before the young stock is thrown freely upon the market. After the active laying season is over these old hens will not be doing very much laying, and then is the time to

market them. I have always found it advisable and profitable to begin disposing of them as early as May, and all that we had to sell went before the close of June. At this time they are in the best marketable condition, and bring about, or nearly at least, twice as much as in the late fall. Then, too, it is very hard to get old hens into good marketable shape in the fall when they are molting. During the molt they eat more than otherwise, some are lost, they get poorer, the market declines rapidly, and when you dispose of them they realize not nearly as much as they would have it sold a few months earlier.

For most farmers it is usually advisable to sell all kinds of poultry through some reliable commission merchant, rather than to local buyers, because they cannot sell it better than you can, and you can rest assured, they are not in the business for glory. It is no trouble to get the name of a reliable commission merchant in some large city and a card will bring, by return mail, shipping tags and full directions for preparing for market and shipping. Most commission merchants always have some crates and coops on hand which they will gladly ship you.

When you come to cooping the fowls, make it a rule never to overcrowd, and ship preferably on Wednesday or Thursday mornings. Have two tags on each coop, one on each end, bearing your name and address and that of the commission merchant.—(Exchange.)

PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75 we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Company, Quincy, Illinois.

EGG RECORD FOR A YEAR.

Every one should keep a daily record of eggs and expenses. Give the chickens credit for eggs and meat and at the end of the year take stock and strike a balance, then you will know how it pays. February 1, 1911, I started in to learn if I could raise baby chickens that would eventually give winter eggs. I succeeded as will be seen from the following. The record

is from hens that I raised by hand.

February 1, 1912, I had twelve hens and a rooster (White Leghorn) ten Leghorn hens, one R. I. R., one a cross between R. I. R. and B Leghorn. In March I set two hens and that number were sitting most of the time until October, when a few pullets began to lay. December 1st the R. I. R. laid. In January lost one White Leghorn. A good record appeared in February issue of this journal. I loaned it so can not quote from it. Please compare with this:

	Eggs.
February, 1912	197
March, 1912	213
April, 1912	189
May, 1912	220
June, 1912	192
July, 1912	151
August, 1912	171
September, 1912	149
October, 1912	109
November, 1912	67
December, 1912	111
January, 1913	158
Total	1927
Summing up the winter months.	
February, 1912	197
December, 1912	111
January, 1913	158

Total

The original twelve hens and their pullets are given credit for the above record. See page 73, May, 1912.

John G. Harper, D. D. S.,
Missouri.

BLACK ORPINGTON BREEDERS RALLY!

A strong effort is being made to increase the membership of the National S. C. Black Orpington Club to 1,000 members, the 500 mark having been passed for some time. In order to give all a chance to boost at the state and county fairs and all shows all sending in dues for \$1 at this time will have their membership extended to October 1st, 1914 and will be entitled to compete at all shows without additional payments of dues for next 16 months. Show secretaries are invited to send for awards at once. A little effort at the shows and fairs now by members will surely put the Blacks where they belong, at the very front of public popularity which their wonderful laying records would justify. The range of prices on winter eggs makes the Blacks a big winner, and every breeder is urged to get into the band wagon and pull for the Blacks. Club catalogue will be sent any one interested for a stamp. Address, Milton W. Brown, Secy., Sta. L, Cincinnati, Ohio.

DON'T SUBSCRIBE

To any poultry journal, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and journals and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

ESSENTIALS TO SUCCESS WITH TURKEYS.

We used to imagine that turkeys were difficult to raise. They are, if one goes into the business "by guess," as we did. That was a good many years ago; and I wouldn't like to tell of all the mistakes that were made. Perhaps it wouldn't make very interesting reading. But while we were blundering we were also learning. We tried not to make the same mistake twice, and here are a few of the things that we learned:

First in importance is the matter of a suitable location. No one can hope to become a successful turkey raiser without a good area that can be used for a range. Of course, the land need not necessarily be good for agricultural purposes. It may be practically worthless as farm land and yet be an ideal place for a turkey ranch. However, it should be "high and dry." Ground that is swampy is not suitable for turkeys. I know of one successful turkey ranch where the land is very poor and rough, with very little growing upon it but weeds, and a natural growth of scrubby trees and briars. This place being somewhat isolated, the owner has no trouble in keeping his turkeys away from neighbors' grain fields. When turkeys are kept in large numbers they become a nuisance in thickly settled districts if allowed free range. When kept in small enclosures they never do well. A large field or orchard properly fenced, makes a very good pasture for turkeys, but after a time they become tired of going over the same ground day after day. When not allowed free range it is a good idea to turn them out of the turkey field once a day and have one or two herders. I know a young girl who herds turkeys every year. It is a rather monotonous task, however.

Seasonable Conveniences.

During the laying and hatching season a field enclosed with woven wire fence is a great convenience to the turkey raiser. Kept in such a place, the hens cannot wander away and "steal" their nests, as they otherwise would do, and when the young turkeys hatch they are much safer and less trouble. If there is no chance for the hens to hide their nests, some brush should be piled in suitable places for their benefit. Large barrels covered with branches and provided with some straw or dry leaves for nest material will sometimes meet the hens' approval. Barrels should be securely wedged so they cannot roll. Such nests are very convenient when the hens go to sitting, as they can be enclosed to protect the turkeys if there is danger.

When turkeys are kept in a field during the laying season it is a good idea to gather the eggs after the fowls have gone to roost. They resent intrusion, at this time, and we make it a rule never to let a turkey hen see us near her nest when it can be avoided.

A large house or shed that can be used for both old and young is a great convenience. Such a house can be built at small expense. It should have a good roof, but no floor is necessary if

built on a well drained spot, as it should be. Walls on all sides except the south should be quite close, and if the house is very large a few small windows, protected with wire netting, will be found of great advantage when the weather is so bad that the fowls need to be kept in the house. They need plenty of light and good, fresh air. One entire side of the house should be enclosed with strong, close-mesh poultry netting, or woven wire fencing, which is more substantial than the netting. Then a heavy double burlap curtain should be provided, for I find that in spite of the turkey's reputation for hardness he appreciates some extra precaution in severe weather. Don't make it necessary for the turkeys to roost in trees.

Suggestions as to Feeding.

By the foregoing I do not wish to infer that suitable range and a suitable house are alone necessary to success with turkeys. While they require plenty of exercise, they also require plenty of feed. If it cannot be found on the range it must come from some other source. Turkeys consume large quantities of insects, especially flies and grasshoppers, but where the range is limited these soon become scarce. They also must have pasture. They like good grass, clover or alfalfa, but a grain field is their delight. A flock of growing turkeys will sometimes live for weeks in a wheat field after the grain has been harvested. This is clear gain for the farmer who keeps turkeys as a "side line."

While wheat is one of the best grains for them, they should not be confined to it alone. Then, too, it must be sound; moldy grain of any kind is unfit for turkeys, or any other poultry, for that matter. We have lost a good many young turkeys from eating unripe and moldy grain. A few years ago a near neighbor had a similar experience. His flock, the very finest in that part of the country, were a little more than half grown when they suddenly began to die. They had discovered some shattered grain around the place where the thresher had stood. It was badly spoiled, some of it beginning to sprout, when they began eating it and the trouble commenced.

We never feed rye (that is, the grain), to any kind of poultry, because it is difficult to digest and is said to be too stimulating. Several years ago we lost a number of turkeys from the effects of eating rye. We did not know it was injurious and the turkeys were allowed the run of a rye field. To make a long story short, they ceased to thrive and more than half of them died. Those that survived were more or less stunted.

Oats will sometimes injure young turkeys if they eat too much of it. This is due to the hulls lacerating the digestive organs. This may be overcome by boiling the oats before feeding. Oats with the hulls on should be either boiled or scalded before feeding to any kind of poultry. We have found the steel-cut or pin-head oatmeal a valuable food for young tur-

keys when fed in a dry state. Either whole wheat and cracked corn, equal parts, either dry or cooked, is an excellent ration for young turkeys. We feed corn and wheat daily after turkeys are two months old. Before that their ration is more or less varied. Onions play an important part, as a tonic. In fact, we find that even the matured birds relish an occasional bran mash containing chopped raw onions. They are good for all kinds of poultry, except laying hens. Nearly all of the trouble with young turkeys can be traced to wrong feeding, lice, and lack of vigor in the parent stock.

It pays to buy good breeders, even at fancy prices. Never keep hens and gobblers known to be related. We usually keep a young gobbler with yearlings or two-year-old hens. Young hens give better results with an old gobbler. Don't attempt to cross two varieties of turkeys unless you know what the result will be. We like the Narragansett better than the Bronze, but it is probably only a matter of taste. Have never raised White Houlards or Bourbon Reds.—(Exchange.)

NO WHEAT CHAFF FOR BABY CHICKS.

In preparing the litter for my brooders I found that the chaff worked into my flesh; thinking this might do the same with baby chicks, and work into their legs, I asked several poultrymen about its use, but all said they used it and it was all right, so I used chaff for litter for my baby chicks to scratch in. After a time I began to lose a lot; they moped around and died. They seemed healthy and there was apparently no disease that I could find but their crops were entirely empty and they were almost too weak to stand. I noticed that some had watery looking eyes, and that their feathers were damp where they tucked their heads under their wings. I picked up one of these and examined its eye; on close observation I saw in the corner a white spot which I probed with the eye-end of a needle; I thought it a piece of straw. Upon getting hold of it with a small pair of tweezers I found it to be the sharp end of chaff which had worked far down into the eye. After removing it the chick at once began to eat, and was soon all right. I found 35 or 40 in this condition out of a flock of 200 baby chicks 10 days old. The pieces varied from a quarter of an inch to five-eighths in length and two chicks had three pieces in one eye.—(Exchange.)

FREE OFFER.

Radiatone is the name of a new and scientific remedy for poultry. It keeps chickens and hens well and well hens lay. The manufacturers are so sure of this, that they want to send a package free on trial. No results, no pay. See advertisement page 146. Address, The Quality Drug Stores Co., Kalamazoo, Michigan.

FEEDING FOR EGGS

Whether you keep 12 or 1000
hens you want them to

Lay when Eggs are High

HOW TO WHAT TO FEED

The profits in poultry are
in eggs—profits in eggs are
during the cold months and
not during the summer.

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Your Hens
Will Lay

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ful poultry paper published.
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Send booklet on Feeding Poul-
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Name

A SENSIBLE RATION FOR A SMALL FLOCK.

The ever recurring subject of feed-
ing hens is an interesting one for those
of us who cannot procure all that com-
petent judges have decided the best for
maintaining health and producing eggs.

My experience, covering a period of
fifteen years, may help some poor, dis-
couraged hen man or woman, who after
reading articles naming the various
grains, ground and whole, which hens
must have, are ready to say, "It is
no use for me to keep hens.

There are thousands like myself with
a small flock who are unable, for vari-
ous reasons, to provide other than the
commonest of grains for them, who may
take from my experience encourage-
ment to go on in some old way.

A flock of sixteen hens fed, for
whole grain, only corn and oats; for
ground feed, fed dry wheat bran and
corn meal, with the addition of meal
meat or as some call it, meat scraps,
gave in one year, from January, 1912,
to January, 1913, a profit of thirty-
two dollars and thirty cents, besides
raising a flock of eighteen chickens.

The eggs laid amounted to \$23.47.
Poultry sold and eaten, charged at
market price, \$8.53.

A flock this year, 1913, consist-
ing of five pullets, hatched May 8th,
eight yearling hens and two year
old hens, have layed constantly through
the fall and winter. The hens have no
lice and no mites in the house.

People who have hens in this vicin-
ity laugh at the idea of hens without
lice. The general idea is that lice are
as much a necessity to a hen as her
feathers. I read a short time ago an
article, I think in the Poultry Keeper,
on the subject. The writer said, "A
hen never existed without lice." I am
sorry to differ from him, but I most
earnestly do. I handle my hens daily
from the time the chickens are hatch-
ed and they are free from lice on their
bodies and no mites in the house.

My hen house is a part of an old
barn, dry but cold. It is kept clean,
droppings removed often, and roost
kept well kerosened, with a good supply
of scratching material on the board
floor.

The daily feed for the fifteen hens
and cock consists of a little more than
a pint of cracked corn in the morning,
at noon dry feed, one and three-fourth
quarts composed of wheat bran, four
parts; corn meal, 2 parts; meat meal, 1
part, a little salt and a pinch of pep-
per. In the middle of the afternoon
a bundle of clover hay tightly bound
and hung where they can just reach
it and a piece about five inches square
of sprouted oats, with occasionally a
pan of apples and all the waste made
in a family of two, about a quart
daily. At night, nearly a quart and a
half of corn, half cracked corn and
half a pint of oats.

This is not a wonderful record, I
know, but shows that we, who, by cir-
cumstances, are obliged to make the
best of what we have in feed and hous-
ing, can make a few hens profitable.

Maine.

Mrs. S. F. Davey,

A SUCCESSFUL EGG FARM.

In southeastern Iowa lives a farmer
who has made a success of producing
eggs for the market. His success is all
the more wonderful when we find that
egg farming is only a side line in his
regular farm work. The farm consists
of 200 acres of the best soil in the
state of Iowa. His speciality is the
breeding of heavy draft horses, but
he keeps about 20 head of good dairy
cows, which add a good deal to his in-
come.

He produces all his own feed, with
the exception of alfalfa, which is pur-
chased on the market. He has install-
ed all the machinery necessary to do
the various back-breaking tasks of the
farm, among them machinery suitable
for the grading and mixing of his
chicken feed. By so doing, the cost
of producing a dozen eggs is far below
that commonly supposed.

Although the farm is stocked with
Single Comb White Leghorns he hatch-
es all the chicks the natural way. Sev-
eral dozen Banded Plymouth Rocks are
kept for this purpose and to supply
the table with meat. The chicks are
left with the hens until they are about
three weeks old, when they are removed
to the orchard. In the orchard they
are given free range over five acres of
ground. In that way they grow rapidly,
are of strong constitution, and they
greatly aid in the war on the orchard
insects and pests. The orchard also
affords them considerable protection
against hawks and other enemies of
young chicks.

A small colony coop is allowed every
twenty five chicks, so that they are
not crowded in their sleeping quarters.
It has been found that crowding the
young chicks in their sleeping quarters
is of serious injury to them, in that
it causes a loss of feathers, which calls
for an additional strain on the system
of the chick in growing more feathers.

The young fowls are kept in the or-
chard during the summer up till the
nights are beginning to get frosty,
when they are culled out and those
that come up to the standard are plac-
ed in the laying house. All the rest
are sold on the market. The writer
does not approve of waiting until so
late before selling the fowls, unless
the farmer is able to wait until Thank-
sgiving for in the fall of the year the
market is usually flooded with culls,
so that the price is necessarily low.

Only pullets are placed in the laying
house for the owner has found that
by using pullets he can realize a better
profit, both in the number of eggs laid
and the small amount of food a pullet
consumes. At the end of the first year
all the pullets are sold on the market
for breeders, only the very best being re-
tained for breeders on the farm. During
the summer they are fed with a view
of building up their constitution and
developing them to the highest point
of perfection. When the breeding sea-
son is at hand they are in fighting trim
and have "their decks cleared for ac-
tion." It is a safe and sane method
of preparing breeding stock for their
work. Line breeding is practiced for
it allows the owner a chance to build

up the flock, by handing down from one generation to the other the best characteristics of that generation.

During fair weather the laying hens are allowed to run in the yards, but when it is sloppy or damp they are kept in the house. Everything is kept clean and sanitary which accounts for the success of the farm in doing away with diseases. A good ration is fed and a supply stored away to serve as green food for the hens during the cold nights. In this way no expenses or time is lost in preparing sprouted grain. It tends to keep the cost of production down, which increases the profits.

The success of the poultry on this farm, which is only an average farm, is due to the fact that no increase is made in the number of hens kept from year to year, it being the policy of the farm to keep 200 layers each winter. By using grains and other foods produced on the farm and mixing and grinding the foods with the farm machinery, the expense of feeding is practically nothing. The range raised pullets are the strongest that one could obtain and their cost of producing is not over 25 cents each, while the average poultryman finds that it costs 75 cents to raise a Leghorn fowl to maturity.

The profit from the different branches of the poultry last year amounted to nearly \$600, realized from the sale of eggs, breeders, culls and hatching eggs.—(Exchange.)

WASHING SHOW BIRDS.

A badly-washed bird, naturally, looks far worse than one shown just as it is taken from its run; but by the exercise of a little forethought and by carefully following my directions, nobody need fear failure.

First see that you have a clear, bright fire, and abundant supply of hot, soft water. On no account use hard water, as it would cause the soap to curd, and completely spoil the bird. Partly fill two bowls, or tubs, with water as hot as one can comfortably bear one's hands in—one bowl or tub for washing, the other for rinsing. We find round earthenware milk pans, about eight inches deep and eighteen to twenty inches wide, answer the purpose admirably.

The operator should provide himself with a large apron, covering him to the chest, and roll up his sleeves above the elbow; because, sometimes, the bird objects to the process, and gets one wing loose, a struggle and splash being the result. The bowl should be placed at a convenient height, then with soap and sponge, make a slight lather.

Before immersing the bird, always wash its head, throat and the upper part of the neck thoroughly clean with the soapy sponge, but do not leave any lather on the face. Then take it in both hands, and hold it, up to the throat, under water for a few seconds, to saturate the feathers and prevent them breaking. Next hold the bird in the left hand, its head towards the left shoulder, its breast resting on the palm, and legs securely held between the fingers, soap the sponge and thoroughly rub all over the neck, back, wings,

under the wings and breast. It will not hurt the short feathers to be rubbed sideways, or round and round; but the flights and tail must be rubbed all ways in one direction. By this time the bird will be so completely subdued, that it may be grasped across the back and wings and held breast upwards, while the thighs and underparts are washed. When all the dirt has been removed, wipe off as much of the lather as possible with the sponge, then plunge the bird into the clear water, taking care to rinse out every particle of soap. Next wipe with a soft towel, always stroking the feathers one way, i. e., from head to tail until as much as possible of the moisture has been removed, when it may be placed near the fire to dry, either in an ordinary exhibition hamper, lined with thin canvas or in a cage made specially for the purpose, the back and sides of which are composed of wood or canvass, and the top and front of wire. The cage must not be so near the fire as to permit its inmates to be scorched; and if the operator is not pressed for time, he should hold the bird before the fire, with each wing in turn spread open, so as to dry the under side. Whilst drying, they must be watched, and from time to time stroked down, or the feathers may not dry straight and in their proper places.

It is not often that we find birds faint whilst being washed, though they do so occasionally; but a little cold water poured over the head, and a teaspoonful of water, with a little whiskey or brandy, poured down the throat, quickly revives them, and after a few minutes the work may be continued.

If possible, the washing should be done two or three days previous to the show, and the birds should afterwards be shielded from extreme cold, or draughts, lest they should catch cold, as the washing renders them more susceptible to atmospheric changes.—(Exchange.)

VITALITY AND EGG LAYING.

If all the laying competitions that have been and are now being conducted in various parts of the world bring home to us the lesson conveyed by the report of the South Australian laying contest, they have not been in vain. Under the heading general observation, it says that "it is very noticeable among some of the birds which have been bred from some recognized laying strains that they are becoming very small and weedy in appearance, and it is very doubtful if the heavy laying has been maintained in these birds, which their ancestors were duly noted for. Various troubles have arisen which though small at the present stage, point to a decided weakening of the constitution; and also point to a limit having been reached in some systems of mating which will have a disastrous effect if continued much longer on the same lines, and become a matter for regret if constitution is sacrificed for the sake of a few more eggs. Secondly, it has been a too prevalent occurrence during the test to have to treat birds suffering from troubles of the reproductive organs. This points clearly to

a loss of strength in the internal organs, and although this trouble has not yet become a common one, I feel it is high time a warning note was sounded, as it is a weakness which is going to prove very costly if not eradicated. A number of birds have shown weakness in various directions, such as weakness in the legs, which have suddenly given away when the birds have used a little more energy in traversing the yard. Again, some have shown a sort of paralysis, apparently of the brain, the victims making several complete circuits within a small compass, and appearing quite dazed and stupid for some minutes. These matters require, I think, an infusion of new and invigorating blood in the breeding systems, and tend to bear out my previous remark, that breeding on certain lines has proceeded far enough."

This warning is very timely. It is only a matter of a very few years when even the best managed and line bred flock bred for heavy egg production will show such symptoms, even if fresh and vigorous blood is from time to time introduced. So far we have not found a way to linebreed for heavy laying and maintain vigor or improve it. In culling out all weaklings and by breeding only from the strongest and best, we may defer the day of reckoning for some years, but its ultimate arrival is as sure as fate. As every egg laid by a hen in excess of her natural ability to produce without weakening her constitution is a drain on her vigor, it is only a matter of excess vitality before she will show the inevitable signs of distress. After all is said, wise is he who aims to keep his flock from over production, as the temporary gains of the excess stand in no relation to the inseparable loss of vitality. He who makes his hens produce within reason and keeps up their vitality, is after all the only safe and sane poultry breeder.—(Exchange.)

THE IMPROVED ALUMINUM CHAMPION LEG BAND. PRICES REDUCED.

The Champion Leg Band is the oldest and most popular band on the market. It is made in one piece, in

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two sizes, adjustable to fit any fowl.

This band always stays securely where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the broad part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend the two lugs over the loose end as shown in cut. Cut off surplus with scissors.



Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state that you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

BLACK LANGSHANS.

Editor, Poultry Keeper:

I have been interested in the letters from other breeders of poultry and if you have room in your paper, I would like for you to print my letter in your valuable paper.

The Black Langshans are the best all round fowl I have ever seen. They are very sturdy and the young will grow and thrive where other breeds are a failure. They are prolific layers of brown eggs. They may be easily confined in a pen made of five foot wire netting; if given free range, they will go out and hustle and make a large part of their own living. They are good birds for those who want either eggs or birds for roasters or broilers. Their quick maturing qualities and white flesh make them desirable for market birds.

Their noble carriage, together with black color with greenish tint, make them also excellent birds for the fancier as well as the utility breeder.

The Langshans are fast coming to their own. They will soon be among our most prized birds. Poultrymen are learning that the Black Langshans are finding many friends not only among the fancier, but among the utility breeders. Their class is well filled in the show room and is growing every year, while farmers are beginning to know of the winter egg production for which the Langshans are noted. They will soon rival the Plymouth Rock as table fowls as their white skin makes no difference to the consumer.

F. B. Crawford,

West Virginia.

**RHODE ISLAND RED PULLETS
MOLT THE FIRST FALL.**

In your June number, a writer from Wisconsin says that early hatched pullets will not molt in the fall; in fact, he says they will not molt till the next year. I have read the same in other poultry papers.

I have raised three hundred chicks each of the last six years. Last fall I had one hundred early hatched Rhode Island Red pullets that molted, which very much provoked me. Why they molted, I have no idea. Can you or any of the readers tell me? They were hatched, fed and raised as the others were the five years before and they did not molt till the next year after they were hatched. These one hundred red pullets roosted in a house by themselves and the floor under their perches would be also covered with feathers every morning. They had no lice or mites to bother them. Each house was cleaned every morning the year round, and the chicks had plenty of fresh, clean water and grit before them all the time. They had the range of 160 acres. Their ration consisted of corn, soaked or boiled oats, and a mash of shorts and bran. Sour milk or buttermilk also was fed every day during the summer and fall. The corn for the chicks was crushed of course. I also fed some millet, wheat and corn bread to start the chicks on. The chicks were fed often and liberally, but not

Buff Wyandottes

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Let me try to please you. Send for circulars containing best lot of testimonials put out by any breeder. Ten years a breeder of Buff Wyandottes.

ORIGINATOR "HIGH QUALITY" STRAIN.

J. E. WILLMARTH,

AMITYVILLE, N. Y.

so much that they would not eat it all. Why they molted last fall is what I should like to know, and how to prevent it. Part of the chicks were hatched in an "Old Trusty" incubator, and part by hens. They were raised by hens and all were handled just the same as for the five years previous.

Last year was the first year I had raised Rhode Island Reds. For the years before I raised Plymouth Rocks, but hardly think the difference in the breed would account for the R. I. Red pullets molting. The first were hatched last year on March eighth the same date the first were hatched on the year before.

Missouri.

Bessie Lewis,

(Editor's Note.)

The Plymouth Rocks are among the large breeds, the adult birds weighing a full pound more than the Rhode Island Reds, and the average Rock will not mature as quickly as a R. I. Red or Leghorn. This may have much to do with the birds molting and the solution lies in hatching the smaller breeds a little later, to avoid the fall molt the first year. If our Rhode Island Red breeders have a different solution for the matter, we shall be glad to have their views on the subject.

POULTRY RAISING IN THE EVERGLADES OF FLORIDA.

Away down here on the shores of Lake Okeechobee, we can hear the merry cackle of the hen and the crowing of her mate, as of old, to announce the first gray streak of the dawning of a glorious southern morning. Thus the keeping of poultry marks the advance of civilization to the drainage district.

Here in the everglades, according to the U. S. Government report, we find the richest land in the world. Much soil, richer than the valley of the Nile. There is plenty of rainfall and the average temperature throughout the year is 86.

All kinds of vegetables and green stuff can be grown throughout the year, and chickens can be hatched any time, although the main hatching season here is during the winter months as this is the driest part of the year. The rainy season begins here in May and we have about four months of rainy weather. This is an ideal country for the raising of poultry, with but little expense. We have no need of hen houses, as the hens can roost out in the open air the whole year. We have one hundred hens fenced off on a four acre piece of ground, with perches put up for them to roost on, but no cover over them. There is plenty of shade of natural growth in the grove.

We have boxes placed around in different places for nests. Our hens are healthy, happy and busy shelling out the eggs at 35c per dozen. Hens are selling here for \$1.25 and eggs will bring 35c almost the year round.

We are stocked with White Leghorns, White Plymouth Rocks and Rhode Island Reds. We also have a nice flock of English Penciled Indian Runner ducks. We use the X-Ray incubator for hatching and find it one of the best on the market. The chicks are brooded in fireless brooders. We have our growing stock in the banana grove as the banana plants furnish plenty of shade. There is an abundance of bugs and worms and there is no need of beef scraps. The youngsters get all the animal food they need.

We expect to stock up heavily this season in order to be able to supply the demands of people who will move into this district during the coming fall and winter. This is a new country and as soon as the drainage is completed, it will be settled rapidly. Most of the everglade land is already sold to northern people.

The main farming season here is during the winter months. We begin planting our gardens in September and October and ship vegetables during the winter months to the New York market.

In conclusion will say to any one who wishes to raise poultry with but little expense, come to the south or to Florida, the land of sunshine and flowers.

Mrs. W. S. Dowell,

Florida.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

"Success With Poultry" is worth more than all other Poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount (\$1.00) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

\$60 PER HEN PER YEAR

SEND POST CARD TODAY for free 56 page free book, "The Why and How of The Miller System." Test our idea far enough to form an opinion. Show our guarantee to your lawyer. Miller System Company, 52 7th, Binghamton, N. Y.

HOW ABOUT THE FEAST BIRD, MR. TURKEY?

A FEW years ago I told a lady friend to keep me two turkeys and a gobbler when she took them to market. I suppose she thought my father or mother should have told her, for she sold them all. When I asked about them she said they strayed along the railroad getting grains that had lost out of cars and that she sold them for fear they would be killed. Now, we people around here have telephones. She could have called or dropped a postal. Think back to your own childhood days when you wanted to start a little business of your own. I was very much disappointed.

A cousin of mine had made \$47.00 from one turkey hen that summer, and I had planned great things for the coming season. I had depended on this lady. It never occurred to me that I could order through the mail. I guess I would have been afraid to run the risk anyway. It would have been well enough, too, for one should learn if the man with whom he is about to deal is honest and trustworthy. Many advertisements sound all right but investigation proves bad for the other party. I may be getting away from my theme but poultry business is poultry business, and its up to the advertiser to produce good and excellent stock to fill his orders for honesty is what counts. Be honest or quit.

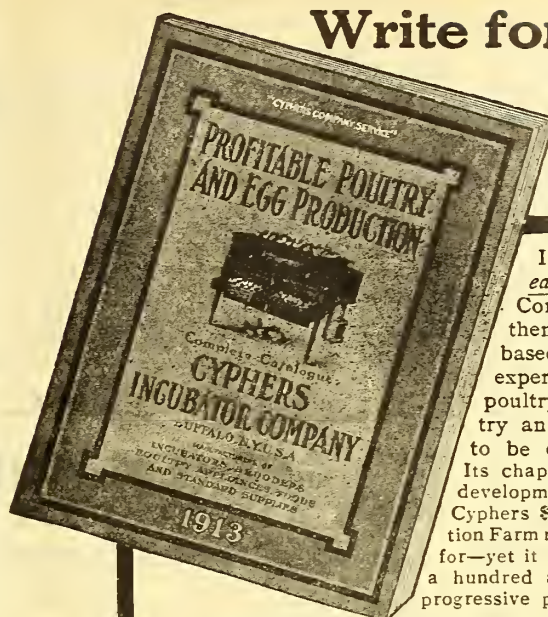
When spring rolled around I thought I would buy two dozen eggs. I raised ten turkeys and kept six hens and a gobbler. I planned to raise eighty or a hundred the next summer. How nice those eggs looked to me the next summer. I valued them at \$1.50 to \$2.00 each if they should hatch. Don't forget, however, that you should never count your chickens before they hatch, holds good for turkeys. The eggs hatched poorly and the turkeys were weak. I let them run in a field and some pigs caught all but three and one of them died a week before I sold the others. This was bitter experience but I was learning.

I have lost several turkeys but gained knowledge. Last year I kept four hens. These were the same hens I hatched from the eggs I bought. I had bought the eggs in late summer and decided the hens were not developed well, causing my first trouble. Turkeys which are kept for eggs should be hatched early. I find the little turkeys are stronger and the eggs much larger. I bought a gobbler, too, that was not related to the hens.

I feed them regularly three times a day for the first three weeks. Then I feed once a day at night. They always come in then to roost and get the habit. When six weeks old I stop feeding. I find their crops are full and its just an extra expense. They grow just as fast. Three weeks before you are going to market then feed three times daily. Don't pen them, they worry and don't fatten. Sell two weeks before Thanksgiving for the price is then at its best. year a lady brought a White Holland

Don't raise all kinds together. Last

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It is more than a catalogue—is educational, helpful, valuable. Contains 244 pages—many of them filled with sound advice based upon the knowledge and experience of some of the foremost poultry authorities. "Profitable Poultry and Egg Production" deserves to be called a poultry text-book. Its chapters on right methods, newest developments and proved results at the Cyphers \$75,000 Poultry and Demonstration Farm make the book well worth paying for—yet it is free. Also lists more than a hundred articles needed and used by progressive poultry keepers.

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turkey hen to mate with my gobbler. I raise the bronze turkeys, and I hatched mostly gray turkeys. So don't let your gobbler run with another bird for you will hatch a mixed lot. All of one color is pleasing to the eye. Ship your turkeys. The extra change will rattle just as loudly in your pocket.

Mrs. Ralph Riggs,

Indiana.

ABOUT GAPES.

Editor, Poultry Keeper:

I saw in the May issue of the Poultry Keeper, where R. V. T., Illinois, asks for a cure for gapes. I have tried turpentine as you have answered, gum of camphor and almost everything I ever heard of. One day I got my sister's old poultry papers and read of a cure for gapes, which is a sure cure. I wish all of your readers might have it as there is no guess work about it as a cure. I took a National Biscuit box and cut a square hole in the lid, which I made to fit the box, and put in a piece of glass, as light, by which to see your chicks when inside. Then I made a wire box of coal screen size wire to fit inside biscuit box, put a lid on one side of inside box, about two inches wire and the length of wire box. This I stood on legs, about two inches from bottom of biscuit box and had another slide inside of outside box large enough to put in a spoon near the bottom of box. I heat a dipper or hot brick and put my chicks in wire box, then put brick in, then chicks

then shut top lid, open slide and pour on one-half teaspoonful carbolic acid on hot dipper or brick. Shut slide and watch the chicks. When they begin to pant, let them out. The fumes will make them jump around lively, but they will stand a good smoking before it hurts them. One application is generally all that is necessary. If a second application should be necessary, wait a few days before giving it.

Edna S. Bitner,

Pennsylvania.

PREPARE TO CAPONIZE THIS SEASON'S SURPLUS COCKERELS.

Everyone desires to realize the greatest amount of profit possible from the surplus cockerels but is puzzled as to which is the best method of disposing of them. Selling them as broilers will, of course, bring in a profit, but unless one has a good market for them this is not satisfactory. In order to secure highest prices they must be in prime market condition, and this entails quite a bit of labor unless one is properly prepared for the work.

The best method of disposing of them for the farmer and poultryman alike, is selling them as capons. Cockerels that have been caponized bring a price per pound that compares favorably with that of broilers. Some markets quote them at 30@50c. and as they weigh from 8 to 12 lbs. each, according to breed, it will at once be

seen that caponizing is profitable. A large capon will bring about as much as a good sized turkey, and from a smaller amount of feed consumed. No special feed or feeding is necessary in growing capons. In fact, they will eat anything. They will eat feed that the other fowls will not touch. Hence, the small feed bill in raising capons.

A capon is an unsexed male bird. A capon shows no inclination to crow or fight. He is quiet and docile. The comb and wattles of the capon cease to develop. Capons are also easily fattened. One of their characteristics is a fondness for little chicks. They can be taught to care for a brood of chicks and make the best of mothers. Cockerels caponized in the fall will be right to brood chicks early in the season when broody hens are unavailable. They are especially of value to the breeder of a non-sitting variety of chickens, as chicks can be hatched in an incubator and given to the capons to be cared for.

Caponizing can be learned by anyone, and a little experience will enable one to become quite expert in manipulating the instruments. Procure a good set of instruments—they can be purchased very reasonably, and the work is much more easily done with a full set—follow the directions that accompany them and you will have very little trouble. Of course your first operation may not be a success, but this should not discourage you. You are acquiring experience, and that is what is needed. It is a good plan for the beginner to watch an experienced person perform the operation if this is possible. Lacking this, the next best thing to do is to experiment on a dead cockerel, one that has been killed for table or market.

The heavy or meat breeds of chickens are better than the light or egg breeds for making capons. They should weigh from 1½ to 3 lbs, and be in good health at time of operating. It is best to perform the operation early, if possible, before hot weather sets in. While the work can be done successfully in hot weather, the results are usually not so good as earlier or later. Do the work in a room where there is plenty of light, and select a day that is bright and clear.

For the operating table a barrel or box may be used, as preferred. It should be of the right height for the operator to work well. A barrel turned on end answers the purpose nicely and is usually of the right height. The fowl should be laid on its side, a cord tied around the feet and a weight attached to the end, which is allowed to hang down the side of the barrel. This is to keep the feet still and hold the fowl in position. Another string is fastened around the wings and a weight attached to this also.

Cockerels intended for caponizing should have no food for about 24 hours previous to the operation. Now, follow the directions that accompany the instruments. After the cut is made and held open by the spreaders, the male organs will be in full view. In size

and shape they resemble navy beans, and are of a yellowish color. Some remove the upper one first, but it is better to remove it last. If the upper one is removed first, and a loss of blood occurs, the view of the lower organ would be obstructed and its removal made more difficult. Do not sew up the cut after the operation; it will close of itself. When the capon is released the ribs will close up the wound and it usually heals in ten days.

Care must be exercised to remove the organs entirely or "slips" will occur. Of course, when this happens the fowl will not be a capon and cannot be sold

for such. It often happens that the organs develop again and the cockerel becomes fit for breeding purposes.

The fowls are ready to be fed as soon as the operation is over with. First they should be provided with water, however. They should not be put on fattening food. The object is to keep them growing until they are about a year old. Then, a few weeks before marketing, place them in small yards and feed three or four times a day, on fattening rations. This will put them in prime market condition. — (Exchange.)

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PROFIT IN A SMALL FLOCK.

Editor, Poultry Keeper:

I received the February number of the Poultry Keeper which I wrote asking for and was well pleased with it, as I think the articles in it of actual experiences are of more interest and far more beneficial to the average poultry keepers than a dozen journals filled up with show bird talk. What the average people want to know about poultry is how to raise birds successfully and how to get them to produce eggs after they are grown. Such as the laying contests and I think a few hatching and growing contests would be of great interest. I suppose there is no use to tell you I am an amateur in the chicken business for you know that before you have read this far in my letter and if you publish this letter all amateurs will recognize me as one of their fellow members before they read it all. You ask in this February number for such letters and I am going to do my best to give it to you.

I started in last winter with 20 hens and two cocks to see if it would pay to keep poultry in town and raise a few chicks. I ordered an incubator and brooder and had another incubator and brooder made. I loaded them up with eggs from my little flock which I had been saving, expecting great results, which I got, I guess, for I only hatched 12 chickens and 10 of them died before they learned to take care of themselves. I was somewhat discouraged but I decided I was not in such a hurry for fried chicken and I started in to learn how to run an incubator for a week, and decided I would try eggs from some flock that had a little more range than mine had. I bought my eggs from a man in the country and started again.

I had a little patch of wheat come up in my yard about 10 feet square, just when my second hatch of 130 little chicks came off and I gave each little chick a drink of water by dipping its beak into it. When they were from 36 to 48 hours old I gave them a little corn meal and started to clip some of

the green wheat for them with a pair of shears and I raised 125 of them, selling and eating 65 of them and have yet 60 pullets which cleared \$10 a month all winter.

I give you here a copy of my expenditures and receipts of the 20 grade Leghorns from January 1st to October 1st:

Paid for 20 hens and 2 cock.....	\$11.00
Paid for incubator and brooder....	11.50
Paid for making incubator out of brooder	3.50
Lost eggs of first hatch, 20 doz. value	6.00
Bought eggs for 2nd hatch.....	5.00
Paid for feed from Jan. 1 to Oct. 1	21.65
Paid for oil for hatching	6.00

Total expense	\$65.00
Sold and ate 30 fryers at 40c.....	\$12.00
Sold and ate 35 fryers at 35c	12.25
Sold and ate 30 doz eggs at 40c.....	12.00
Sold and ate 30 doz. eggs at 30c..	9.00
Sold and ate 50 doz. eggs at 25c..	12.50
Sold and ate \$4 2-3 doz eggs at 20c	16.93
Sold and ate 17 old birds Oct. 1. ...	8.50

Total receipts	\$83.18
Stock on hand, 60 pullets at 50c each	\$ 30.00
Stock on hand, 3 old birds, 50c each	1.50
2 incubators, value	15.00
Total receipts and stock.....	\$129.68
Total expense	65.00

Total net profit\$64.68
Which equals a profit of \$3.23 per hen in 9 months, which I think very good for an amateur and having the bad luck I had on the start, and only having a bunch of grades to begin with that my wife purchased from a neighbor.

I will say further my 60 pullets laid some in November which I kept no record of, beginning December 1st to keep a record on them. Up to date they have laid 120 dozen eggs with two more days yet to make the 3 months. For these I received 40 cents a dozen for all I could spare, which

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Box C, Yarmouth, Maine.

makes a value of \$58.00. My feed bill for the sixty has been \$4.50 to \$5.00 a month, as I raise my own green feed which is cabbage.

I want to ask the question in regard to this feeding everything on the market to chickens to get them to lay. I know of a poultryman here in this town who has two large feed houses full of everything imaginable that a chicken could eat and he is very attentive to them in every way, yet I have got more than 2 eggs to his 1 all winter long and the only way I can figure it out is that I feed more cabbage than he does, for cabbage is my main feed. I feed two quarts wheat morning and same at night. Through the day they have cracklings, bran or cabbage and take their choice and 10 cents work of liver twice a week. They get no corn, oats, barley, sunflower or beef scraps. I did buy one package of beef scraps but they wouldn't eat it. In fact they were raised on cabbage and bran and I don't believe they care for much else. I haven't the best house in the world for chickens, just an old barn, 12 by 14 feet and nearly all my hens got their combs frozen as we had quite a lot of cold weather with from 8 to 1 below zero.

Why don't some of you poultry journal men tell us more about the Rose Comb R. I. Whites, the Buttercups, the Buckeyes and the Buff Orpington Ducks? I see you have a cut of this duck in your February issue.

J. M. G. Wilson,

Washington.

RHODE ISLAND REDS FOR GENERAL PURPOSE FOWLS.

After reading Dr. Sanborn's letter on "Why Breed Thoroughbreds?" I am tempted to give the readers of Poultry Keeper some of my experience along this line.

I started my poultry keeping when a boy, like Dr. Sanborn, with mongrels, not because some friend gave me them but because I did not have the money to buy thoroughbreds.

I bought the four birds I started with from a lady in my neighborhood. I bought them by the pound, three pullets and a cockerel. They were all of the same color, (black), but they did not suit me. I had a poultry journal some where and after reading it over and over decided I wanted some thoroughbreds.

About that time there was a contractor finishing up a contract of grading for the railroad company near here. I learned he had some white Plymouth Rocks that he had brought with him from Pennsylvania, which he had paid a long price for and which for some reason he did not want to take away with him.

I made him a visit and when I left brought six hens and one cock bird with me for which I paid him \$3.50. They were nice big birds but did not lay to suit me.

Next I tried the Barred Rocks and from them to the White Leghorns. Like most every one that starts in the poultry business I was trying all of the

different breeds I could hear of.

I could not do any good with the Rocks or Leghorns. The Leghorns laid very well but I had to have incubators to hatch with for which I had about \$50 invested, counting brooders, also.

About five years ago, after reading several different poultry journals, I decided to try the Single Comb Rhode Island Reds. I bought a cockerel and two hens from a breeder in Illinois. I did not pay him very much for them, considering what I got and what I had heard and read about the R. I. Reds, but right here is where the trouble began with me. My neighbors, upon hearing what I had done, all joined, without a single exception, and pronounced me crazy. Some of them went further than that, but when my Reds began to lay and I began to get the place covered with young Reds the neighbors that had said the most also the worst began to sneak around when they thought the other fellows would not know it and ask me what I would take for a sitting of eggs or perhaps a rooster. Of course we did not always trade but enough of them went crazy as I did until now you can see a nice flock of Reds almost any way you may go from my Red farm.

Right here I want to say that after I got the Reds "agoing" I did not need the incubators and brooders, so began to sell them off to people that were not fortunate enough to own a flock of Reds. The incubators are O. K. where one wants to raise chickens in large numbers but where only a hundred or two chickens are wanted you do not need the incubator if you have Reds. I raised a fine bunch last year without the use of the incubator although I had two on the farm.

I set two hens the same day and when they hatch give the chicks all to one hen. I put them in small colony

houses and as soon as they are able to follow the hen let them have free range. I feed the young chickens on prepared chick feed until they are old enough to eat cracked corn, then give them all they will eat of the corn. By having free range they will not eat very much corn and it certainly is a pleasure to watch them grow. I never in all the years of poultry raising had chickens to grow so fast and do as well as they did last year. I think I would be safe in saying I raised 90 per cent of what I hatched. My breeding stock has free range of the farm and they are laying well.

I built a new chicken house last fall, of the open front type, 12x24. This, with what houses I had, gave me plenty of room. So on cold or snowing days I kept my chickens busy in the house digging for their feed and they never fool me when I go out with my egg basket.

I suppose there are other breeds as good as the Reds and I believe it is the breed you like best that will pay you best to keep. I have kept several different breeds and I am bound to say the Reds suit me better than any breed I have had, so if you have a few birds and they don't suit you by all means try some other kind if you think you would like the R. I. Reds, give them a trial and if you get good stock or eggs to start with I am sure they will suit your fancy, else you are mighty hard to suit.

They will lay in the winter when eggs are high and then get broody early so if you have no incubator you can have early chickens any way and the early pullets are the ones that lay and pay. By all means get your chicks out early and get them out Red.

The R. I. Red crank,

Andes, Kentucky.

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FROM A BERLIN CORRESPONDENT
 Editor, Poultry Keeper:

The writer of this is the "friend in Berlin" who, some time ago found the Poultry Keeper all right and whose statement of this fact was recorded in the issue of June, 1912, page 125

At present I am not raising poultry because I do not think that the kitchen or cellar or balcony of a Berlin flat are suitable places for hens. For this reason I cannot send an egg record, a branch of poultry study which interests me very much. I carefully study these records but find them incomplete as they seldom, if ever, state how old the hens were when the record began, and how old when the record concluded. I take it for granted that the first laying year or period is meant, but believe it should be stated.

I think more records like that of the Kidder Poultry Farm, New Hampshire, October issue, page 271) would interest many readers. It is the first clear record that I can remember which gives a laying capacity of chickens for a period of years. But this record also is incomplete, as it does not state on which days the several hens died. I do not believe that they died on the exact day concluding the year: very improbable that the four hens died between December 31, 1911, and January 1, 1912, or more strictly speaking between the laying hours of these days. But an exact calculation as to what these 25 hens would have laid in this period of 40 months after hatching had they all lived, is therefore impossible. What did the hens die of? \$30 is my opinion a very good price for 15 hens of the age mentioned. Were they not too old for breeding purposes? I cannot believe that such prices are paid for slaughter poultry, at least not for 3 year olds, unless meat prices in America today are certainly outdoing those in Germany.

I am reading several poultry journals, among them your esteemed American paper. I have a number of interesting poultry books and have visited a number of poultry shows here. I am therefore one of those who "know all about poultry."

From one of these poultry shows I will, by this chance, relate a comical incident. One of the exhibitors had a method or article for sale, or whatever it was, by which he could tell if an egg was fertile or not: even more—he could tell if the result would be a hen or a rooster. A prominent poultryman handed him a dozen boiled eggs

and was informed that 5 (those marked by the exhibitor with a cross) would be roosters, the others would be hens. This exhibitor was thrown out by the director of the exhibition. America is not the only humbug land on the globe as many Europeans are inclined to think—there are others.

About 1881, when we lived on Clark St., Hartford, Conn., my parents—I was then a small boy—bought of our neighbor, a Mr. Morgan, six splendid White Leghorn hens and a rooster and a fine set they were. All our neighbors thought very well of them. At any rate our hens laid splendidly, a legend from those days says an egg per hen every day, but this can hardly be fully correct, as all poultrymen know.

In the cold winter the laying dropped off and my father built a box in the "chicken apartment" of the barn, perhaps 4 feet long, 2½ feet wide and 3 feet high, with a roosting pole about 1 foot from the ground and a window in front. At first they would not enter, but after they found that the box was warm inside they did not lose much time in getting in when the little door was opened. The head of the family, of course, was always the first to enter, as he always claimed the warmest place. Mornings they were hard to get out and fortunately my father had previously made an opening in the top of the box and when he blew into the opening (he had a good lung) they came out as if a pound of dynamite had exploded behind them. The effect certainly was that the laying was increased very decidedly. After roosting in the box they were kept in the barn, which was previously supplied with fresh air, for an hour or so, and then allowed to go into the yard. On very cold days they stayed in the barn entirely. They never took cold by this method, and in view of this experience, I am hard to interest in the "open front" method which I believe is fully as dangerous as for catching cold, even if draught is avoided. In my opinion, with regard to the "open front" or "catching cold" question, poultrymen are not making a difference between "warm" and "too warm." I am sure that when the hen house is heated by a stove until it becomes too "warm" the hens will catch cold when let out; but I am just as sure that if the house is so heated by stove or otherwise that the hens are just comfortable (not "too warm") then they will not catch cold.

If my house is heated so that I feel

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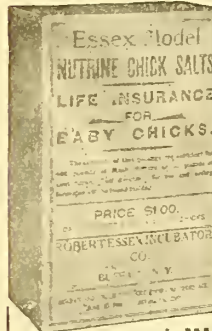
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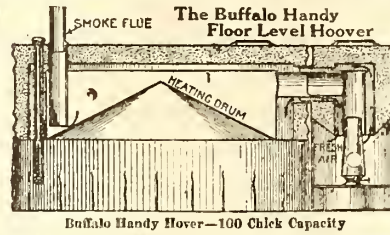
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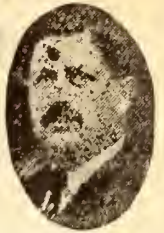
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perfectly comfortable I shall not catch cold when going out even if it is very cold outside. If it is heated so that I perspire and then go out I will surely catch cold, but I will also catch cold if, when going out I am previously thoroughly chilled by a too cold or underheated room. In short, I claim the room must be right, neither too cold nor too warm and not as many seem to claim as similar as possible to the outside temperature. And as with mankind so with animals, including poultry.

Several of our hens became broody and we had good luck setting them, but many of the little chicks were killed by the neighbor's (not Mr. Morgan's) dog, which also broke the roosters neck so that we had to get another. I shall never forget one morning when the chicks were supposed to be out, my father and I entered the barn and saw the little ones peeping out from under the mother hen with an apparent intelligence as if several years old. I also shall never forget when a few weeks after breeding, on entering the "goat apartment" of the barn to feed "Hans," I found the little chicks roosting on the goat's back—a picture that no one can paint. My goat, which afforded my family, and me especially, much pleasure was secured for me by Mr. Morgan.

My father had too little time to take care of this "chicken farm" which we gave up when, because of a business change we removed to Rochester, N. Y. In that city we had, about 1893, a set of Brown Leghorns for which I built a nice hen house but with these we had bad luck. We bought them in the fall and the following winter was so cold that upon my father's suggestion we took the chickens into our kitchen for the night. I believe what little "laying intentions" they had this cold winter were spoiled because of the disturbance to which they were subjected in bringing them into the kitchen when they had already gone to sleep. This "farm" ended in a way similar to the first as we then moved to Chicago.

I believe that if conducted on a large, very large scale, poultry can be made to pay. It can be made to become a business for itself independent from other farming, but the average farmer who allows 50 or 100 hens to forage wild around his farm buildings is not enough of a business man and not enough of an organizer. If a city

man, who has once successfully organized a factory would study the subject thoroughly, would go to the country and organize a poultry farm, he would succeed. But I believe it is difficult to get a city man to go to the country, and this is probably the reason why there are so few really large poultry farms, why so large a percent of the eggs consumed come from those farmers who keep only 50 or 100 chickens and who actually don't know if it pays to keep chickens or not. Of course, if neglected as most farmers do no wonder they don't pay.

To organize a very large poultry farm as I suggest takes a bit of capital, but I believe if I had the necessary means I would courageously go at it, of course I would start small (that is the only way to start and would go on slowly as I collect experience. I am sure that with an organizer capacity which my family assures me is one of my valuable properties I would make a success.

Germany is sending several hundred millions of marks to foreign countries for eggs and other poultry products. Why do we not raise more poultry here and let outsiders raise the feed? I guarantee that if done right an acre of land with chickens on it will yield ten times the profit that it will if chicken feed be raised on it. No, we raise grains in Germany and send millions in money outside for poultry. Think of a vegetable garden in the lower part of Broadway, N. Y. and a 30 story skyscraper way up in Yonkers!

Perhaps I may stumble over a bit of capital some day. At present I am struggling along as best as I can, keeping myself posted on the subject of poultry, which has been my hobby for a long row of years. We hear so little about that city in California, (Petaluma) whose principal occupation is poultry in all its forms, and which has constantly over a million living chickens in its domain. Why don't we hear occasionally from there?

Now, Mr. Editor, I have written, I believe, more than you require and should space be limited you would please me and your readers by striking out from my lines what is not wanted. I hope what there is good in them will interest a few of your readers, even if they don't come from a man who is "right in it." If so, perhaps I can write something more intelligent than this first letter later on.

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BROWN LEGHORNS AS LAYERS.

Editor, Poultry Keeper:

I send you a record of one of my pens. One year ago this month I had 21 thoroughbred Brown Leghorn pullets, mostly Rose Comb, hatched the last part of May, 1911, and one little mongrel, part Leghorn, hatched much later. She did not lay until some time in February but I called them 22 in all. They were put in a small colony house 6x10 feet. Too small, I know, but it was the best that I could do at the time. They have been in there ever since with the exception of letting them out on the ground a few minutes at night just before roosting time. This has not always been done as there have been weeks at a time when they have not had this opportunity. They commenced to lay in December and were doing so well I thought I would keep a record from January 1st, 1912, so here it is:

January, 246; February, 272; March, 429; April, 477; May, 491; June, 420; July, 334; August, 200; September, 134. I do not call this anything phenomenal but consider it a good record, taking into account the intensive manner in which they have been kept. They had no forcing food for egg production, and but very little meat of any kind. I have given them skim milk part of the time when I could get it.

They have had a dry mash of some kind before them most of the time, but not always. The droppings board has been cleaned nearly every day and the litter changed as often as every two months. They have had the best of spring water and have been kept perfectly dry. There has not been a sick one among them. I never have seen a healthier looking flock. Their heads are bright red and they are singing and working for their food and laying.

It has been a lesson to me. It has taught me what can be done on the intensive plan if rightly managed.

J. A. S.,

Pennsylvania.

INDIAN RUNNER DUCKS AS GOOD LAYERS.

Editor, Poultry Keeper:

I see you are calling for egg records so I give you my egg record and experience. As a beginner in the Indian Runner duck business I found that if I would have any success with I. R. ducks on this coast care must be taken to procure a strain that would lay only pure white eggs. In April of 1911 I received from Mrs. Wm. Harshbarger three sittings of New Standard Light Fawn and White Indian Runner duck

eggs. In May from 39 eggs 31 ducklings were hatched and carefully following instructions received with the eggs I raised 27 ducks, 14 of these being drakes I was able to dispose of them at a good price for breeders. The 13 ducks began laying in September at the age of four months and thirteen days. In last two weeks of September, 1911, 24 eggs were laid. In October, 238; November, 325; December, 341; January, 320; February, 301; March, 365; April, 337; May, 351; June, 325; July, 341; August, 285; first two weeks of September, 1912, 102. A total of 3,655 pure white eggs or an average of 281 eggs per duck for one year. These, if sold at average market price, (which in California is 30c per doz.) would bring in seven dollars per duck.

The equal of the Indian Runner as an egg producer has yet to be found. Undoubtedly some of my ducks have laid over 300 eggs apiece as two of the 13 were lame for two months last winter and they stopped laying through that time.

I have no fight with the English breeders of I. R. ducks but I do know I made no mistake in purchasing my eggs to start in business from Mrs. Harshbarger's strain of New Standard Light Fawn and White I. R. ducks. I also have a nice flock of pure white Indian Runners but haven't had their quite a year so will have to give you their record at some future time.

Frank Toles,

California.

BUFF COCHINS.

I have been a reader of the Poultry Keeper several years and like it best of all. I take four other journals.

I notice there are quite a few articles of late written in regard to the larger breeds. Very little is written in the poultry journals about one of our oldest and best known breeds, the Buff Cochins, by those who breed them extensively. Can it be they are so busy or don't care to have others know what they have learned by hard experience.

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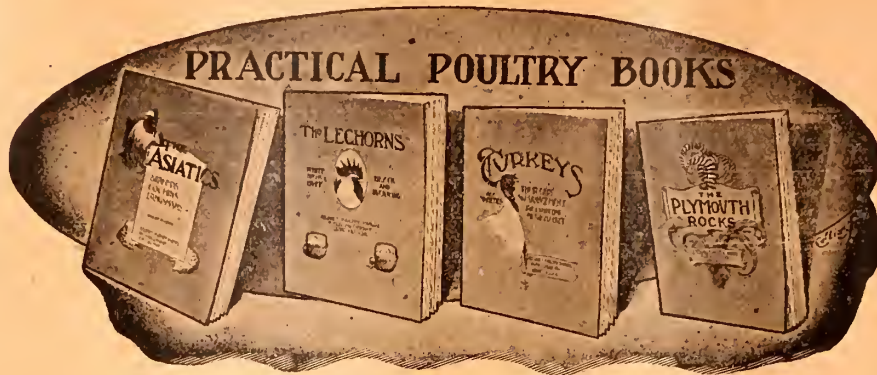
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AUGUST, 1913

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VOL. XXX.

AUGUST, 1913.

No. 5.

THE BEST TIME OF THE YEAR TO START WITH PURE BRED POULTRY.

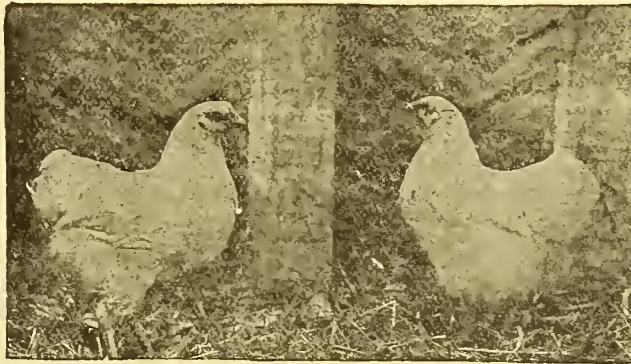
By J. E. Willmarth, Amityville, N. Y.

IT IS impossible to tell just what is the best way to get a start with pure bred poultry, for there are many men of many ways, interested in the poultry business, but as to the time to make a start the present is as good as any and the way to start at this time is to buy stock and at this season one can get birds at very reasonable prices. Breeders will have old hens, that have possibly passed their best show days, but with proper attention will make excellent breeders next spring. Such hens can generally be purchased at a very low figure, considering their breeding value. You will probably have to pay two to three times as much for pullets or young hens of equal breeding value. Of course you will get longer service from the younger ones, but where one only wants to invest a small amount, they will often find these old hens to just fill the bill. They will get at least one year's breeding from them and the chicks will probably be way ahead of chicks from younger hens, bought for the same price. These old hens should be mated to a vigorous cockerel and you will generally get excellent fertility from such a mating.

We know you are taking some risks with these old hens. Molting will probably go hard with them and you may possibly lose one or more but with careful attention they should come through all right. They should grow a good coat of new feathers and by the first of February will likely be in full laying condition or even if they hold off as they often will until March or April, before beginning to shell out the eggs, their eggs are way ahead of eggs laid by young hens which have been laying heavily all winter, for hatching purposes. You will find that practically every egg from such old hens will turn out a strong, large chick, when properly incubated.

We advise those who are thinking of starting with pure bred stock, also those who want to introduce new blood

to improve their stock, to give this old hen question careful consideration. Get in touch with breeders and find out what they have to offer. You will often be surprised at what you can pick up at a low figure. Sometimes you can get birds with excellent show records, that should make you fine breeders and which can be gotten for a few dollars. Breeders will dispose of them to make room, as they probably have young from them to take their place and they do not care to assume the risk and trouble of carrying them over, as they will not pay for their board until next spring, while



A pair of Regal White Wyandottes, from yards of John S. Martin, Box 403, Port Dover, Ontario, Canada. The White Wyandottes are exceeding good winter layers and popular among American fanciers

the beginner, by giving them separate quarters and feeding carefully and making them exercise, will pull them through in fine shape. Then at this season young stock can be bought cheaper than a couple of months later and much cheaper than if you wait until just before the breeding season, before purchasing.

Old stock is apt to be too fat at this season. We do not believe in forcing the molt to any great extent, but if hens have not started to molt very much, it is a good idea to cut down on their feed, for they are nearly always too fat, and this will get them in better condition to stand the strain

of molting. It is not best to serve a starvation ration, but see that they are just a little hungry all the time and make them work good and hard for what they get. But after they have shed a good part of their feathers, the food should be increased both in quantity and richness, to aid in the production of new feathers.

Those excessively fat old hens will not stand any sudden reduction in rations and such reduction will often prove fatal to such birds. Better reduce the quality but feed them about the same quantity. We don't mean by reducing quality to use poor feed, but rather food that is not rich in fattening materials. All the green food they will consume with dry mash that is bulky, rather than of high feeding quality, should be used. Wheat and oats should be fed sparingly, with no corn or similar food. By gradually changing to such a ration we can safely reduce the fattest hen.

Breeders who are thinking of getting a new male next spring, will do well to look around at this season and see what they can get. Old cocks and young cockerels can now be purchased at a much lower figure than next spring.

One thing to guard against at this season in introducing new birds, is the liability of their catching colds. It is a good idea to ascertain about

how the breeder from whom you purchase, has been housing the birds, and then give them as near the same conditions as possible, gradually changing to meet your personal ideas.

Nearly every breeder concedes that starting with stock is the best way and that it has many advantages over eggs. As shown above this is surely the best season to start with stock, and thus it is probably the best season of all the year for the beginner to make his start.

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants it except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

CHANGES IN STANDARD OF PERFECTION.

The Standard Revision Committee of the A. P. A. met in the Denison Hotel, Indianapolis, Indiana, July 8, 1913, and continued in session until July 11th.

The following members were present: Reese V. Hicks, Chairman, Topeka, Kansas; A. C. Smith, Secy., St. Paul, Minn.; J. H. Drenstedt, Buffalo, N. Y.; Richard Oke, London, Ont., Can.; F. J. Marshall, College Park, Ga.; E. C. Branch, Lee's Summit, Mo.; W. C. Pierce, Indianapolis, Ind.; W. S. Russell, Ottumwa, Iowa.

Between 500 and 600 changes were made in the text of the Standard.

Frizzles and Buff Turkeys were dropped from the list of standard breeds.

Henceforth all turkeys and water fowls are to be judged by comparison. Symmetry is eliminated from the scale of points.

The color of baby chicks and the color of the egg shells of the different breeds is to be described in the text.

In Cochins the weight of hens was decreased from 9½ lbs. to 8½ lbs.

Weight disqualifications in Cochins and Brahmas were dropped, as specimens belonging to the Asiatic classes falling more than 3 lbs. below standard weight are taken care of in the general disqualifications. See Page 33 present Standard.

The weight of the Java pullet was decreased one half pound. The weight of the Rhode Island pullet was increased one-half pound.

Important changes were made in the Rhode Island Red and Buckeye text.

Anconas and Leghorns were given weights as follows: Cock, 5½ lbs.; cockerel, 4½ lbs.; hen, 4½ lbs.; pullet, 3½ lbs.

The Brown Leghorn color disqualifications were modified. Tails of Leghorn male and female dropped 5 degrees each. Tail of Minorca male dropped 5 degrees; female 10 degrees.

Cornish were added to the English class.

The Orpington male shank was changed from short to rather short. This is an important change. Another **Important Change.**

is the dropping of the words "Rhode Island" in Rhode Island Reds. They will be known as Single and Rose Comb Reds.

A complete color description was given to the Houdans.

A standard was adopted for White Indian Runner ducks.

In the Bantam scale of points the valuation of size was reduced to 2. Important changes were made in the Bronze turkey standard and a new standard was written for Bourbon Red turkeys.

Each page of the Standard was carefully read and the points considered.

Stenographers are now at work on the Standards as adopted by the committee. These will again be gone over at a further meeting of the committee, to be held at Atlantic City, August 7th. The entire committee will convene at 9 o'clock that morning.

A number of breeders appeared before the committee at Indianapolis. An

effort was made to meet the wishes of the breeders, judges, specialty clubs and associations who had changes to suggest, when those changes were consistent with the character of the book and appealed to the best judgment of the members present.

The entire work of the committee will be read to the Association assembled at Atlantic City, August 11-16, and the report of the Revision Committee will be open to discussion and up for adoption.

Bring your Standard with you. Sent out by the authority and with the compliments of the Revision Committee.

Indianapolis, Ind., July 12, 1913.

MISSOURI POULTRY FIELD MEETINGS.

Big Gatherings of Farmers, Poultry Raisers and Business men Being Arranged for in Different Sections of the State.

Prominent Men to Lecture, Big Basket Dinners, Band Music, Moving Pictures, and Poultry Exhibits and Demonstrations to Constitute the Program.

A number of Poultry Field Meetings have been arranged for in different sections of Missouri. These will be held under the auspices of the State Poultry Board, the State Poultry Association and in conjunction with the local commercial club and poultry association of each meeting place. A big basket dinner served in a park or near-by grove, band music, a poultry display, demonstrations and lectures by prominent educators, poultry judges and breeders. Many of the lectures will be illustrated with charts, etc., and the night lectures will be held in the opera house or show rooms and illustrated with lantern slides and moving pictures, all dealing with practical problems of interest to farmers and poultry raisers.

The tentative program is as follows: Prof. E. C. Pierce, U. S. Department of Agriculture, "The Advantages of Selling Eggs on a Quality Basis."

Prof. H. L. Kempster, University of Missouri, "Modern Methods of Poultry Feeding."

Prof. F. S. Jacoby, Ohio State University, "Improving the Quality of the Farm Egg."

Ralph H. Searle, Vice Director Missouri State Poultry Experiment Station, "The Farmers Fool-Proof Poultry House." (Illustrated.)

Geo. Benoy, "The Capon King of Kansas, on the "Money-Making Capon," (accompanied by a demonstration in caponizing.)

R. C. Lawry, Manager Yesterland Egg Farm, "Some Ways in Which the Farmers May Co Operate With Profit in the Production and Marketing of Poultry and Eggs."

E. C. Branch, Licensed Poultry Judge, "Selection of Poultry for Show and Breeding Purposes." (Demonstration with live fowls.)

T. E. Quisenberry, Director of the State Poultry Experiment Station,

Mountain Grove, Mo., "The Care and Management of the Farm Flock." (Illustrated with lantern slides and moving pictures.)

Members of the State Poultry Board and prominent poultrymen and women in different sections of the state will also be present to make addresses.

Meetings have already been arranged for the following dates and locations:

Centralia, Mo., Tuesday, August 26th. Marcelline, Mo., Wednesday, August 27th.

Orrick, Mo., Thursday, August 28th. Nevada, Mo., Saturday, August 30th. Neosho, Mo., Tuesday, September 2nd.

West Plains, Mo., Wednesday, September 3d.

Mountain Grove, Mo., Thursday, September 4th.

Perhaps Greenville, Piedmont and other points will be included.

These will be a sort of get-together meetings for the farmers, business men and poultry breeders of each section of the state. We especially urge the members of the State Poultry Association and the poultry raisers of the state to attend their respective meetings. Great good will undoubtedly result from these meetings in increasing the value and improving the quality of the product from the \$50,000,000.00 Missouri hen.

Everybody is invited to come and spend a pleasant and profitable day together. Fried chicken will reign supreme.

T. E. Quisenberry, Director State Poultry Experiment Station, Mountain Grove, Mo.

Have you derived any benefit from the numerous suggestions and articles furnished by some of our other readers who have given you the benefit of their ideas through the columns of the Poultry Keeper? Possibly your success or failure furnishes some idea of value to other readers who may avoid loss by knowing of your experience. We shall be glad to print your experiences on practical lines if you will take the time to write them out. Simply get the matter up in your own way and we will properly edit the copy before printing it in our columns.

We desire to extend our readers the opportunity of giving their experience at poultry work and shall be glad to publish these letters. The letters can be gotten up in your own way and we will edit them properly before printing them in Poultry Keeper. Doubtless you have been interested in reading the letters which have been sent us by other subscribers, and they in turn will be interested in reading your letter.

To any reader of Poultry Keeper sending us a list of twenty names, of people interested in poultry raising, no matter whether they keep one or a hundred hens, we will send free of charge a copy of our booklet number four on "Feeding for Eggs." This booklet contains much information on this all-important subject of service to those wanting winter eggs.

SOME OF THE TROUBLES THAT FALL TO THE LOT OF HEN OWNERS.

Dr. N. W. Sanborn, Holden, Mass.

I often think, as I read the poultry papers and listen to the addresses at poultry institutes, that too much is said of the pleasant part of poultry keeping, and too little of the disagreeable. I must plead guilty, myself, of having done my part in the matter. It is well to understand the difficulties that have to be met that they can be avoided. It is best to tell of the failures, that have come to so many of us at times, that we may be helpful to beginners and even to poultrymen of older growth. I want to tell you of some of the trials that have come to me during my twenty years with poultry, or some of the troubles that I have directly known of in the work of others.

Rats.

Every year I get reports of chicken losses from rats. Poultrymen take great risks when they ignore the dangers from rats killing the small chicks, and sometimes they reap the full reward. The average rat needs to be taught to catch and eat live chicks. There is a big, grey, "wharf" rat, that is not at all common away from ocean and lake shores, that is naturally an eater of live flesh. The common rat of the town and farm prefers grain to flesh, and is not likely to get the bad habit on him if you do your part. Once have a rat on your premises that loves chicken flesh, and you will suffer constant losses till he is caught and killed. Last year I left on the floor of my small incubator cellar a tray partly filled with eggs that did not hatch. It was there a week before I saw my mistake. A few of the eggs contained chickens that were full grown, but not strong enough to have more than chipped the shell. Before I realized what was up rats had opened the shells, carried off the contents, and laid in a food supply against a time of need. The eggs were all cleaned up, the trays washed, the cellar made sweet and clean. Three days later I had two hens hatch out twenty-nine guinea chicks. They were given the run of the room over the incubator cellar. Not one missing for two more days. Then I found ten chicks missing in the morning. I thought of "rats." The nineteen little guineas were given to one of the hens, removed to a tight, wire front coop outside, and every chick raised to maturity. A wire trap was baited with a live cripple incubator chick, and two mornings later I found three rats in the trap. That ended chick losses last year, from rats, though chicks were in that same room for over two months, in open brooders. Like some of my friends, I did not profit by last season's lesson, but went through the same experience, in the same cellar, the same room, but with brooder chicks. It was later in the season, in June, while away from home, but the rats got thirty-four out of thirty-five chicks out of a single brooder, in four days. I am "gunning" for that rat but he

is cunning, and so far has refused to enter my trap, though it is baited with five chick. Until he is caught I must close up every brooder, close it up rat tight, both day and night.

In my mail this week I am told the experience of a Vermont poultryman, a man of experience, who winters over two thousand layers of white eggs for the New York City trade. He writes me as follows: "I don't know as you are interested in rat stories but I have had an interesting experience lately. I left one of my brooders in a colony house over winter, and, unknown to me, a rat was living under the house, and had a two inch hole up through the floor of the house, directly under the center of brooder. I did not notice it when I put chickens in, and one morning, when they were two weeks old, I was met by a perfectly empty brooder, when I opened up the house. Not a peep! I thought it was a case of thieves, until I noticed a little blood on back side of brooder. The cover was up about two inches and the rat had carried out every chicken, out under that cover, down the back of brooder, under where the lamp goes in, through his hole in the floor, and made three carefully built piles of chicks in his space under the house. How many chicks? Just one hundred and fourteen of them! I tipped up the house and killed the rat. There was just the one big rat and her nine little ones, a few days old. I never met anything just like this before. Did you?"

In my experience with rats, covering twenty years, I have not lost more chicks after the catching and killing of a single big rat. It has been a single experience, several years apart, when I did some foolish thing, as I have told you. May you profit by my mishaps.

Incubator Troubles.

I enjoy reading incubator catalogues. They are like some of the new books I read evenings—partly fact, partly fiction. To take their statements as true you would never suppose that spider webs could upset a hatch! Yet down in Rhode Island I found a small poultry plant that was about ready to give up hatching chicks because of the mischief that small spiders were doing in the incubator room. Leave the incubators in good condition, temperature right at 9 o'clock in the evening and find them all off proper temperature in the early morning. Spiders would spin their fine threads through the night, tying regulator bar to machine or to ceiling, upsetting all regulation, allowing the machine to cool down or heat up, according to the conditions. Spraying of the room with whitewash, with carbolic acid in it, would have done much to overcome the trouble, but this had not been thought of. The owner would brush away all webs as he could see or feel them, only to find a new lot the next day.

Another man, this year, a man with some past experience with artificial

hatching, went into his cellar one morning and found the temperature of his new incubator at 110 degrees. It had been running smoothly ten days, he could find no cause for the sudden change. He changed the adjustment of the regulator, hoping that the eggs were not spoiled, and when he came back six hours later the thermometer indicated 98 degrees. Surely this was something puzzling, something that would not help the getting of a satisfactory hatch, and he studied for a long time before he solved his trouble. What was it? Just the weight of the eggs tested out in the evening and left on the top of the machine through the night. The weight of the egg depressed the thin wood of the top, to which the regulator was screwed, and drew down the wood bar to which the disc of the heater was attached, sending more heat into the egg chamber. He had removed these after adjusting the regulator, in the morning, and the bar rose back to its former place as intended, letting out more heat than it ought. It was an accident, you will say. True—but nevertheless a serious mishap.

Another man bought a new incubator this spring, on my recommendation and straightway got into trouble. Everything ran lovely. His reports were glowing and I began to think what good judgment I was possessed of. Finally came a report of four per cent chicks on the 22nd day, ten per cent chicks on the 23rd day and the others dead. He thought it was up to me to solve his problem. This was not done till he had made a visit to the office of his family doctor and had the incubator thermometer tested by the side of a clinical one. His thermometer was wrong. As a matter of fact he had run his machine at a temperature of about ninety-eight degrees—with occasional increase to ninety-nine and one hundred. Making allowance for the defective thermometer, he has since done better. The machine was all right, the man managed his eggs as he should, but his guide to heat was incorrect.

Dead Chicks.

Three evenings ago I met a friend who is reputed to be able to raise all the chicks he hatches. He had just lost a full brooder lot of chicks. He said they began to die; a few at first, then more rapidly, till only a few scrubs were left. He did not recognize the cause of his trouble till he ran into a few hard, solid, bunches of feed in the bag of chick feed. When he saw these matted lumps, he looked at the rest of the contents of the bag. He found that all the cracked corn in the feed was moldy. It did not show without careful examination, but there was no question of its being present if he looked for the mold. He had killed his chicks with spoiled food. Too bad, but he is not likely to be caught that way again.

You may get trouble from the feeding of sprouted oats—sprouted in summer weather. The greatest care is needed in warm weather to keep the trays free from mold germs. The younger the chicks the more danger from contact with these mold germs. It is safer

to sprout your oats in warm weather in the ground. Spade them in, let them sprout, and let the chicks dig them out as they desire. If you must use the ordinary trays for sprouting oats, disinfect them between the lot of oats fed and the starting of the next lot.

The litter in the brooder and small coops may be the cause of some of your losses. Under the water fountain, under the drip of the moisture that comes from the escape heat pipe, may gather moisture enough to start mold. Heat and moisture, plus darkness, give the best culture ground for mold. The younger the chicks the more danger you run from these conditions in brooder or coop.

Trap-Nests.

Have you ever had trouble from trap-nests? Have you ever found dead hens in them in summer? If you have not you have been better favored than some of the poultrymen I know. Trap-nests are not freely ventilated, especially for summer weather. Suppose a hen enters one of these nests along nine o'clock in the morning. The door shuts behind her and she waits your time to be released. It is summer, you have many cares, the hours slip away, and at three o'clock you go over the bank of traps in that special mating. The hens are panting for breath, some are flat in the heat of the summer weather, and maybe your best hen is dead. Never were you so thoughtless in your life! I am glad to hear this because all poultrymen are not in your class. A trap-nest in a warm poultry house, in hot summer weather, must be watched carefully, lest you injure the hens. I lost two of my best eight hens one day last summer, in this way and just let out the best blue ribbon hen I own in time to save her life. She was limp, was nearly out of breath and I thought she was going to die. She was wet down with cold water, put out on fresh grass in the shade of a big apple tree and pulled through. This year she has produced some of the best pedigree chicks I own, but you take my word for it, she is not trap-nested after the first of June. In fact, I have let her hatch and she is raising a nice bunch of guinea chicks. This hen is four years old. She won first prize at Boston show and the good rest this summer caring for the chicks, will add a year to her life. There is no better way to rest a good hen, no better plan of taking off surplus fat, than to let her hatch a clutch of eggs and raise her chicks.

We profit from the mistakes of others. Why not profit from the mistakes in our own experience. If we do this we should be willing to share our lessons with other folks. It is one of the good qualities of the fancier—he is glad to help others. No better people exist than the men and women who are breeding good stock. Poultry facts are free to all who come in contact with you. You gain from others—let them have the help that you can impart to them.

THIRD ANNUAL EGG LAYING CONTEST AT STORRS, CONNECTICUT.

The First International Egg Laying Competition held in America was conducted on the grounds of the Connecticut Agricultural College under the immediate supervision of the Experiment Station Poultry Department. A second contest is at this writing, (May, 1913) half over and a Third International Competition is now being planned.

The third contest will include all the essential features that made the previous competitions successful; it will be conducted at the Connecticut Agricultural College, Storrs, Conn., by the College and under the sole management of the Storrs Agricultural Experiment Station. It is believed that great good has been accomplished by inviting attention to the productivity of hens; the public is coming more and more to demand pedigrees of performance as well as pedigrees of plumage. The laying competition provides for the practical breeder the same opportunity to exhibit his skill and ability that the fancy breeder has enjoyed in the show room for the past sixty years.

Rules and Regulations.

This competition shall be known as The Third Annual International Egg Laying Contest conducted under the auspices of the Connecticut Agricultural College, Storrs, Conn.

Records of the number of eggs produced, amount of feed consumed, duration of molting, broody periods, etc., will be in charge of the officials of the Agricultural Experiment Station.

This competition will begin Nov. 1, 1913 and terminate Oct. 31, 1914. Each entry shall consist of eleven pure bred females, either hens or pullets, but no males will be included. Ten birds shall constitute a competing pen, the extra female being held as a substitute in the event of loss of a layer by death or accident. Contestants will be privileged to maintain throughout the year a full complement of ten birds.

All birds must be shipped prepaid. Birds should be consigned so as to arrive on or after Oct. 27th and before Nov. 1st. The right is reserved to return to the owner fowls suffering from any contagious or infectious disease or deemed otherwise unsuitable for the purposes of the competition. A further right is reserved to refuse any and all entries. The management also reserves the right to cut or clip the feathers of one wing of any fowl that may be troublesome to yard.

An entry fee of twenty five dollars (\$25.00) is required for each pen, ten dollars to accompany application and balance to be paid on or before Oct. 1st. Failure to make second payment will forfeit the first payment. If any entry be deemed unsuitable and re-consigned to its owner, the entry fee will also be returned. All eggs produced will be sold by the management and the funds used for the purpose of conducting the competition.

After fowls have been received at the Connecticut Agricultural College and placed in the competing pen, every reasonable precaution will be taken

looking toward protection and prevention of loss of any and all birds, but neither the College nor the Experiment Station will be held responsible for the death or loss of any fowl. No pen may be withdrawn during the progress of the contest.

All fowls entered in this competition must be of some recognized breed or variety. Bantams and ornamental fowls will be excluded. Only those birds will be eligible that can produce eggs of marketable size, as all awards will be based on the production of marketable eggs. Eggs that weigh less than one and a third ounces (.05 lb.) will be considered unmarketable.

At the end of the competition, fowls will be returned to their respective owners at their expense together with a certified record of the individual egg production and amount of feed consumed by the pen.

Information and Suggestions.

Entries will be accepted from any point in this country or any foreign country.

It will be noticed by increasing the number of fowls in a pen, the management is enabled to reduce the entry fee to two dollars and a half per bird, instead of five dollars as has been necessary in previous competitions.

The management will accept a competing pen owned jointly by two or more breeders, provided however, that the fowls be all of the same breed or variety.

Weekly egg bulletins and monthly feed bulletins will be sent to each contestant. Weekly reports will be made to the newspapers and monthly reports will be sent to the poultry press and agricultural journals.

The records pertaining to this competition will be promptly posted so that all awards can be made without delay.

Contestants will be expected to cooperate with the Experiment Station by furnishing data regarding early care and management of their competing pens, method of hatching, system of brooding, and other information which will help to make an Experiment Station bulletin on the contest of more value. Blanks will be furnished for this purpose.

The management will supply leg bands for all entries and will send same to the owner in advance in order that his birds may be positively identified on and after their arrival at the college.

All eggs will be sold at the highest market price and the proceeds thus obtained will be devoted to the operating expenses of the competition. The financial records of the enterprise will be in the hands of the College's expert accountant and his books will be open for inspection at any time by any pen owner. At the end of the contest a financial statement will be incorporated in the Experiment Station bulletin giving a complete report of the competition.

Entries will be limited to one hundred pens and will be accepted in the order in which they are received. It is expected that Experiment Station birds will occupy ten pens for the pur-

pose of adding to the competition interesting experimental features.

The list of cups, medals, money prizes, etc., is incomplete and cannot, therefore, be published at this time.

Some of the Winners in the First Competition.

Highest production for the year:

White Leghorns	1071
White Wyandottes	1069

Highest pen production for any month:

White Rocks	135
White Rocks	130

Highest pen production for any week:

White Rocks	34
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Highest producing individuals for the year:

S. C. R. I. Red	254
S. C. White Leghorn	253

Note:—Above records were obtained from pen of only five birds each. For further information address Connecticut Agricultural College, Storrs, Connecticut, Poultry Department.

N. B. Telegrams and telephone calls should be sent to Willimantic, Conn.; freight and express to Eagleville, Conn.

CROP BOUND HENS.

Writers on the subject of crop bound hens, invariably overlook giving the most simple of all remedies. Even though the birds have a good and sufficient diet, they are likely to eat something that will clog the crop. Hens having access to a manure pile will eat more or less of small lengths of straw and this is poor food for a laying hen as it is practically nothing but fibre and lacks nutritive value. If bulky food of a filling nature is desired it can be supplied in some other way. Plenty of freshly cut lawn clippings cannot hurt a hen, but dried clippings may cause crop bound. Care should also be taken to keep particles of string out of bran, middlings, etc., which are fed to chickens.

In giving remedies for crop bound, the usual advice, is to give the bird castor oil and massage the crop. Sometimes the crop may be compacted and hard and at other times it may be badly distended and full of foul water which the bird has been drinking as fever sometimes sets in and gives the bird an abnormal thirst. If the crop is full of foul, bad-smelling water the bird may be held with head suspended and by working the crop gently this water will pass out through the mouth and give the bird much relief. Care must be taken not to make this treatment too severe or long drawn out as it will kill the hen. Some writers advise the giving of grit, and forcing the bird to take several doses of it a day. The difficulty with crop bound is in the crop alone and not the gizzard where the grit does the grinding and much of the theory about grit being of value in

such cases, is probably not well founded.

The easy and simple way to handle these cases is to shut the hens up where they cannot get anything to eat for two days and feeding very sparingly for a week or ten days, or even less, if the crop shows the obstruction has passed out. The hen will not suffer from this fast if she is given fresh water each day and it is much more humane than the other treatments. Cases of crop bound may be detected by watching the birds, as a hen with crop bound frequently tries to force the mass out of her crop by a spiral motion of the neck, showing plainly that she is in distress. A hen kept on a scant ration of green food and table scraps, under the fasting system, will usually be all right at the end of a few days.

DUST BATH FOR HENS.

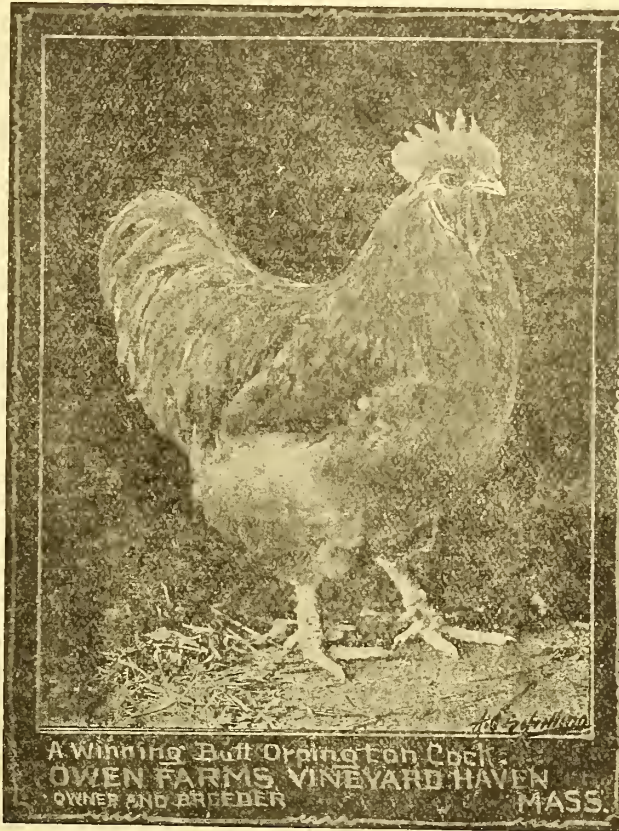
The dust bath is nature's way of letting the hen keep herself free of lice. In a confined place where the sunshine does not penetrate, hens will not make an effort to dust themselves

but in one of the open-front houses, now in general use, a good place under cover may be easily arranged for the dust box, and once filled and arranged, it will last for several months.

GOOD SUMMER LAYERS.

The general opinion is that the good layer is the one that lays during the winter. For the fancier, this may be satisfactory, as his aim is to produce eggs during the natural hatching season, which he sells at fancy prices as hatching eggs, but the farmer or egg producer wants the hen that is a good all year 'round layer. Instead of being the winter layer this really means a good summer and fall layer, as any good hen will lay during the winter and spring months, if she is properly developed, but it takes an extraordinary layer to keep up a good gait during the summer and fall months, when she is imbibed with the broody spirit and in addition has to go through the strain of molting. The general rule is to sell all the hens and keep a supply of pullets for winter layers, and this weeding out process destroys the hens that are good summer layers and that will keep on laying all through the molt. These are the particular hens that should be retained as breeders for the coming hatching season. The egg laying contests show that the pens which have the good summer layers are the ones that capture the first places. The fancy poultry business has not paid any attention to the egg contests, and none of the big poultry fanciers have pens entered. Doubtless they could make creditable showings at the egg laying contests, but the fanciers seem to be willing to leave the honors to the utility men who have to produce eggs in larger numbers to make their poultry farms profitable.

If you are interested in advertising send for a copy of our rate card which shows our charges for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our "classified ad. department in the back part of each issue furnishes an easy way to get started at a low cost.



A winning Buff Orpington Cock
 OWEN FARMS VINEYARD HAVEN
 OWNER AND BREEDER MASS.

unless it is very warm, and then they dust themselves in a cool shady place more to get relief from the heat than to try to get rid of lice. The dust bath may consist of road dust, but if this is not obtainable, a good substitute may be provided by sifting out some fine coal ashes. This should be kept in a moderately deep box where it cannot be kicked out to litter the floor of the yard or house. If there is a place in the yard, sheltered from the rains, but where the sun can strike the dust box, an outdoor location is to be preferred, especially during the warm months,

To any reader of Poultry Keeper sending us a list of twenty names, of people interested in poultry raising, no matter whether they keep on or a hundred hens, we will send free of charge a copy of our booklet number four on "Feeding for Eggs." This booklet contains much information on this all-important subject of service to those wanting winter eggs.

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Poultry

And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

**HOW TO GET STARTED
LEADING STANDARD**

**BREEDS
CHARACTERISTICS OF
BREEDS**

PRACTICAL POULTRY HOUSES (Plans)

**FOWLS: CARE AND FEEDING
MODEL BROODING HOUSES (Plans)**

**CARE OF ADULT FOWLS
FEEDING FOR EGGS**

**A HEN CATECHISM
FEEDING YOUNG CHICKENS
CARE OF GROWING STOCK
ARTIFICIAL INCUBATOR
INCUBATOR CELLARS
BROILER AND BROILER
RAISING**

**CARE OF BROODER CHICKS
PEKIN DUCKS FOR PROFIT
5000 DUCKS WITH STANDARD-BRED POULTRY**

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The publisher's price of "Success With Poultry" is \$1. We will send it postpaid and Poultry Keeper one full year for price of book alone, \$1. If already a subscriber, we will extend your subscription one year and send the book to any address you furnish. If taken alone the price of "Success With Poultry" is \$1. Address, Poultry Keeper Publishing Co., Quincy, Illinois.



J. T. FRENCH Barred Rocks

Winners at Cleveland, Toledo, Chicago, and other leading shows.

36 Prizes in one season.

EGGS from the Best Matings I ever owned, \$3.00 and \$5.00 per 15. 6 hens and a cockerel for sale. Price, \$12.00.

Finely Illustrated Mating List.
838 W. GROVE PLACE, TOLEDO, OHIO.

HELPING THE BEGINNER.

As most of us know that to make a success with poultry one must put a certain amount of time and energy in the business and a few words from one who has been through the mill does at times help out. To start with, have a good sized open front coop, say 10x12 for a flock of 25 or 30 and keep it clean, for I find that a clean coop, fresh water, and fresh air are the things most apt to be neglected, but don't overlook the green food for the hen that is cooped must have a certain amount of green food.

A good way to feed your cabbage or turnip clean is to have a large meshed net and hang about one foot or 16 inches from floor; it will give the fowls exercise and also keep the food clean and free from dirt and dust that will get on if thrown in the litter.

Don't close your front curtain on these warm nights, but leave them open. Fresh air makes healthy fowls, and a close, damp house means colds and roup.

Too much care cannot be taken at hatching time. Watch your sitting hens, for a few days will be enough for the lice to drive them from the nest if they are allowed to remain. A good lice powder sprinkled on the nest when the hens are put on the eggs and again in about one week, also the 14th and 18th day and you will have no trouble from lice. Watch the young chicks closely for head lice and be careful of the colony coops for the red mite, as you will find that the mite is much worse and harder to exterminate than the lice, but by careful watching and a little extra work on your part you will be repaid with a nice flock of healthy chickens.

I have found that a looped horse hair twisted until the loop is about 1-4 to 3-8 inches long will bring out the little red worm that causes gapes in the young chickens. Twist the hair several times and continue twisting at the same time pulling the loop slowly out of throat and if you don't at first succeed, it has at least done no harm, so try again.

A little lime thrown on the ground where you intend to rear the flock will help to kill the germ that causes gapes.

Any good breed will do well if given the time and attention, but the best, if not cared for properly, will soon be a loss to the owner.

As it costs no more to keep a good flock than a poor one, my choice would be to choose a breed and get a few eggs or day-old chicks and then take care of them and stick to one kind, at

least until you have tried it.

Don't scare your hens but be kind to them and never allow stray cats or dogs in your flock.

A hen likes a dark place to lay and it takes but little time to arrange nests under droppings boards that will take up less room than if nailed on the side of house.

C. W. Benson,

Pennsylvania.

CROP TROUBLES IN SMALL CHICKS; THE WINTER EGG PROPOSITION.

Editor, Poultry Keeper:

If all that has been written about the course to be taken in caring for chicks just hatched, for the first ten days, were compiled in one book it would make a huge volume.

My own experience has shown me that one must not only be careful how he feeds but as to what he feeds and not only while quite young but up to the time the chick is ten weeks old or over. The chick about 4 to 6 weeks old may have sense enough to know what it ought to eat, but no sense at all as to what it is able to eat, and is very likely to try swallowing a clothes line if the end of it looked good.

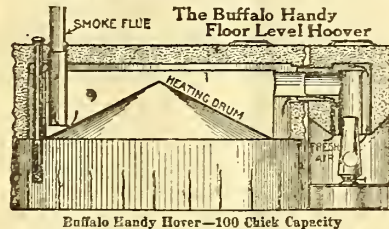
Last spring I had a chick about 4 weeks old get crop-bound while yet in the brooder. It became evident it could not live, so I decided to operate on the little fellow and see what caused it. I found that in feeding some sprouted oats that I had let some of the grain get in the brooder and some of the hulls the chick swallowed clogged the passage to the gizzard. I cleaned out it's little crop as well as the passage to the gizzard, sewed up the opening I had made, kept the chick in the house for three days on soft feed, then put it back in the brooder. I never could tell it afterwards.

When about six weeks old I put this lot of chicks out in a small colony house and fed them a commercial chick mash. I lost three of the largest in two weeks. I held a post-mortem examination on all of them. In the gizzard of two I found quite a length of sack twine with knots in it. This had gotten into a hard ball and clogged the gizzard passage outward.

The third one had the same thing in its crop, closing the passage to the gizzard. By this time I began to look for knotted string in the mash, and found lots of it. As I removed it I had no trouble afterwards. All this shows how careful one must be about what one feeds as trouble comes from un-

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CHAS. A. CYPHERS, President Buffalo Incubator Co., Buffalo, N.Y.
 467 Dewitt Street

looked for sources.

Now for this cautionary advice, will some one explain for me my present trouble? The chicks referred to were Barred Plymouth Rocks from good laying stock. I matured from my spring hatches 54 nice pullets. They began laying on time, some ahead of time. By January 1st 16 or more were laying and more coming in right along. In fact every hatch had begun to lay. The average being 4 to 6 weeks earlier than fall and winter of 1911. About the 10th of January we had a small snow storm with sleet and about 10 degrees above zero weather. The pullets dropped off laying and by the last of the month I was getting an average of 6 eggs a day and some of these were from new pullets laying, and they would lay only two or three eggs and stop, and at this date (Feb. 12th) I get only 4 eggs a day. Two of the pullets have laid continuously since the first of October. The winter of 1911 and 1912 I got lots of eggs. The severe winter did not stop the laying, in fact some pullets began laying in the severest weather. This winter the weather has been much better than last, my quarters have been in better condition. My feeding system has been just the same, with the addition of some fresh ground bone, and some sour milk occasionally. There is no vermin of any kind. Fowls are healthy and strong. Have not had a sick bird since those mentioned that died. You may ask if they are over-fat? Possibly some may be now, but not all. Some may be internally too fat, but this does not manifest itself yet in the abdomen. I have killed a few and the egg development was small and did not indicate that eggs would be laid until some time in March. If the pullets had not begun laying I would not be so puzzled, but why should they quit and not begin again at least after 21 days? Will say here that they did not go into a so-called early winter molt. Who can explain? Will say also that my birds have scratching privileges and work for their grain food.

Is there a breed that is as good as the Plymouth Rocks all around that do not lay on fat as easily as the Plymouth Rocks and yet make as rapid growth up to 14 months of age? If so, what is it and how are the eggs for size.

G. V. A.,

Illinois.

(Editor's Note):

Although a little late, an answer on the subject of getting mid-winter eggs is still in order. If the pullets had a good open front house, the drop in temperature should not have stopped the laying. They should have something in the way of green feed and sprouted oats will solve this question. A good laying strain of Barred Rocks should give good winter egg results. They are warmly feathered and able to stand severe cold. The grain should be given in deep litter to make the pullets exercise and they should have plenty of drinking water with the chill taken out, at least three times a day. Frozen water dishes alone are the cause of many failures in winter egg getting.

PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges pre paid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

The best favor you can do Poultry Keeper is to tell your poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special club offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.



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CULTURE OF ENGLISH PENCILED INDIAN RUNNERS.

The secret of success with anything is to start well and so with Indian Runner ducks. The white egg English Penciled stock, if treated properly, is bound to give satisfaction. The eggs hatch well, strong fertility being assured when the breeding stock is fed systematically and have free range. The rapid growth of the ducklings soon brings a profit to the raiser, 3½ and 4½ pounds is often acquired in eight weeks. The culls make a dish for a king but the meat is fine and delicious and much sought by epicures.

The ducklings require strict care, fed by measurement in a clean way. They cannot endure anything sour or foul. An open front house or pen is typical for Indian Runners of all ages. The writer was unfortunate enough to kill her first hatch inside of two weeks by not allowing the ducklings enough air at night. They demand lots of pure air and clean water at all times. A pool of water is not necessary for grown ducks and would mean death to ducklings. They must all have drinking vessels arranged that they may dip their heads in. They are very clean and in this way they keep their eyes and nostrils free from dirt. It is very interesting to see them eat, first a mouthful of feed, then a dip of water to wash it down.

Of any fowl I have raised, the English Penciled Indian Runner white egg layers has captivated my heart and it is wonderful what can be done with a few good ones. The eggs are large and rich, many prefer them to hen eggs for table use and when the ducks begin to lay they can be depended on for eggs. Different from hens in my experience as often when encouraged over a good egg yield, several would turn broody. Indian Runners don't treat you that way. The Runners do not squeeze into the garden and scratch up the prized plants, they are too aristocratic for that. They can easily be taught to keep away from places they are not wanted and have very intelligent ways.

The lovely fawn and white color, as if painted by an artist makes them very attractive and it is hard not to fondle them. They become so gentle from kind, regular treatment and seem to look for a "love-tap" day by day. To any one thinking of entering this work I would say get the best, do your best and the best results will follow.

Mrs. Wm. J. Turner,
Vermont.

PHILO VS. OPEN FRONT HOUSES.

Two years ago I visited our local poultry show, not because I kept fowls of any sort whatever, but out of curiosity to see fine specimens of the different breeds. After viewing them, my return home was with an extremely bad case of chicken fever. All my husband heard for days was, "I want some chickens." My only knowledge of them was Barred Rocks of the ordinary farm variety which my parents always had, but of which I had no care.

Imagine my surprise and delight one

evening when my husband brought home two lovely thoroughbred White Orpington hens and shortly afterward one more. I named them at once "Dumpling, Penny and Beauty." We then purchased a fine young cockerel from one of the best breeders in this city, paying five dollars for him, which we thought a pretty big price.

Now if we had raised our chickens from those only, that season we would have had much better luck in starting, but we had read in so many magazines the ad, "How to Make a Living From Poultry on City Lots," and as we had two of the latter and an old hot water incubator (from the flood) which we wanted to use and couldn't fill very quickly from just three hens we decided to go upon the market and buy at current prices and take our chances with fertility. We figured there was quite a saving between three dollars and ten. We put in what we had of our own White Orpington eggs and of all those 25 eggs we had 45 hatch. Next we bought some, but they came out no better than ones we bought on the market, so we kept right on buying and hatching, running that incubator from February to June, to raise broilers and keep best over for another season. One should see the variety of chicks. It made it more interesting to have them all look different. It was easier to name them.

In the meantime we had the book and plans we had sent for of the Philo system. Of all the things to make work the Philo System is the very best to be found. By fall we had eighteen coops and I was sick with nervous collapse. Those chicken coops (as my friends said) had to be kept like a parlor. They look nice all in a row, painted, etc., but the only redeeming feature of that system is the fireless brooder coop, of which I am an ardent advocate.

We sold and ate a good many broilers and after I sorted them according

to color and size we sold nearly all the ordinary ones to people that came to see the Philo plant. An amusing incident was of a negro coming to buy some. I had two pens side by side, one of White Leghorns and one of black chickens. He chose black ones—said they liked black chickens best.

From our White Orpingtons we had a nice start with blue bloods. Also in the fall we purchased a pen of standard bred Partridge Wyandottes. Last spring we sold all the eggs for hatching we could furnish, shipping as far as Michigan and California.

A year ago we moved to a small ranch where we built open front houses, using hens for hatching and the fireless brooder coops. Our large houses face the east as in this locality our storms come from west and south. In these houses my fowls have had no colds and we think them fine. We keep deep litter on a dirt floor and feed an egg ration published in Poultry Keeper last November, from which we get good results.

As I have unusual success in raising young baby chicks will say I attribute my good luck to a liberal use of fresh pounded charcoal taken from my kitchen hearth. I do not feed them after they are hatched for 48 hours, then feed hard boiled egg mixed to a crumbly state with bread and feed the charcoal with their first meal and with every meal right along. It will save lots of worry over bowel trouble. After the first few days I give a good commercial chick food and with lawn clippings, etc., find it no trouble to get them to live.

After two seasons and not the best of conditions to start with I am not discouraged. Like all in a new business I had to learn and am still learning something new all the time. I know of no other business which brings up so many new things all the time as the poultry business does. The learn-

(Continued on Page 169.)

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BREAKING BROODY HENS.

The spirit in which untimely broodiness is commonly approached by the ignorant and thoughtless is thus humorously described in verse by Mr. Holman Day, in the Lewiston (Maine) Journal:

“When a hen is bound to set, seems as though 'taint etiket
Dowsin' her in water till she's connected with a chill.
Seems as though 'twas scarcely right, givin' her a dreadful fright,
Tyin' rags around her tail, poundin' on an old tin pail,
Chasin' her around the yard. Seems as though it was kind of hard
Bein' kicked and slammed and shoo'ed 'cause she wants to raise a brood;
I sh'd say it's gettin' gay, just 'cause Natur wants its way.
'While ago my neighbor, Penn, started bustin' up a hen;
Went to yank her off the nest, hen, though, made a 'peck' and jest
Grabbed his thumb-nail good and stout, (like to yank the darn thing out.)
Penn he twitched away and then tried to grab that hen;
But, by ginger, she had spunk, 'cause she took and snipped a chunk
Big as a bean right out his palm, swallowed it, and cool and calm
Hi'sted up and yelled, ‘‘Cah-cah’’—Sounded like she said ‘‘Hoo-rah!’’
Well, sir, when that hen did that, Penn he bowed, took off his hat—
Spunk just suits him, you can bet. ‘Set' says he, ‘goll darn ye, set.’”

It seems to be universally believed that the broody hen has a “fever.” Any method that will “break up the broody fever” will destroy the hen's desire to sit.

The medical definition of fever is: “A diseased state of the system, marked by increased heat, acceleration of the pulse, and a general derangement of the functions.” While it is true that the naked or nearly naked breast of a broody hen that has been sitting several days feels hot to the hand, I long ago became convinced that the abnormal heat was the result of a superficial inflammation caused by pulling out the feathers of the breast and the close contact and friction with the nesting material and eggs. Years ago I expressed in print my scepticism as to the presence of any genuine fever in the system of the broody hen. Consequently the following, clipped from Profitable Poultry, interested me much is commonly spoken of as the ‘broody expressed opinion:

“It has long been accepted that the temperature of hens that were incubating eggs was somewhat higher than that of hens which were normal, which were attending to their daily duties, and this theoretic higher temperature is commonly spoken of as the ‘broody fever.’ Some studies of the body temperature of fowls, however, have demolished this theory, and, like many other myths which had no foundation in fact, it will have to be abandoned.

“A paper read before the Royal Society of Edinburgh, entitled ‘Observations on the Body Temperature of the Domestic Fowl (Gallus Gallus) During Incubation,’ prepared by Sutherland Simpson, M. D., reports the results of tests made by the writer of the paper covering a period of three years, also at Cornell University in four separate tests made by the writer of the paper that the temperature of a hen that is incubating is slightly lower than normal.”

By the above it will be seen that all attempts to break broody hens by “cooling them off” with cold water are senseless as well as cruel.

To my mind broodiness is more a mental than a physical condition. Anything that will successfully divert a

broody hen's attention from the nest to other things for a few days will remove her desire to sit. In order that her nervous system (which very largely controls egg production) shall not be shocked or deranged, the broody hen should be handled with considerate patience and kindness.

When a vacant pen is available, it provides an excellent place for “broodies.” All nests should be closed or removed and the broodies fed and watered regularly and generously, the same as are the layers. A properly made and located “breaking-up coop” is, however, the most practical device for breaking broodies. It should be sufficiently large to hold several hens at one time in comfort, be well ventilated, and so designed that the feeding, watering, cleaning, and putting in and removal of birds can be accomplished properly with ease.

The best place to locate the breaking-up coop is on a wall of the poultry house where the direct rays of the sun will not strike it. The bottom of the coop should be four to four and one-half feet above the floor of the pen. If higher than that it would not be handy to attend. No great degree of ingenuity, mechanical skill or expense will be required to install such a fixture as a permanent feature of each laying pen. It will be handy for other uses at times when there are no broodies to break.

Putting broody hens in a separate pen with a bunch of male birds is an effective and frequently employed expedient for breaking them, but it is somewhat cruel.

The broody hen has a mental desire to incubate eggs. It is an instinctive desire, but she will forget it if her attention is diverted from a nest for from one to three days and nights. The earlier she is taken in hand the more quickly she will be broken and resume laying. If removed to the vacant pen or the “breaking-up coop” the very first night that she prefers the nest to the roost, she is very likely to continue laying with but brief interruption. There is no such thing as a “litter” or “clutch” that limits the number of eggs a domesticated hen can lay in succession.

Where trap-nests are being used the observing poultry keeper will surely note the first signs of approaching broodiness. As soon as a hen becomes broody enough to stop laying, her favorite nest (if she has one) can be locked against her. This will be sufficient to break some hens, but not all. Should she enter another nest, as some will surely do, it is a good plan to lock all the nests after laying has ceased for the day and see that the birds are all on the roosts for the night. The nests can then be unlocked for the next day's laying.

Given suitable conditions of feeding and care it is better for a hen that she be not allowed to sit. Egg production is not an arduous occupation for a healthy, properly-kept hen, but three weeks confinement on a nest most certainly is.

F. O. Wellcome.

PROFIT IN A GOOD EGG YIELD.

That fortune favors the brave, is as true in the poultry industry as in any other branch of human endeavor.

In the spring of 1912 the prices of grain and all poultry supplies were very high and the faint-hearted ones were sure it would not pay to raise any young chickens that year. The result was that there were not many eggs set and as the eggs did not hatch very well early in the season, there were many less pullets to supply the market for fresh eggs last fall, than there would have been if grain had been cheaper early in the season.

Now the more optimistic of the poultrymen were sure that if feed was high, so would eggs be the next winter. Therefore he laid his plans accordingly and raised more than ever before. It took considerable nerve to do this, but the results proved the wisdom of this course.

The timid ones with few, if any, early pullets on hand, were obliged to winter many old hens that had passed the profitable age and after molting these hens will go on a strike until next spring when everything with feathers on will lay and those top notch prices will be a thing of the past. It is a pretty good plan to notice which way the crowd is going and then go some other way.

When incubators began to come into general use the wise ones prophesied that it would only be a short time before eggs would be so cheap that they would hardly be worth gathering. This seems strange to us when we think of the prices that city people have to pay for strictly fresh eggs in the late fall and early winter.

Without a doubt the law that prohibited the placing of eggs in cold storage for more than six months has tended to boost the egg market during the months of greatest scarcity and the poultry keeper who can manage to have his hens shell out the eggs at this time need not go to the county house.

J. C. Gordon,

New York.

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Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful hints to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL.

AUGUST, 1913

No. 5

Have you more chicks than last year? That is the report of many of our readers. A new house will be needed to house the increased number of pullets. Begin to plan early, to build the house. Have it simple, ample in size and arranged for the comfort of the stock and yourself. Avoid the extremes of low-down and barny. We have visited poultry houses that the owner could not go into without bending down almost double. We have seen a few buildings so low that they could not be entered by man. In eastern New York state we went through a house that was twelve feet high at the sides, with steep roof, large enough for a stock cow barn. It was built new, for hens, just as the owner wished it, but the birds were always getting roup and lung troubles, and never produced eggs as they should.

Every season has its trials for the poultryman. Those of the warm season are the dangers from high heat and the quick multiplication of red mites. Both need to be kept in mind these August days. Shelter from the sun by day, and protection from mites at night, should be given. We need not suggest what should come to the mind of any earnest poultry keeper. It is only enough to study the question of what is needed to raise chicks and produce eggs through the heated term. The man who has kept after red mites since the first of May will continue his fight, successfully, we know, and trees and bushes will solve the latter problem. Airy houses and coops will admit much breeze through the night hours, making the stock on the roost more comfortable.

A word of warning as to heavy feeding of clover and alfalfa hay. Dried clover and alfalfa are much less digestible than in the green state. Dried grass of any sort has much indigestible fiber in it. It is seldom safe to feed a ration with over fifteen per cent fiber, and even twelve per cent is rather high. Ground oats and "provender" have much cut hulls that are without value for food and may cause trouble

of a serious nature if too freely used in the feeding of hens and chicks. Watch the dry mash that you buy lest it be weighed down with oat hulls—a waste product in many a mill.

A nice change in diet can be had by the feeding of swelled oats or sprouted oats. Use the big oats, running from thirty-six to forty-two pounds to the bushel, rather than the light oats so often offered. The heavy oats have so much more "meat" in proportion to hull, that they are decidedly better and safer. Pour hot water over half a pail of oats and let stand two hours. Or cover with cold water at night and feed the next morning. Let the feed be a small one, for variety not quantity, given when the stock is not hungry from long absence from food.

More loss than gain comes in the use of home-made brooders. We do not mean that there are not splendid home-made brooders, but the beginner is so likely to make such a poor substitute for a good one that he loses time, chicks and good eggs. In this morning's mail we got a letter from a subscriber who has lost 118 out of 127 chicks entrusted to two such brooders. He tells us that it is warmed by a lamp under the floor and that the temperature runs at about eighty-five degrees. This report is for spring weather—not the summer nights of over seventy degrees. No brooder is a success that supplies only bottom heat—and no brooder is high class that does not give forced ventilation. Several years ago we published plans and description of what we called the "Sanborn Brooder," though it was along the lines of what has long been known as the "Rudd Brooder." This brooder has the lamp under the floor, but it has top heat, with free circulation of air over the chicks and out through the fringe of the hover. It seems part of the history of new men that they think they can build a better brooder than others have made before them. We have seen in barns, in attics and in

dumps, the remains of many a failure in the line of a home-made brooder. One Fourth of July, years ago, we visited a large poultry plant; one of the best known in New England and found the boys of the place using several galvanized iron brooders to fire off fire crackers in. There was a place where the lighted cracker could be dropped in, and the metal tank gave out a noise that was a pleasure to the spirit of '76! It was quite a comedown—from a brooder to a help to celebrate the Fourth—yet it was all that these brooders were fit for. They would brood the chicks, but they were so made that they could not be cleaned out. The only way to get inside them was through a square opening, just five inches across, and the opening was four inches deep, between the outer and inner shell. This was a brooder put out by a man who had made one, used it once, and then put them on the market for general sale. It pays to purchase brooders with care. It pays better to go slowly in making one for your own use. Do not try to improve on those on the market. *S*

It is a mistake to try to get both weight and size in your growing chicks. In stock for market, get the size first and then add the weight. Grow your chick and then finish him for the meat market. Birds intended for breeding should never be pushed for great weight. Grow them the best you can, getting strong bone and muscle, giving a ration that will produce sturdy stock. Too many farmer's flocks get more corn and corn meal than is good for them. With free range, that gives large quantities of insect life, plenty of shade of tree or bush, you may get along with a hopper or corn, but it would be safer to add a box of meat scrap and one of wheat. Bran is a good feed to give dry, letting the chicks have free access to it.

Hens that are to be sold as they go into molt can well be fed heavily through this month. Give them a good egg laying ration, perhaps a little more fattening than you have used through the months just gone by. The hens that are to be saved to make up the breeding pens next year need a rest for three months. A fairly liberal egg ration will suit their requirements. When the molt is fairly on it works well to add linseed meal to the mash. Sunflower seed can be used to no better advantage than as part of the scratch feed of the molting hens.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, if desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote promptly.

IT IS BEST TO LOOK ON DARK SIDE.

It is always best to present the dark side of poultry raising to beginners for they are to prone to start in on such a scale and in such a manner that failures almost inevitably result.

There is a very bright side to the poultry business if one is willing to start small flocks, take time and study every detail for the first season, at least, two would be better and enlarge as your experience increases. Large poultry farms are usually the result of plenty of money to invest without the accompaniment of a good manager. No business should be entered into unless the man who puts the money into it has some knowledge of the business. It is easy enough to say you can secure competent help by paying enough money. But so you can in any other business. But the fellow who succeeds is generally the one who has placed all he ever owned in the business and knows he must work or lose his money. The "gentlemen" farmers along the poultry lines are not usually very successful. Every chicken raised is worth twice as much as it could be purchased for in the best markets. The man who does the work himself is guided by actual experience. He has everything he owns invested in the business, and after years of investigation is the successful one.

Begin on a very small scale and work up gradually. Soon you will notice things coming your way and going like clock work. Another important point to consider is the start, start right and half the battle is over.

I have raised poultry for a good many years and it has taken a good deal of study to get to the point where I can raise the young chicks without losing a large number each year. There are some mistakes that practically all beginners make.

The digestive organs of the chicks are very tender and it is not a difficult matter to feed foods that will greatly injure the tender mucous lining. If a chick is properly fed to maturity you have healthy stock and egg producers regardless of the strain. I remember a friend of mine who purchased eggs from a breeder of reputation. The eggs hatched well but by lack of proper care he raised but a few. Those he did bring to maturity did not amount to anything and laid but a few eggs. Now this man was ready to condemn this reliable breeder, as is too often the case, but as it happened another party purchased eggs at the same time. My friend remembered this so he called on this man and asked to be shown the stock he raised from the eggs purchased from the same breeder. He admitted he never saw a finer lot of chickens than those and was more surprised to learn that they began laying at the age of five or six months. The next question he asked was "What do you feed your hens that they lay so well?" The answer was common "Hen Feed." Now this man really thought he could

still make layers out of his neglected flock by obtaining the secret he thought his friend had up his sleeve. A clear case of experience vs. inexperience, that's all.

One mistake in feeding that I have observed among poultrymen is the giving of too much wet meal at a time and leaving the spoiled stuff where the chicks can get at it. Remember a chick has no more sense than a hen and will peck at this kind of remains till the crop is full of fermenting mass. For some reason I do not understand, the crop of the chick is unable to push much of that kind of food into the gizzard, when it gets into the gizzard it causes bowel trouble for the digestive processes are not able to handle it to advantage.

For the first feeding of young chicks I feed hard boiled eggs (not tested out eggs.) The egg is of the same nature as the food in the digestive tracts of the chicks when they are hatched. It is therefore easily digested and gives the chick a good start. It is also a mistake to feed chicks too young. I always let my chicks go without food for from twenty-four to thirty-six hours after they are hatched. In the meantime they are digesting and assimilating food that nature had placed in them before birth.

Corn-meal, especially coarse, is good to feed to the chicks when they are but a few days old. It should be fed dry. It is easily digested and can be fed for a long time after the chicks have gone out from the maternal roof. Bread crumbs are also an excellent food. The fact that they are hard and dry improves them from the standpoint of the chick. They are more wholesome than fresh bread. Why not? We say that stale bread is better for people than new bread and the digestive system of the chick is very delicate.

Oatmeal, especially the steel cut oatmeal, is particularly good. Oats contain just the elements that are needed by the growing chick. The amount of protein in oatmeal is very large. There is also an element called avoine which has a stimulating effect on the eaters.

Meat-meal is to be recommended highly. I have tried it with excellent results. Any kind of meat is good but the meat meal consists mostly of lean meat and bone ground up and I think it is better than fresh meat. However the latter is good and when a bone cutter is at hand fresh cut bone with the meat on it makes a good feed.

It is also well to know that young chicks like Kaffir corn and it is worth about the same as corn for feeding. Wheat also is relished and very good. Do not feed wheat screenings. It is needless to say that the chicks should always be provided with fresh, clean water and the fountains likewise kept clean. The water very easily becomes impure. I also recommend fountains holding no less than two quarts while mine have a capacity of one gallon as there is less danger of becoming impure between the changes of water.

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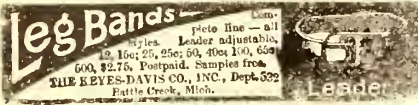
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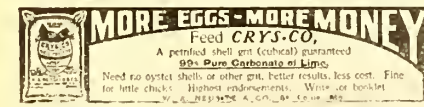
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Eggs for hatching in season. From now until fall will have good layers, (yearlings.) This year's chickens for sale.
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FIVE YEARS' EXPERIENCE WITH POULTRY.

Having been an interested reader of Poultry Keeper for the last five years, would like to tell a few of my experiences.

I taught school in Iowa for seven years, then after reading the catalogue of a Northern Illinois College in which they positively guaranteed positions to all their graduates, I attended this college, graduated from the telegraph department and found their "guaranteed positions" only a myth.

Returning home I taught one year more in Iowa and then went to southwestern Wyoming and taught two years in a little log school house "in the shadow of the Rockies. Permit me to add here, in all humility, that as a teacher I was a success.

My husband was an employe of the Union Pacific Railway. His health failed and by the doctors orders we returned to Iowa. We purchased a small farm and I started in the poultry business. Having been raised on a farm I was not without some knowledge of poultry, although I had never been much interested in that department. My chief pride was in being considered an adept in the management and care of horses. Even in the "wild west" I was praised for my skill and daring in that line. I have always had a most unreasonable fear of cows, but when it comes to horses I am absolutely fearless, but I must not wander from the subject.

I chose the R. I. Reds and have never regretted my choice. I have been cheated by several Red breeders but at last have found some good reliable breeders and now have a fine flock of a good laying strain.

After I had a good start of the R. I. Reds I read of the wonderful Bourbon Red turkeys that were so easy to raise and that would not wander. I sent to Illinois for a trio of these turkeys. They arrived in due time—were beautiful birds and I was delighted with them. But in the spring those birds would and did wander. They were determined to make their nests on the banks of a creek away off from home, on a neighbors land. I shall not undertake to tell how many trips I made across that man's fields that spring. Let it suffice to say that I apologized and was forgiven.

I set all the first eggs under hens and almost every egg hatched. I hatched about sixty turkeys in all and after many trials and tribulations I still had a fine flock when they were large enough to roost in the trees.

I read where one experienced lady said she always considered her turkeys as good as raised when they were large enough to go on the roost. I drew a sigh of relief but the worst was yet to come. Those turkeys wandered about a mile from home every day and simply would not come home to roost unless driven home. Any old place they could find to roost was "Home Sweet Home" to them. My father has a very large woods pasture adjoining our place and they wandered at will through this and we drove them home

every night. Along about the first of August they began one by one to droop and die. I did everything in the world that I knew to do but during August and September my flock dwindled to eight turkeys, then I read an article that said new oats and corn would kill young turkeys and I knew then that as my turkeys had access both to an oats stubble field and corn fields it was the oats and corn that killed them. One man wrote that his turkeys refused to eat new corn even when he cut it off of the cob, but mine preferred it to anything else.

I tried raising them one more year—hatched over one hundred. I kept them out of the corn field but they found the corn that the squirrels carried into the woods and one unfortunate day when we threshed they ate their fill of oats before they were discovered. I raised four that year, then I gave it up. It may sound easy to you—to me it was tragical. Now don't say I should have given them castor oil or olive oil or paregoric. I gave them oil according to the directions of an experienced lady and not one sick turkey ever survived.

The next spring I tried Indian Runner ducks and had no trouble in raising them. I raised about one hundred and fifty, feeding them according to directions given by an experienced breeder. They layed a few eggs in the fall and then stopped and did not lay any more until spring.

I furnish fresh eggs to private families in large cities. When my ducks commenced to lay I sent each of my customers a few of the large nearly white eggs as a sample, telling them I could furnish them the duck eggs at the same price as hen eggs. I really expected those people to be delighted with the duck eggs, but one and all politely gave me to understand that they did not care for duck eggs. I then traded my ducks for a fine Jersey heifer.

I heartily agree with Mr. Schoepnel when he says, "If you are the least bit inclined to be lazy don't go into the poultry business."

Maurice F. Delano, 127 William St., Vineyard Haven, Mass., who recently took over the famous Owen Farms and is now the sole owner of this business, has upwards of eight thousand fine specimens in Buff and White Orpingtons, White Rocks, White Wyandottes and Single Comb Reds, and following the precedent established by the Owen Farms in recent years, Mr. Delano is now in position to furnish matured specimens of show birds, fit to win in any fall fair or coming poultry show. No matter how lacking you are in quality stock to enter at any show, Mr. Delano will agree to furnish you with the necessary stock at prices in proportion to the quality wanted. The reliability of this farm is unquestioned, and readers of the Poultry Keeper may safely entrust any order with Mr. Delano with the assurance that it will receive the best of attention.

MARTIN'S REGAL SUMMER SALE

In order to make room for my large flock of rapidly growing chicks I am offering for sale 400 selected breeders at very low prices. Send for free sale list, giving description and prices, also 20 page catalogue.

EGGS FROM PRIZE MATINGS, \$2.50 PER 15; \$12 PER 100.

As usual REGAL WHITE WYANDOTTE CHICKS will be the WINNERS at the POULTRY SHOWS. Will have matured cockerels and pullets by September 1st. Book orders early.

JOHN S. MARTIN,

BOX 403,

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Although my worst enemies never accused me of being lazy there are times when it is about 100 degrees or so above zero and one feels like sighing, "Oh, for a book and a shady nook," but instead has to feed and water the poultry; there are times when "I wish I had been born rich instead of handsome," as the old saying goes and other times when it is away down below zero and I am out shoveling snow I have visions of the time when my two little boys will be able to help me.

I have had some amusing experiences with some who come to buy my Reds. One cold day in February, while I was washing, two men came and said they would like to look at my chickens. I hastily threw a scarf over my head and took them out to inspect the ranch. They looked at the chickens a long time and commented on them. At last one of them said, "I see you have more in those houses west of the house." I said, "Yes," and he said, "Well we want to see them too." The men were dressed in fur overcoats and caps and looked quite prosperous and the way they talked I thought perhaps they were going to want about all my chickens. At last one of them caught a fine large rose comb cockerel and asked what I would take for that one. I told him \$1.50. They stood there in their fur overcoats looking at that bill and I stood there in my gingham dress slowly freezing to death. At last the one holding the bird said: "Well, Bill, do you think you'll take one?" Bill drew a long breath, solemnly shook his head and said: "No, I guess I'll wait and see how you come out with yours." Then the man with the bird said in an awful voice: "What if he would die?" At last he handed me \$1.50 and I almost felt guilty when I took it, he held on to it so tightly. I came in the house and felt like crying but I didn't. When I got warm I laughed about it and thought perhaps some weary, hard working woman will appreciate that beautiful red bird when her husband gets home with it. This is a fair illustration of many of the men in this part of the country. The women want better poultry. The men talk nothing but hogs, cattle and corn, and yet in many instances the women buy all the groceries and most of the clothing for the whole family.

I know of a man who owns a large farm who told his wife that wheat was too high priced to feed to the chickens—and yet this same man marketed a load of poultry in the fall and bought himself a fur overcoat. Now what do you think of such men? Don't you think some farmer's wives are altogether too meek?

Just a word about "What would you do?" It seems to me there isn't really much of anything a person can do after accepting the birds or eggs from the express office, only don't let the same man cheat you twice. One writer says, "All we can take with us into the next world is what we have given away in this world." Why not consider all this money we have given (although unwillingly) to dishonest men as another "jewel in our crown" and think that the poor man has taken one

more downward step and pity him for the day of reckoning will surely come. Now I don't advocate being so meek that you encourage people to be dishonest—far from it. Do all in your power to keep from being cheated, but when you are cheated and can't do anything else, make the best of it. Beware of the man that boasts too much of his own honesty.

While teaching in Wyoming, on Friday evenings I often rode thirty miles to a small station where some of my cousins lived. One night the girls at the ranch were telling me weird stories of crazy sheep herders, etc., trying to frighten me. I had a beautiful pony—said to have been trained by a famous outlaw. Some of the feats of that pony were really amazing. I told those girls I wasn't afraid of anything when mounted on that pony, and thus I started on my journey. About half way to my destination I had to pass through a small settlement. Shortly after passing through here I heard someone coming behind me. I looked back and through the gathering gloom could just discern, at some distance, a man on horse back riding wildly toward me. I spoke to my pony and he wasn't slow in understanding. We flew over the sage brush and rocks and past lone sheep camps. Occasionally we would stop and listen and could always hear the pinging of horses hoofs in close pursuit. At last the welcome lights of home came into view. I reined in my jaded steed and let this man overtake me. He rode up and said: "Did I frighten you?" I said, "Oh, no, I wasn't frightened at all." (May I be forgiven for this falsehood.) "The men of Wyoming are noted for their chivalry" and during the remainder of our short ride he dwelt continually upon the honesty of the men of Wyoming in general and himself in particular. He told me his name and it chanced that I knew his reputation was of the worst. Had he been an honest man he would probably have forgotten to mention the fact.

If anyone has a strain of Bourbon Red turkeys that absolutely refuse to eat new corn and oats and that will not wander I would like to hear from him or her and if it isn't a secret I should like to know who the people are that are anxious to pay 10c per dozen more for I. R. duck eggs than they do for hen eggs.

In conclusion will say, Let us all try to keep the "Golden Rule" and don't worry too much about what the other fellow does. "Act well your part 'tis there all honor lies."

Lily Goodrick.

Iowa.

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AUSTRALIAN EGG LAYING CONTESTS.

The annual reports showing the 1912-1913 Australian contests have just reached The Poultry Keeper's office. The main contest was held at the Roseworthy Station, 30 miles north of Adelaide. Owing to being in the Southern hemisphere, the winter season comes at the time our summer season is on, and the coldest weather was in July, 35.7 degrees (maximum for month 51.1) and the warmest in February, 97.7 degrees (minimum for month 70.3.) These figures show a much more equable climate than American breeders have and may figure materially in the records the Australian breeders are able to show as they hold the world's records to date. The American breeder who has to contend with 20 to 30 below zero in winter and 100 or over in summer, finds a wide range of climate hard to overcome. This Roseworthy contest which terminated March 31st, 1913, comprised 804 hens with an average yearly egg record of 182 eggs. This general average thus equals the best individual record of the Mountain Grove, Missouri, contest ending last fall, but the Missouri contest now on will show a better record, from present indications.

The report shows that the value of good breeding, and the meaning of the term "Pure-bred," is in ability to produce eggs and not outward show or

points, and the Australian utility breeder chooses his layers along utility points as well as fancy or standard points. The best breeders value type very highly and correlate utility and fancy characters. Care is also taken to replenish new stock (especially new male birds) only from known breeders who are careful in maintaining full utility and fancy points.

The laying pens have been made up of six birds to each pen. The next contest is to be 10 layers per pen, and it is confidently expected that at a no distant date, a contest will be had with pens of 100 layers each, thus showing that it is possible to have excellent results from large flocks.

Broodiness has been found to be a serious drawback and one interfering greatly with the total yearly record. Breeders are warned against using any layer as a breeder, which has shown a broody tendency, or that has been subject to laying difficulties, such as protrusion of the vent or laying soft shelled eggs, the desire being to get nothing but perfect eggs. A standard weight for eggs has been established, requiring them to average 2 ounces each—averaging 8 eggs to the pound. No forcing foods or condiments of any kinds are recommended, and the use of green bone indiscriminately, is warned against, the desire being to let the layers accomplish their results naturally rather than from forcing. Deterioration in laying ability has not followed from the plan of selection of the layers, although a tendency has been noticed among some pens to revert in the size of the eggs and this is to be overcome by a more rigid selection and improved care and feeding. Mature birds are to be used for breeders, making it possible to note the desired points better than could be determined with young, untried pullets. Records of the breeding of both males and females are to be kept and good points amplified under the Mendelian law that sires transmit characters through their daughters and dams through their sons. The poultry expert in charge of the contest recommends that future contests be started a month earlier, so as to end the last of February, his contention being that the early, well-matured pullets are the most likely to show the best results.

The Roseworthy contest was held in three sections: First, 83 pens of White Leghorns; Second, 31 pens of Orpingtons, Wyandottes, Faverolles, Langshans, and Plymouth Rocks; Third, a scratching-shed section containing 20 pens of White Leghorns. The rations fed were wheat, corn, bran, meat-meal and greed food, given much after the plan of the American breeders.

The yearly averages per bird were as follows: White Leghorns, 191; Black Orpingtons, 150; Silver Wyandottes, 147; Faverolles, 156; Langshans, 180; Plymouth Rocks, 149. The total number of pens was 134; total number of hens 804; average number of eggs per hen, 182; highest average per hen, 235 eggs.

A second contest was held at the Kybyholite Station, 227 miles south-east of Adelaide. This contest had 34

pens: 26 of White Leghorns, the balance being Minorcas, Black Orpingtons, Silver Wyandottes and Plymouth Rocks, with averages in the order named of 193, 147, 134, 148, and 115. The total number of hens in this contest was 204. Average number of eggs per hen, 149; highest average per hen, 255. The weather conditions at the Kybyholite Station were much more uneven than at the Roseworthy Station. For the six months, October to March inclusive, the maximum temperature reached from 94 to 108 degrees. The coldest month (July) had a minimum of 28 degrees.

RECORD OF THE NORTH AMERICAN (STORRS, CONN.) EGG LAYING CONTEST.

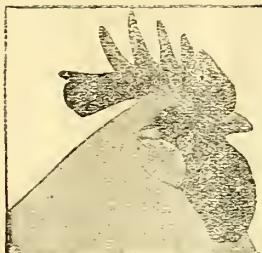
With the week ending July 10th, this contest closed its thirty-sixth week. The pens number 100 and are made up of five layers each, or supposed layers, but there is a vast difference in what they seem to be able to do. There are 43 pens of White Leghorns in the entries, and the leading pen of all varieties is that of Tom Barron's (English), with a record of 882 eggs. The lowest record is that of a single pen of Buckeyes, which have laid 274 eggs. The American Leghorn pens seem to be lacking in egg laying qualities as one of them has a record of only 423 eggs and only 20 of the American pens have a record of better than 600 eggs.

The leading pens of the other varieties entered have the following records: Barred Rocks, 584; White Rocks, 642; Buff Rocks, 552; Columbian Rocks, 559; Silver Wyandottes, 528; White Wyandottes (English Pen) 717; Buff Wyandottes, 480; Columbian Wyandottes, 500; S. C. Reds, 658; R. C. Reds, 618; Brown Leghorns, 486; Buff Leghorns, 688; Black Minorcas, 517; Australasians, 704; Arcanas, 424; Buff Orpingtons, 518; Black Orpingtons, 289; White Orpingtons, 569; Cornish, 393; Buttercups, 274.

A summary of the White Leghorn pens shows that for the week ending July 10th, 10 layers had a record of 7 eggs per week and 72 of 6 eggs per week. The best pen records for this week are American White Leghorns. One shows that all five layers produced 6 eggs each for the week. Another pen four layers had 6 eggs and the other layer 5 eggs. The third pen had a record also of 6 eggs for four layers and 5 for the remaining layer. The poorest record for the week among the Leghorns was 14 eggs for 5 layers, and the poorest record for any variety was that of the single pen of Black Orpingtons which produced only 2 eggs for the week.

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GEORGE B. FERRIS—The Ferris Leghorn Farm
309 Union Avenue - - Grand Rapids, Michigan



Three yearly records show that a very breeds to be at a disadvantage owing to the layers losing time from broodiness. This habit doubtless accounts even for the variance shown among the White Leghorn pens, as some strains are more prone to broodiness and in future American breeders will have to select their layers from birds known to be lacking in this habit, if they are to compete with the English pens.

MODEL POULTRY DEMONSTRATION FARM.

A one man poultry farm is being established by the Missouri State Poultry Experiment Station at Mountain Grove. Five acres have been set aside and a model poultry demonstration farm has been planned, and is being established and fully equipped just as the Station would recommend it. Thousands of people have asked themselves the question, "Can I make a living from poultry on five acres, and if so, how?" It is this question which Mr. Quisenberry and his associates have set out to answer. Only such methods as have already been tested and proven successful at the Experiment Station, will be used. Their best methods of feeding, their best colony house, breeding house, laying house, and all the methods of care and management which have proven best with them will be put into actual practice on this farm for all the dollars and cents which they can make out of it.

The plans of the farm are very unique and are arranged with a view to saving labor as much as possible. It is intended that one man shall do all the work on this farm. The live stock will probably consist of one brood mare and one cow. A certain amount of strawberries, raspberries, cherries and small fruits and vegetables will be grown. The plan is to eventually have a flock of one thousand laying hens, and enough breeding stock used to renew the flock of layers as often as is necessary. If it is proven that five acres is not sufficient, then acre after acre will be added until the farm does prove to be profitable. The building and all plans will be started as if the farm was being owned and operated by a man with limited means and gradually added to and developed as the income justifies.

Careful records of receipts and expenses will be kept, as well as records of the methods used, etc., and the results published from time to time.

This is an innovation in experiment station work which is bound to meet with widespread interest, and to be of great practical value to thousands of

present and prospective poultry raisers. By the establishing of this demonstration farm, experiment station work is made more practical, and brought one step nearer the people for whose benefit it is intended. When new methods are not only discovered, but their use demonstrated under practical farm conditions, one more excuse for failure will have been banished.

POULTRY RAISING AS A SIDE ISSUE.

January 1, 1912, I had on hand for stock seventy five hens and six cockerels. During the year I sold one hundred and fifty dollars worth of poultry products and raised one hundred and fifty pullets. Will say here that I have no fancy stock and consequently received no fancy prices.

The table is always well supplied with fresh eggs and fine roasters and fivers which would more than pay for their feed. The pullets commenced laying in December and the egg yield has been steadily increasing every day until now we count our eggs by the dozens, while our neighbors count theirs by the single egg. They do not stop laying on account of wind or weather. I did not use an incubator for hatching though I would like to try one. Old biddy did the work for me.

When my hens get broody I remove them to a clean room that is free from lice, putting from seven to nine in a room. After dusting them with a good lice powder and placing them on the eggs I cover them up for a day, then take the cover off. I give them plenty of grit, grain and fresh water and some green feed and then leave them to take care of themselves. Of course I do not let them leave their hatching room. Usually I have no trouble about their returning to their nests, but always watch them to make sure. We are always careful with our sitting hens, never allowing them to become frightened.

When the hen is through hatching I take her and her downy yellow balls to a clean coop placed on green grass. Last year I used the coops without floors, putting them far enough from the buildings so that there would be no trouble from rats, though our old cat looks after those midnight molesters quite well.

Every day I move the coops to clean ground which I think played an important part in keeping them so healthy for I lost none from any disease. Some, but not many, were killed by accident.

When the baby chicks are about 36 hours old I give them fresh water and

stale bread crumbs, soaked in milk or water and squeezed dry. I feed five times a day for the first two or three weeks some good commercial chick feed. After that I feed three times a day.

When the weather is good I let the mother hen out of the coop for a part of the day so that she may exercise and dust herself and by doing this I am never troubled with lice on her or chicks.

Are my chickens tame? You would think so if you could have seen my two boys one day last summer, sitting on the back porch cracking nuts while the chickens perched on either side picking up meats as fast as cracked. The boys were obliged to move inside in order to get any themselves.

My chickens are of the Rhode Island strain, though they are not pure bred, but they are excellent layers both summer and winter. I am getting them better every year and even now, as one of the neighbors said, they are hard to beat.

Mrs. A. J. Kemperer,

Wisconsin.

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FRANK H. DAVEY, Superintendent.

More About Germozone

I know a man who bought a profitable poultry farm with 2000 healthy, laying hens and lost 1600 of them within three months. I know another man who bought a 2500-hen farm, producing regularly 100 dozen eggs a day, and within sixty days his egg production had dropped to 8 dozen per day and over 200 hens had died.

It's easy to keep a healthy hen healthy and it's easy to keep a laying hen laying, but it's ruinous to wait until they become sick or until they quit laying before taking prompt action.

On both the above-mentioned farms the chickens had been getting Germozone regularly twice a week in the drinking water and Lee's Egg Maker daily in the food. The new owners "did not believe in feeding medicine to healthy chickens," and had their own notions about feeding, not realizing that cooped-up chickens, in large numbers together, require very different care from the dozen kept in a backyard or the hundred running openly on the farm.

One cannot well disinfect the floors, yards and scratching litter every day, but one can, by use of Germozone in the drinking water, produce an antiseptic condition of both food and drink and also of mouth, throat, crop and bowels.

On our own farm we would as soon think of omitting food as to omit the Germozone water on Wednesdays and Sundays.

Large 12 oz. bottles 50c. New size, one-gal. cans for large consumers at \$3.00 each, equal to eleven bottles. (Express paid for \$3.50.) Sold by more than 10,000 dealers in the United States. Sample bottle, postpaid, 10 cents.

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RHODE ISLAND REDS IN TEXAS.

I have been thinking for some time I would write a letter for your journal just to give your readers my experience in the poultry business.

I get lots of pleasure and good ideas from the many letters of other poultry raisers in your journal and no doubt someone would like to hear of my experience with the feathered family.

I have the S. C. R. I. Reds and think for an all around bird they can't be beaten, both for layers and table purposes. I have a small city lot only 50x100 feet and my dwelling, servants' room and coal house take up the greater portion of it. However, I raise from 10 to 125 chickens every year in my backyard and get a great deal of pleasure from my birds.

I have two pens, 7x16 ft., that I keep my breeding birds in. I have 10 hens and one rooster to each pen. I have the open front pens, which I find very satisfactory. Have droppings boards and hay on ground for their scratching feed, which consists of cracked corn, wheat, sunflower seed, cane seed, oats and Kaffir corn, which I have found to be a very good scratch feed. I feed them this mixture morning and night. I keep bran, charcoal, ground bone, beef scraps, oyster shell and grit in hoppers before them at all times, also fresh water.

I have a place dug out on one side of my pens about 18 inches wide and 4 feet long and about 18 inches deep and boarded up about 1½ feet above the ground to keep them from getting the straw into it when scratching for feed. In this place I fill about half full of wood and coal ashes which I find makes the best dust bath and wallow you can have and it is a pleasure to watch them wallow in the ashes and in this way I find they keep the lice off of themselves, and they get lots of pleasure out of it.

My nests are built on the sides and end of my pens under the droppings boards, about 1½ feet from the ground. I keep tobacco stems in the nests all the time, which I get at a small cost

from the cigar factory here and am never bothered with lice or mites. I clean and disinfect my pens once a week and always keep them perfectly clean, by so doing I never have a sick bird. I don't believe in giving much medicine to chickens. Keep your pens clean and keep everything well disinfected once a week and you will find it will beat medicine.

One of my finest hens was crop-bound some time ago and I inquired from several chicken fanciers here what to do, as I did not want to lose her. Some said give her oil and massage the crop well and work it out of her mouth. I did this and could not move it. Others said I would have to cut it open and take it out. This I was afraid to do so I decided I would try a remedy of my own which saved the life of my hen. I opened her mouth and put quite a little bit of prepared grit down her throat twice a day for two or three days and it did the work, so I would advise you to try this simple remedy when you have chickens crop-bound.

I have been raising the Reds for the past five years and would not change them for any other breed as they stand close confinement better than any other bird I know of. I mate my cockerels to my two year old hens and cock bird to my pullets, and I find by so doing I get better results.

I get a great deal of pleasure out of my chickens and also make quite a little money out of them. I am always anxious to get home from the store so I can get to work with my chickens. My wife also takes great pleasure in our flock.

We try to have all our hatches off by the last of March and by so doing I find they grow much faster and are stronger in every way, and will commence to lay in the fall when eggs are high.

I read a great deal about green stuff for chickens, such as cabbage, lettuce, and various other things which on a small lot in a city one can not raise and can not afford to buy just to feed them. I have solved that problem to my own satisfaction and have gotten

good results. I save my yard clippings every year and cure them as you would hay, put them away in barrels. When fed pour boiling water over them and let them steam for a while, then mix corn chops and bran, and to see how they run over one another for it is a sight. In this way I have green stuff for them all the time and I get eggs the year 'round, my chickens never tire of this mash, which we generally feed at noon. Sometimes I feed just the steamed yard clippings alone for a change.

My morning feed is always grain in their scratching pens and lots of it as I believe you must feed heavily if you expect to get eggs but be sure you make them work for their grain.

A. F. Plunkett,

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; \$1 for three; \$1.50 for four; \$1.75 for five; \$2 for six. The clubbing list on another page will show what some of these papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.



PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

PHILO VS. OPEN COOP.

(Continued from Page 160.)

ing has been quite expensive. We are now rid of the scrub kinds, all but four which are good layers and this fall they will go in a fricassee. In the start we tried to raise too many and didn't turn them off soon enough. I liked Mrs. Melville's article in the February issue. Like her, am searching for a time to hatch to get fall layers. In all our hatching we have only had one hatch that laid at six months old. They laid two months and went to molting and the others molted before laying at all. But we have had our eggs run strong in fertility.

This season's aim is to get a better laying strain and cull more closely. We are not in the thing as a commercial business but for our own family use and to make a little over expenses. Although now they all look alike to some people I still have many of them named for to me they are individual and a great delight.

Mrs. S. L. Harper,

Washington.

ADVICE ABOUT POULTRY KEEPING.

To keep poultry successfully one must attend to the minute details for poultry keeping is a business made up of small things and therein lies the reason of the failure of so many who started in so promisingly.

The average beginner sees a fine flock of poultry that it has taken years to build up and straightway has a bad attack of the hen-fever and goes home vowing to do great and impossible things. He starts in on an elaborate scale. Buys a pen of high priced fancy birds and with no previous experience thinks to duplicate the success of breeders who have spent years of painstaking, study and costly experiment. He houses them in an imperfectly built house and feeds them an unbalanced ration and straightway his birds get droopy and finally die and our would-be poultry king throws up the business in disgust, declaring that it is only fit for foolish women and there is no money in it anyway. Now if our friend had started nearer the foot of the ladder he might have been near the head now.

Such experiences as these are what bring the chicken business into disrepute. Now how should we begin. I say if you have had no previous experience you had better set a few sittings of eggs under some broody hens, nutting sixteen to a hen or if you wish to start on a larger scale, buy a reliable incubator. I prefer a 120 egg size, and fill with medium priced eggs.

Don't make the mistake that I did and place the eggs in the machine before you are familiar with the running of it or you will have trouble. Better do your experimenting before your eggs are in the machine than afterwards. When there are so many incubators on the market, the beginner is puzzled as to which to select as each claims his to be the best. The Sure Hatch, made at Clay Center, Neb., is as good as

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It is *more* than a catalogue—is *educational, helpful, valuable.* Contains 244 pages—many of them filled with *sound advice* based upon the knowledge and experience of some of the foremost poultry authorities. "Profitable Poultry and Egg Production" deserves to be called a poultry text-book. Its chapters on right methods, newest developments and proved results at the Cyphers \$75,000 Poultry and Demonstration Farm make the book well worth paying for—yet it is *free.* Also lists more than a hundred articles needed and used by progressive poultry keepers.

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the best. There may be others just as good but none better. Never buy a cheap incubator. The best is always the cheapest.

After your chickens are hatched leave them in the incubator 12 or 15 hours and remove them to the brooder. The fireless brooder described in E. W. Philo's book has proven very successful.

When they are 36 hours old give them their first feed of dry bread crumbs and hard boiled egg. No wet food in mine. Do your chicks look droopy and do their droppings roll up around the vent? You can lay this to wet, slushy fool. Keep fine grit and water constantly before them. Divide your chickens into small bunches and watch for mites. They will sap the life out of your chicks. Feed a balanced ration of ground corn, oats, wheat, boue and beef scraps.

When your chicks are completely feathered put them in the colony houses, previously separating the sex. Do not force your pullets for early eggs as it weakens their vitality. Feed red pepper sparingly. I have found Dr. Hess's Poultry Panacea a cure for most all diseases.

In the summer when your hens are broody do not try to break them up by placing in a tub of water. That is barbarous. Let them sit a week or so, they need the rest. If you must break them I have found this very satisfactory: Make an open coop 3x14 feet with closed ends. Bore an inch

hole in each end of the box (about the middle) and pass a broomstick through this. Hang the ends of the stick on two forked sticks driven in the ground. On the top have a slat loose, to put your hen in and take her out. When the hen tries to sit on the floor of the box it whirls around and she is compelled to roost on the broom stick. She will grow tired of this in a day or so. Keep things clean, fight lice and give plenty of fresh water.

E. D. A.,

Iowa.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

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S. C. BLACK MINORCAS A GOOD BREED.

Some of the people who have acquired the chicken fever will be starting into the poultry business soon. They will be looking for the best general purpose fowl that they can find. Of course they will never think of looking to the Mediterranean class for a bird that will weigh from 7 to 9 pounds.

If they will kindly look up the standard weight for the S. C. Black Minorcas they will find the weights to be 9 pounds for cock, 7½ pounds for cockerel, 6½ pounds for pullet and 7½ pounds for hen. They are a handsome fowl and also good layers. They commence to lay when about six months old and lay the whole year 'round as I have found from experience. The eggs are large and white, weighing from 28 to 32 ounces per dozen. The feathers of the Minorca lay close to the body and the fowl does not look as large as it really is, but the weight is there to show for itself.

The birds are good foragers and on free range will pick up most of their feed. Even in confinement they do not cost half as much to feed as some of the other breeds do. The chicks are easily raised and as they grow very rapidly they can be soon disposed of as broilers or spring frys. Some people try to discourage the beginner and say don't raise the Minorcas as their meat is blue and don't look fit to eat, but those people don't know what they are talking about, for their flesh is not blue but is a delicate white color.

When a Minorca is stuffed and roasted well, it is fit for a king to eat, because it is nice and juicy. In closing I will say to the beginner who is looking for a good breed that will furnish lots of eggs and good meat, he can do no better than to give the Minorcas a trial this year and he will never regret it. I have heard a Minorca breeder say that a person once started with Minorcas will never regret it.

A. C. Henley,
Ohio.

A TALK ON HENS.

Hens do some curious things while living and are interesting even when dead. They know when they are well used and will lay more eggs for a man who will use them kindly than for one who merely chucks them some food

and hurries away.

A man needs to be a glider to succeed with hens, glide quietly into the hen house, scatter the grain around where it will keep them busy scratching, then step softly but firmly out of the house and on to the next where you can repeat the operation, talking kindly to the biddies, who seem to be always looking for encouragement.

Some people seem to be unable to get their hens to lay for them in the winter when prices are high. We cannot tell why such hens do not lay for we do not know how they are handled. We are told the same old story that they have feed before them all the time, also grit, oyster shells and fresh water. They are given remnants from the dinner table and have a good place to scratch for grain in the straw of the scratching house. It is a mysterious affair, certainly, but I think I could make any bunch of hens lay if there were any eggs lying dormant in their systems waiting for the touch of a master hand.

If they are not laying keep among them a great deal, study them, find whether they are being fed too much or too little. See if their combs are red or of a pale, spiritless color. Whether they need more meat or a change of grain.

If you have been feeding them a dry mash, change and give them a wet one steaming hot with many different articles of food in the mixture. Wheat middlings, gluten meal, ground oats, bits of bread made soft with hot water, meat scraps, cut clover, linseed meal, sulphur, ground charcoal, a little salt, any cooked vegetables you may have. Mix this together very thoroughly and then watch them eat. You will find they will relish it and it may start the eggs you are looking for. If they are pullets you can add Indian meal but if they are old hens you had better not as corn makes them too fat and when they are fat they will not lay freely.

Last fall I noticed a large pullet in one of my yards with something red hanging down behind. I went and picked her up, took her out of the yard and felt of the bunch which was hard and covered with veins. I took out my pocket knife and cut the bunch open when much to my surprise one came an egg with a good shell on it. She had laid sack and all. I had to repeat this performance every day for a spell but she finally got to laying

in a proper manner and I was greatly relieved in mind for I thought I would have to kill the poor thing.

On the eighth of February, of this year, I started twenty-five hens and two cockerels for Santo Domingo, West Indies, and I often wonder how they liked the change from zero weather here to 80 or 90 above in Santo. It shows the popularity of the Columbian Wyandotte that a fancier should send so far from home for this handsome fowl, when he could get eggs that would taste as good from hens of any breed that was handiest, as the taste all depends on the feed.

With my small yards I used to be troubled with the cockerels or cocks trying to fight one another through the wire fence, seeming to be more interested in showing the other fellow how smart they were than attending to their own little harems. I soon remedied this, however, when I stopped to think what it was best to do. I always keep a roll of tar paper on hand for the many things I find it useful for, and put strips of this paper between the runs and the fighting stopped at once, as they could not see one another and were no longer irritated by the sight of a hated rival.

The tar paper is about three feet wide and a heavy roll can be bought for a dollar or less. All of my hens houses are covered with tar paper, which I paint with tar or green paint and it keeps out the wet. No doubt shingles or some of the different kinds of roofing would be better but tar paper is cheaper.

If the breeders will only use their thinkers they will conquer all the little difficulties that will come to them even if they have never had much experience with hens for every conundrum has an answer and some of them are very simple. I am trying an experiment this season that will be interesting whether it turns out as I wish or not. In the Boston Poultry Show one year I saw some nice Columbians in a pen that were said to come from a pen of R. I. Red hens mated to a White Wyandotte cockerel, so last month I bought ten R. I. Red hens and a handsome White Wyandotte cockerel and the trial is now one. I will get some pullets that will lay well, I think, even if they are not good Columbians.

The hen is always interesting to me going or coming and when I pick one up and talk to her she seems to like it and to understand everything I say. A hen that is used to being petted will act as friendly at all times as a neighbor who has dropped in just as a nice dinner has been placed on the table.

B. F. Black,

Massachusetts.

POULTRY GROWING ON A SMALL SCALE.

A plan which would apply to large or small flocks might be suggested and as our plans are working out so well, I will give my views.

A few years ago we moved to a country home from the city and purchased a small tract of land, building a small dwelling and a few out-buildings.

The intent from the beginning was to raise poultry and truck and have a small fruit farm, but with little or no capital to invest in a good breed to start with, found us buying mixed or mongrel stock and eggs of all kinds and descriptions.

We also purchased incubators both of hot air and water varieties, using same to the best of our ability. It took only a year or two until we reached the conclusion that we preferred hot air to hot water and that eggs of all kinds or breeds hatched very unsuccessfully.

While still heavily handicapped for funds and with mongrel stock on hand, we decided to dispose of our stock and invest in a much less number of pure blood stuff, so we made the transfer, selling off all else except some few we had purchased eggs of from a White Wyandotte breeder at a high price, raising eight pullets and two cockerels. Next season found us buying nothing but Wyandotte eggs with which we have been having marked success, rearing quite a number of good pullets which we closely culled, and kept culling until the laying season began, when we had left twenty-four birds that are of unequalled quality. The culling principle is a heart-rendering task but it has paid us. The system we followed was along the lines advocated by leading poultrymen. Our methods of feeding and care-taking were as near as could be done by making summer conditions in winter. We have eggs when the prices are both high and low; in fact, year 'round.

With a total of 24 year-old hens we began a year's egg record, which is as follows for the four preceding months to up the 25th day of April:

December, 1912	374
January, 1913	446
February, 1913	431
March, 1913	378
April, up to 25th day	288

Total 1917

We have at present a fine bunch of chicks, all doing well.

We use camphorated opium or paregoric for White Diarrhoea, which has in the past been our greatest enemy.

C. D. Hinderliter,

Illinois.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

"Success With Poultry" is worth more than all other Poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount (\$1.00) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

Have you any stock or eggs to sell? Our cheap rates shown in the classified ad. department will enable you to make the desired sales.

HALF PRICE
For Day-Old Chicks,
Hatching Eggs and
8-Weeks-Old Chicks

Here is the great mid-year opportunity to get pure-bred Pittsfield stock at half-price. From June 15 to Sept. 1 our already low prices are virtually cut in two. Read these wonderful bargains:

**100 Day-Old Chicks
Now Only \$15.00**

**100 Hatching Eggs
Now Only \$7.50**

8-weeks-old chicks, between July 1 and Sept. 1, 65c "as they run" or \$1.00 for all pullets, a saving of one-third. For prices on greater or smaller quantities, write today. Buy Pittsfield stock and have layers next winter. Pittsfield stock is famous for early development, sound health and strong vitality. All purchases eligible to our \$225 prize contest. Order now for best selection of Breeders for 1914.

PITTSFIELD POULTRY FARM CO.
410 Main St.
Pittsfield, Maine

WE MANUFACTURE

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- Chick Coops
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- Etc., Etc., Etc.

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Send for our BIG FREE CATALOGUE containing illustrations of Best Brooders made—the kind that raise strong chicks. It also contains 5 Chapters on Poultry Raising written by Robert Essex, and 30 Photos of the latest Experiment Station Poultry Houses. Address nearest office.

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Success With Poultry	\$1.00
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All for	\$1.25

This is one of the best offers ever made to poultry readers. It gives the best practical book on money-making poultry and two poultry papers at a greatly reduced rate. Address,

Poultry Keeper Pub. Co.
QUINCY, ILLINOIS.

THE GREEN FOOD QUESTION SOLVED.

Editor, Poultry Keeper:

The green food question has been one of the subjects of interest to all poultry raisers. I have solved it for my flock. We have quite a number of spruce pine around our place and they always looked so nice and green in the winter I went to examine the leaves on them and found them to resemble a blade of grass as near as anything I ever saw not to be grass. I was very badly in need of green feed so I broke off a limb and took it to my chicken house and you ought to have seen those chickens going after it. They would leave other feed to get it.

With the evergreen limbs for green feed the following is my daily ration for 98 hens: In the morning I feed 4 quarts of wheat and oats mixed and raked in deep litter. My litter consists of straw and about 6 inches of sand. At noon I boil about 4 quarts of wheat and oats and any peelings or table scraps that are on hand. I always boil them dry. If it is not dry when cooked I stir in a little corn meal or flour so as to make it dry, and add about a pint of beef scraps.

For the night meal I give them all the whole corn they will eat and about one gallon of buttermilk each day. I keep oyster shells before them all the time. I have a box in the coop to put coal ashes in for them to get what grit they can get out of and to dust in.

Following is my egg report from the first of the year to March 24th:

January	1248
February	1228
March, to 24th	1301
Total	3777

W. E. Lucas,

Ohio.

ONE WOMAN'S EXPERIENCE.

I have raised chickens twenty-eight years out of the last thirty-five. First on the farm where I just took time to see that the eggs were set under the hen and feed given the chicks when they were hatched. While I liked caring for them, it took so much of my busy time I thought, will I ever get so I do not have to take care of fowls?

Then we moved to Grand Rapids. For several years we did not keep any fowls, in fact, we lived upstairs for three years, but after seven years without chickens we had the chicken fever and began again.

The first year we bought two piano boxes, placing them back to back about four or five feet apart, putting a roof over the space between and boarded up one end for the back of the coop. We put a door in front with roosts inside, then bought a few Barred Plymouth Rocks and two Brown Leghorn hens and were started in the chicken business.

The Brown Leghorns laid steadily while we had them. The Plymouth Rocks did very well, but I raised only a few chickens. My husband bought a pair of Rhode Island Reds. I did not

like the color but thought I would do the best I could with them. I managed to raise two R. I. Red pullets. They were nice ones, but one died in the winter and the other died sitting on the nest in the spring. Then we bought more Plymouth Rocks and when winter came we had forty old hens and a few young stock. We had built in the meantime a good sized hen house with cement floor, divided into two parts. All winter we looked for eggs in vain so the next year we killed all but two Plymouth Rocks and the R. I. Red hen, thinking we would have the Plymouth Rocks for Thanksgiving but a week or so before Thanksgiving they began laying and layed all winter. That summer I got some Rhode Island Red eggs and have been learning how to raise Rhode Island Reds for utility and for exhibition.

I find if a person combines ambition and perseverance the Rhode Island Red fowl is one to stimulate and reward the persevering one. When the chickens are hatched the color varies and it is interesting to watch them grow and change color, until those you think will be scrubs turn into fine fowls; of course, provided the parents are healthy birds and kept free from lice and mites.

It is best to kill and eat the culls, keeping the best shaped and colored fowls for breeding as it makes your flock look better and brings sales quicker. Last year I was disappointed in the hatches but thinking it was due in a great measure to the severe weather I am still in the chicken business for pleasure and profit.

I keep lime on the droppings boards, frequently whitewashing the boards and roasts. I also keep a dish of lime where the fowls can help themselves. I keep sprouted oats all winter and most of the summer. Besides my Rhode Island Reds I have begun with the Im-

proved Champion Strain of Golden Campines. They are seven months old and have been laying a month.

A. L. Winks,

SQUARE DEALING IN THE POULTRY BUSINESS.

Editor, Poultry Keeper:

I would like to add my plea along with others for a square deal in shipping eggs, also stock.

While there are some dishonest poultrymen, there are others that are honest in what they are doing. I have in mind one person that is raising Indian-runner ducks. I spoke to her one day about her ducks being English Penciled stock. She said, "Why, I bought them for Fawn and White." You see she was taking the word of the one who sold them to her. I found that she had not been to a poultry show for 7 years. People should visit the shows and get acquainted with the breeders personally and find out what good stock is.

Then we have the dishonest shipper who will ship penciled stock for fawn and white. I have had this experience myself but I made no kick. I sold them on the market and went to a poultry show and saw some of the real true Light Fawn and White, white-egg layers and placed by order for 300 eggs but I had lost a year's time and lots of work and feed because my ducks hatched from the penciled stock only brought me just enough to pay for the eggs.

Of course there are two sides to the question barring the question of sending stock true to name. The buyer should take good care of the eggs. He should not expect every one to hatch and not expect every chick hatched to be perfection, comb, shape and color. I know one man who sent to a prize winner for a sitting of Barred Rock

Our Big Dollar Offers

SENT TO SAME OR SEPARATE ADDRESSES.

HERE ARE 12 DIFFERENT CLUBS. ANY ONE SENT TO YOUR ADDRESS FOR \$1.00.

Poultry Keeper\$.50	Poultry Keeper\$.50	Poultry Keeper\$.50
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Farm & Home50	Farm Poultry50	Monthly50
Poultry Keeper\$.50	Poultry Keeper\$.50	Farm & Fireside50
Reliable P. JI. .... .50	Fruit Grower 1.00	Poultry Keeper .....\$ .50
Housewife .. . . . .50		Philo System Poultry Book ..... .50
Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50
Farm Poultry ..... .50	Green's Fruit Grower. .50	Book "Success With Poultry" 1.00
Ladies' World ..... .50	Farm & Fireside .... .50	Poultry Keeper .....\$ .50
Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50	Farm & Home ..... .50
Reliable P. JI.50	Farm & Fireside50	Farm Poultry50
American P. World .. .50	Farm & Home50	

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4 Oyster Shell 5c a 100 lbs.

Our 5c sample of PRESCRIPTION No. 1 contains more egg shell material than 100 pounds of oyster shell. Its use makes eggs a certainty.

If used according to directions it saves all the cost of BEEF SCRAP, CHARCOAL, and GRIT. FEED NOW and your fowls will have an easy molt. FEED CONTINUOUSLY and your eggs will have such vitality that White Diarrhoea will be unknown in your chicks at hatching time.

GUARANTEED to PREVENT and CURE egg eating.

5 pounds \$1, and your money back if not satisfied. Trial carton, 25c; sample, 5c. Remedy circulars and our Profit Sharing Coupon FREE.

Nabob Kemedey Co. Box. 2, Gambier, Ohio

eggs. He paid \$5.00 for them and hatched three distinct colors of chickens from them. Some were Rocks, some were entirely of another color, shape and breed.

But I believe there is more danger in buying Indian Runner duck eggs than in buying hen eggs, because so many people in the last few years have started in the Indian Runner duck business and instead of attending shows and getting good stock they have answered the first advertisement that appealed to them and therefore a great many have penciled stock and are advertising them for Fawn and White.

Indian Runner ducks have not been bred for show purposes as long as chickens and there is a lot of very poor stuff on the market.

The real true prize winning white-egg layers are not in everybody's pens that have I. R. ducks.

Then as to chickens, some are scored too high and the egg buyer reads how much they score in the advertisement and is led to expect too much from his hatch, so there is dissatisfaction again.

Lets be square on both sides. People who are intending starting in with fancy chicks or in getting better stock should attend poultry shows and state fair poultry departments and get acquainted with the stock they are after.

Orie Elrod,

Iowa.

SOME GOOD POINTS ABOUT BOURBON RED TURKEYS.

Turkeys and turkey eggs always demand good prices and the supply is never equal to the demand. This is particularly true of the Bourbon Red turkeys. Although they do not grow quite so large as the Mammoth Bronze, they are not of so roving a disposition and are much more easily managed, some making their nests near the house, and others laying in hen's nests. When sitting they can be moved from one place to another. They never range far from home and are tame and easily handled. They are also hardy and easily raised.

To my notion, the Bourbon Red is the most beautiful of its kind that is raised. The male's head is a rich red, changing to bluish-white. The beak is light horn at the tip and dark at the base. Eyes are dark hazel. The throat and wattles are rich red, changing to bluish-white. Shanks and toes are deep pink. The plumage is deep,

brownish-red throughout, except main feathers on wings and tail which should be pure white. The breast in the male should be exceedingly deep and full.

The plumage of the female is similar to that of the male, but a shade lighter in color. It should be stately in appearance, bright and alert.

In glancing over some farm papers I notice that some writers claim the White Holland turkeys as being the best farm turkeys known. However, near this may come to being the truth, I believe these writers should give the Bourbon Reds a fair trial and they would find them not only pretty but the best variety. In the Bourbon Reds you will find more desirable points than in any other. They have a rare combination of vigor, hardiness, gentleness and beauty which is not even surpassed by the beautiful Mammoth Bronze turkeys.

While the Bourbon Reds are not so widely known as the older varieties, they are growing in popularity and creating a demand that seems as yet unsupplied. The consensus of opinion of the breeders and farmers who have tried the Bourbon Reds is that they merit all the good things that are claimed for them. The demand had only fairly commenced as they have continued to grow in popularity every year since they were brought before the buying public. If you are not now a breeder of the Bourbon Reds, now is the time to commence, so that you can share the profits while the demand is great. I believe the Bourbons will eventually be the leading breed of turkeys.

Mrs. Ellen Hagebusch,

Oklahoma.

BUTTERCUPS AS I FIND THEM.

I have tried about all breeds of poultry but I never found any that would quite come up to the Sicilian Buttercups.

They are easy to raise, eat little, lay large white eggs, mature early, laying in five months, tame and are active and good foragers. They are non-sitters and therefore lay more eggs than the larger breeds.

I have had about twenty different breeds in the past and now have five: Sicilians, Salmon Faverolles, Partridge Cochins, S. C. R. I. Reds and Buff Cochin Bantams. I find that the Salmon Faverolle is a close second to the Buttercup.

I raise about five hundred head a year. I do not feed much fancy feed. After the chicks are a week old I feed nothing but cracked corn. I let the old stock have wheat, oats and whole corn. I give them all the green food that they will eat and plenty of beef scraps. I have stopped feeding green bone, because I find it spoils the fertility of the eggs.

I find the Sicilians will lay 20 per cent better than Leghorns and eat less. Their skin is as yellow as gold and therefore they are easy to sell at market. They are very pretty and are great pets. I have always purchased the best stock, because it pays to do so. My birds lay all through the molt.

Buttercups are a good farm fowl because they will forage and get half their living. The chicks are hardy and as they are a breed by themselves they most always come true to color. Join in the Buttercup boom and be a breeder of this beautiful breed.

C. C. Bennett,

Connecticut.

BUFF WYANDOTTE BREEDERS.

Every breeder should be a member of the American Buff Wyandotte Club. We elect our officers and decide place of meetings by mail vote, so that every member has an equal voice in club affairs. One dollar will pay your membership fee and we will credit you with a paid up membership to October 1st, 1914. Send for application blanks and any other information you may desire. J. E. Willmarth, Secretary, Amityville, N. Y.

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To any poultry journal, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and journals and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting someone else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

FEEDING FOR EGGS

Whether you keep 12 or 1000
hens you want them to

Lay when Eggs are High

HOW TO FEED
WHAT TO

The profits in poultry are
in eggs—profits in eggs are
during the cold months and
not during the summer.

Feed Right and
Your Hens
Will Lay

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For fifty cents (stamps ac-
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and Tables for Feeding and
a full year's subscription to
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The most practical and help-
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Quincy, Illinois.

Send booklet on Feeding Poul-
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THE EXHIBITION STOCK FAKE.

When the American Poultry Association finds a little leisure from the preparation of "Standards with Adult Cuts" and the licensing of poultry judges at so much "per", it would not be a bad idea for it to turn its attention to a bigger matter than "faking," to a growing evil which I consider a rank injustice to the small poultryman who is trying to do business on the square. I refer to the subject of advertising single fowls or pens for exhibition purposes.

I do not know whether it has struck you, Mr. Editor, in the same way or not, as it has struck me, but I consider that it is a first class fraud for any man to exhibit any fowls in competition that were not raised by himself.

It has been a few seasons back since there was a great outcry against the practice of borrowing birds in order to make up an exhibition pen and this practice was tabooed.

You cannot take up a poultry journal today, during the exhibition season that your eye does not catch such whole page advertisements, in which occur such sentences as these which I quote below, for the purpose of showing up this evil:

"We can supply on the same day as order is received, or will keep and train your birds for you, the finest line of exhibition birds we have ever had. Imported birds from our English plant. Now is the time to inquire and order your show birds. We supplied twenty times more first prize winners than any other breeder last season."

"At the great Chicago show, December, 1911, the beauty and utility strain won 64 points, to the combined winnings of my competitors in my classes, only 16 points. I have for sale a very choice stock of breeding birds and exhibition females. Write me your needs and I shall be pleased to quote prices."

"They have won more of the most sought for prizes than all competitors at Madison Square Garden, New York, Boston, Philadelphia, Chicago and the three greatest world's fairs. We can furnish sure winners."

"It is well to book early and get the best pick; many birds have already been ordered. 2722 White Orpingtons shipped from this farm to the United States in 12 months. Can any other breeder show such a record?"

I could go on and give dozens of these ads, but let these suffice. I have been reading a great deal in the Poultry Keeper about complaints of frauds by people advertising eggs for hatching and forwarding to purchasers "any old thing," including whole sitting that had only been picked out of crate eggs. The people who are engaged in the business of advertising show winners, have these other fellows badly beaten when it comes to getting after the money.

According to these ads it is not necessary for a man to own a poultry plant at all. If he has a few surplus dollars, all he has to do is to buy a pen of birds from one of these adver-

tisers, have them conditioned and then have them forwarded to as many shows as he can conveniently arrange, and then "cap the prizes." Then he can, on the strength of the awards, spend some more money advertising birds or eggs and fill his orders with any thing he can pick up in his yards, or the discards of other poultry plants, or crate eggs from wholesale houses.

Is it not as big a swindle for a man to exhibit fowls that he did not raise as to sell eggs or birds that do not come from his own pens? I hope that this may set some people to thinking, and perhaps in course of time, the American Poultry Association may take it up.

M. F. Reeve,

Pennsylvania.

SUCCESS WITH POULTRY.

The best book on poultry ever published, one which embraces every branch of the poultry business, is Success With Poultry. From the first chapter, "How to Get Started," to the different chapters on every phase of poultry for profit, this is a book that is of greater value than any other ever published.

Do you want to know the methods in use in the big poultry plants of the country? Success With Poultry will tell you.

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Success With Poultry contains 128 pages (9x12 inches in size) with numerous half-tones and etchings. Price is \$1 per copy. For price of book alone, we will furnish a full year's subscription to Poultry Keeper and send Success With Poultry postpaid. Offer is good for new subs or renewals. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind, or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 15th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year if sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

THE NATIONAL EGG LAYING CONTEST FOR JUNE.

Pens Nearly All Filled for the Next Contest to begin December First.
 —America, Canada, England and Australia to be Represented.
 —American Hen Holds the Highest Individual Record to Date, but an English Pen Still Leads by 259 Eggs.

At least three American hens and three British hens are in a close race to be the first to reach the 200 egg mark in the first eight months of the National Egg Laying Contest at Mountain Grove, Mo. An American hen only has ten eggs to lay in fifteen days to make a record of 200 eggs in eight months. All these hens have made a better record so far than Lady Show-you had made at his time last year. The leading pen record thus far this year is about 20 eggs ahead of the leading pen record at this time last year. The English pen of S. C. White Leghorns is 259 eggs in the lead of its nearest competitor. Two of the hens in this pen did not lay an egg in June, and if this continues, some of the other pens may yet easily overtake them.

June was a scorcher in Missouri. Several deaths were reported in different sections of the state as a result of the heat. It was, of course, also hard on the hens. We had 133 broody contest hens in broody coops at one time this month. Thirty-eight were put up one day and twenty-five another, and such a large per cent being broody at once cut down our egg yield for June. Other contests which had nearly fifty per cent of their pens composed of Leghorns, had less broody hens of course and made a little higher average for June than we did. Our total yield for June was 10,411 eggs, and the grand total to date is 70,386 eggs. The Leghorns in the North American Contest at Storrs, Conn., had made about the same average up to June first as had the Leghorns in the Missouri contest. The larger breeds in Missouri had made a little higher averages than the same breeds in Connecticut as a rule. At the present time, the records are very nearly the same on the average.

The twelve highest pen records to July 1st, being the record of ten hens or pullets for the previous seven months and a half, are as follows:

Pen No.	Eggs
2—S. C. White Leghorns, Eng-land	1529
19—Silver Wyandotte, Iowa	1270
57—Black Langshan, Missouri	1248
20—White Wyandotte, Arkansas	1222
30—Buff Wyandotte, Vermont	1212
33—Barred Rocks, Illinois	1192
11—Black Minorcas, Iowa	1190
26—Buff Wyandotte, Missouri	1192
8—S. C. White Leghorns, Cali-fornia	1185
23—Silver Wyandottes, Illinois	1182
59—Black Minorcas, Missouri	1177
9—S. C. Brown Leghorns, Mis-souri	1180

A thing which is worthy of our consideration is the fact that Pen No.

11, Black Minorcas, from Iowa, is a pen which was entered in the last year's contest and made a very poor record. The owner was not discourag-ed and entered the same hens again this year. More than half of them are two year old hens and they are among the leading pens last month and tied a pen of Anconas from Missouri for the silver cup for June, each pen laying 212 eggs. A pen of White Leg-horns from California also went into the ranks of the first twelve pens and others moved up the list as will be seen by comparing last month's report and this. The hens and pens which continue to lay a reasonable number of eggs during the hot weather are going to be the hens and pens which win.

The twelve highest pen records for June are as follows:

Pen No.	Eggs
1—Anconas, Missouri	212
11—Black Minorcas, Iowa	212
10—R. C. White Leghorns, Mis-souri	210
17—Black Minorcas, New York	199
18—S. C. Buff Leghorns, Missouri	194
8—S. C. White Leghorns, Cali-fornia	196
2—S. C. White Leghorns, England	191
26—Buff Wyandottes, Missouri	184
5—Black Minorcas, Missouri	181
20—White Wyandottes, Arkansas	178
7—Anconas, Oregon	178
14—S. C. White Leghorns, Penn-sylvania	176

The twelve highest individual records made thus far are as follows:

Hen No.	Eggs
860—Buff Wyandotte, Vermont	190
66—S. C. White Leghorn, Eng-land	187
100—Buff Wyandotte, Missouri	184
62—S. C. White Leghorn, Eng-land	179
61—S. C. White Leghorn, Eng-land	178
65—S. C. White Leghorn, Eng-land	175
735—Black Langshan, Missouri	171
67—S. C. White Leghorn, Eng-land	167
516—Buff Wyandotte, Missouri	165
55—R. C. White Leghorn, Mis-souri	165
77—Ancona, Missouri	164
72—Ancona, Missouri	162

Entries Coming in for Third Contest.

About two-thirds of the pens for the Third Annual Contest which begins December 1st, have already been entered. This promises to be the greatest laying contest ever held in this or any other country. We have promises of pens from the United States, Canada, Eng-

200 Egg Incubator \$3

No freight to pay. Actual hen controls every-thing in the Natural Hen Incubator. No lamp, no oil, no deadly fumes, no expense, no trouble, no costly mistakes. Thousands of voluntary testimonials. Fully protected by patents. More agents wanted.
 Approved By Over 550,000 Buyers
 Write today for FREE Catalog telling all about it and containing our Special Introductory Offer. Address Natl. Hen Inc. Co., Sta. H, Dept. 1, Los Angeles, Cal.

120 PAGE POULTRY BOOK FREE
 Tells how to succeed with poultry on the ordinary farm. How to make a first-class brooder out of an old piano box. What breeds lay best. Plans for poultry houses, how to feed, breed, etc. Describes PRAIRIE STATE incubators and brooders.
 You will be surprised at the valuable information it contains. It's free. Write a postal for a copy today. (21)
 Prairie State Incubator Co., 471 Main St., Homer City, Pa.

SUMMER HATCHED CHICKS
 from the eggs picked out by the Magic Egg Tester are equal in every way to any of the very best hatched in the spring. Hundreds of testimonials. Read our winter and spring ads in this Journal. Look for the band that "Points the Way." Circular free. \$2.00 each. If not at your dealer, send to us. Magic Egg Tester Works, Brayton 72, Buffalo, N. Y.

SINGLE COMB REDS, (Tompkins Strain.)
 We have several hundred of the finest young stock we ever raised, fast develop-ing into show birds, and are disposing of part of our breeders at cut rates to make room for this young stock. An excellent opportunity to start with a good pen of Reds
FRANK L. ZIMMERMAN,
 105 Princeton Ave., Youngstown, Ohio.

Feed Pearl Grit-It Pays
 It's a double-purpose grit. Clean, hard and sharp. Grinds the bird's food— aids digestion. Keeps hens healthy, helps them molt quickly, makes eggs. Send for our new valuable poultry booklet giving pointers and prices.
THE OHIO MARBLE CO.,
 13 S. Cleveland St., Piqua, Ohio

25 PAT APPLIED FOR
 Aluminum only; two sizes; ad-justable to fit any fowl. Held by double lock. Can't lose off.
 .postpaid 12-15c; 25-20c; 50-35c; 100-60c. Initials 10c per 100 extra, 50 or less 5c. Also Pigeon Bands.
T. CADWALLADER, Box 1206, Salem, Ohio.

45 Varieties Land and Water Fowls
 Send for free illustrated cata-log, which tells you much you should know. Stock and eggs at all times.
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land and Australia. Our rules are liberal, the premiums large, the entry fee small, and the contest will be held under the auspices of a state institution, the Missouri State Poultry Experiment Station. No breeder's name need appear on the pen or in the reports unless he wants it to appear. The best breeders in Missouri and America should have a pen trap-nested and have their stock pedigreed. You will have to hurry as we can only accommodate sixty pens. We will also try out ducks again in the next contest.

The Feeding Contest.

The pen which has feed of all kinds before it where the hens can help themselves dropped from first place last month to sixth place this month. They made a good record all during the winter and spring, and surpassed all other pens. This would indicate that hens may do well where fed this way in the winter, but it is not a good method of feeding hens in hot weather. The pen which gets nothing but corn, wheat and ground oats and nothing to drink but buttermilk, has now passed to first place.

Pen No. 67 Fed by Automatic Feeders.

This pen gets exactly the same food and treatment that our regular contest pens receive. The only difference is that the grain is fed night and morning by hand to the pens in the contest, and this pen in the feeding test supplies themselves with grain, by working it out of an automatic feeder and exerciser. This pen is in second place and this would indicate that this is not a bad method. The Connecticut contest uses these same feeders exclusively in their contest and no grain is hand fed. This method may prove to be a great labor-saver.

The following is a copy of Circular No. 4, issued by the State Poultry Experiment Station, on the following subject:

The Mighty Mite.

Dermanyssus Galinae, the scientists call him, but to us he is just the "pesky red mite." He is red, by the way, only when he is full of blood. The rest of the time he is gray with black spots.

Although one of the smallest of the parasites which infest our poultry, the red mite, owing to its large numbers, is one of the most serious. This is especially true during the warm weather, under which conditions they multiply most rapidly. Dark, damp, dirty hen houses are especially favorable to their growth, and it is in houses of this sort that they are found in largest numbers.

Mites, like some of the larger vermin which prey upon fowls, do their evil work mostly at night. They crawl upon the hens while they are at roost, and suck their blood. As soon as they are full, they return to the cracks and crevices in and around the roosts. They are also found in large numbers in dirty nests, and are the direct cause of the death of many sitting hens during the warmer months.

Three of the best methods of ridding a poultry house of mites are as follows: Method A—When a house once becomes infested with mites, a thorough campaign must be waged in order to get rid of them. No half-way measur-

ing will do. The first step is to clean up, empty out and burn all the nesting material. Clean out the droppings. If the floor is of earth, take out the top three inches, and replace with dry garden soil. Whitewash the walls and ceiling, using a pint of crude carbolic acid to each five gallons of whitewash. See that the whitewash is thoroughly worked into every crack and crevice. This is best done with a spray pump. (Whitewash used with a spray pump should be strained through screen wire.)

The whitewash thoroughly done, the next thing is to thoroughly paint or spray the roosts, top and bottom, the dropping boards, the interior of nests, etc., with a mixture composed of one gallon of kerosene and one pint of crude carbolic acid. Do not be afraid of putting it on too thick. Use special care to see that the liquid soaks into the crevices at the end of the roosts. The thoroughness with which you do the work will govern the degree of success which will follow your efforts. The roosts should be repainted with this mixture every ten days to two weeks as long as warm weather lasts.

Method B—Another very successful method of ridding a poultry house of mites, is as follows: Shave one ten cent cake of laundry soap into a pint of soft water; steep it until a paste is formed; stir in one pound of commercial cresol, and beat or allow to stand until a paste is dissolved. Stir in one gallon of kerosene. Double the quantities if you wish. Cresol may be obtained from a druggist at about thirty cents per pound. Care should be taken not to get any on the hands and face. Apply the undiluted mixture to the interior walls and roof with a brush.

If the house can be made tight, and the mites are very bad, it will be a good plan to fumigate the house with sulphur before painting the interior with the above mixture. A pound of sulphur for each one hundred square feet of floor space should be used. Use an iron vessel and put it up on bricks so there will be no danger of fire. Put a few shavings in the vessel, light them, and then pour in the sulphur. Do not open the house for several hours.

Method C—Still another method which has been tried with complete success, consists of spraying the interior of the house with lime sulphur mixture, such as is used in spraying trees. Use the mixture full strength for the first spraying, and repeat in two weeks with the mixture diluted, one quart of lime sulphur to four quarts of water.

Facts and rules which you should observe:

1. Red mites multiply most readily during warm weather, and in dark, damp, filthy houses.
2. Avoid all the hiding places possible. Change nest material often. Don't allow any decayed or broken eggs to remain in the nests.
3. When a house is once infested, very thorough treatment is required in order to get rid of them.
4. Anyone of three methods may be used. A, whitewashing and painting with kerosene and crude carbolic acid; B, fumigating with sulphur and painting with cresol emulsion; C, spray-

ing with lime sulphur solution.

5. To prevent mites, keep the house clean, and paint the roosts and interior of nests every two weeks with kerosene and crude carbolic acid. Remember that there is no reasonable excuse for a house being infested with mites. If the house is kept clean, sanitary and properly sprayed, they will never appear. A "mitey" hen house is always a sign of a careless poultryman. Resolve today never to let that sign be found on your premises.

T. E. Quisenberry, Director,
Missouri Poultry Experiment Station,
Mountain Grove, Mo.

MISSOURI STATE FAIR, SEDALIA.

Sept. 27 to Oct. 3, 1913.

The poultry department of the State Fair will be one of the big events of the 1913 exhibition. The poultry building is substantial; it is brick and iron construction with a tile roof, large and roomy and is fully equipped with uniform coops that are furnished by the fair.

No entry fee is charged but there is a small coop rent. Premiums are large. One of the features will be a demonstration of the work that is being done by the Missouri State Poultry Board at Mountain Grove, Missouri. Mr. T. E. Quisenberry, Director of the Station, will be personally in charge of this exhibit.

Mr. Henry Steinmesch, St. Louis, Missouri, is the director in charge of the poultry department.

In addition to the regular classification offered, a special egg laying contest will be held. This will cover a period of one week.

Premium lists are ready for distribution and may be had by addressing the secretary of the Missouri State Fair, Sedalia, Missouri.

SPECIAL CLUBBING OFFER.

By special arrangement with the publishers we can furnish any poultry paper at one-half price, providing the order includes a year's subscription to *Poultry Keeper* at regular price. For instance, for 75c we can furnish a full year's subscription to *Poultry Keeper* and your choice of *Reliable Poultry Journal*, *American Poultry Advocate*, or any other 50c poultry paper. Make up a list of the papers you desire and let us quote you a reduced price on the lot. Address *Poultry Keeper Publishing Co*, Quincy, Illinois.

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We desire to mail copies of *Poultry Keeper* to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to *Poultry Keeper*, and send direct to agents all the sample copies they need. May we hear from YOU?

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. (cost ten cents per word for all four months), is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

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Rates for ads classified under proper headings are as follows:

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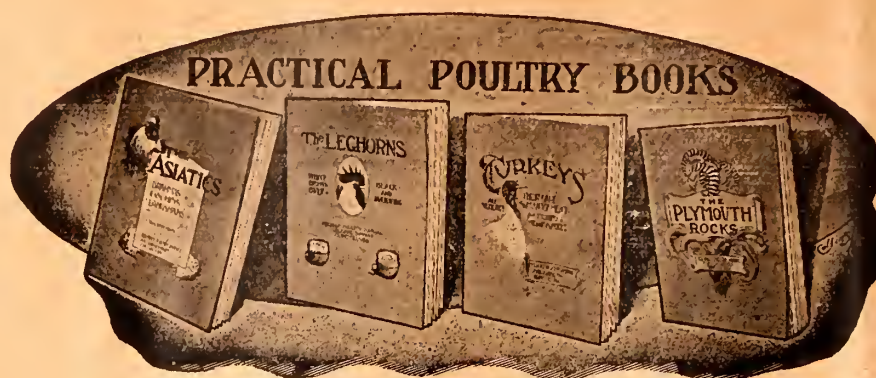
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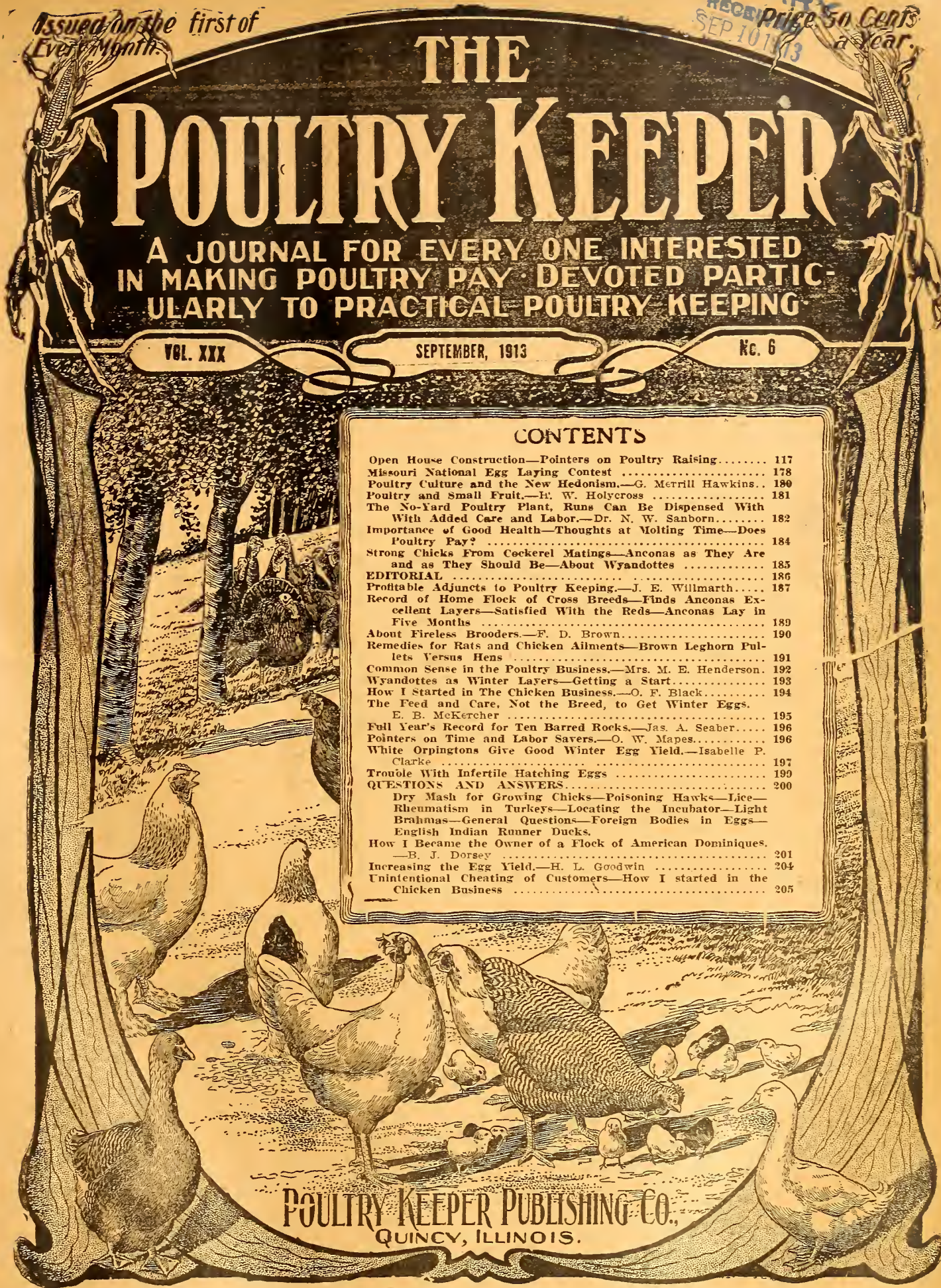
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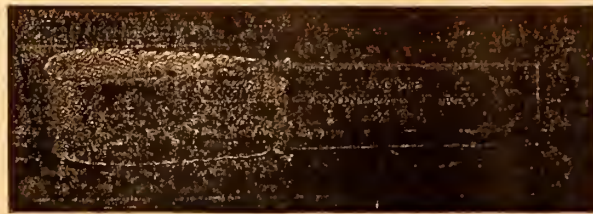
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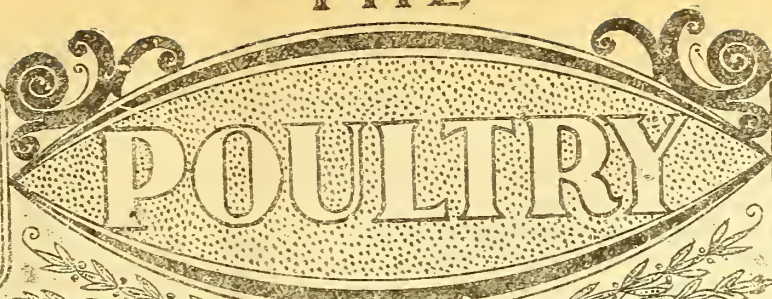
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IN MAKING
POULTRY
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OPEN HOUSE CONSTRUCTION.

Editor, Poultry Keeper:

I decided some time ago to build a poultry house this fall and in the meantime have been reading everything I could get hold of in regard to poultry house construction. As my plans differ somewhat from any I have ever seen in use and any that I have read of I thought they might be of interest to some of your readers.

The window problem was what puzzled me most. I think a poultry house should have glass in it when the weather is cold but what are we to do with the glass when the weather is hot? After giving the matter considerable thought I have decided on a plan that seems to me a practical one.

My house will be of the shed-roof curtain front type. It will be 7 ft. in front and 5 ft. in back and 12 ft. deep, divided into pens 9 ft. wide. The rafters will be long enough to allow a two foot projection in front to keep out snow and rain when storms come from the south. This, I think, is very important, especially in winter. The front will be boarded up 3 feet. This will leave an opening 4 ft. wide and 9 ft. long or entire length of pen. Sash 3 ft. wide, hinged at lower outside edge of opening will extend full length of pens leaving an opening one foot wide at top for ventilation when windows are in use. These windows are for use only when the weather is very cold. As they are on hinges they can be dropped down to hang against outside of front wall when the weather is mild. When cold weather is over they could be taken off and stored, or could be constructed so as to make excellent hot bed sash. Hinged at top of inside front wall will be a frame full size of opening and made to swing up and hook to rafters.

This will be for the muslin curtains. Between this frame and window sash fastened to cleats will be inch mesh wire to keep sparrows out and the chickens in.

The dimensions of these pens are similar to those of the Cornell house used at the New York experiment station. The openings in the front being almost the same with the exception of the window arrangements.

Some of those who have used the

Cornell house claim that the openings are too large, consequently they are troubled with frosted combs when the thermometer goes much below zero. I think by the arrangement I have planned my house it can be made warmer than the Cornell house. In warm and mild weather the curtains will be hooked up to the rafters and the window sash dropped down, leaving the entire opening free of everything except the inch mesh wire. When the weather gets decidedly cold the curtain will be dropped at night and the window sash raised during the day and when the mercury is near zero or below will leave the window sash in use day and night and drop curtain at night, also.

I think the air entering pens by passing down between curtain and sash and then filtering through curtain, together with the ventilation provided by the one foot opening above sash will make ample ventilation in zero weather and at the same time be warmer than a house with curtains only.

Most writers advise against the use of so much glass, but when it can be disposed of in hot weather and so arranged as to not make the house too cold in winter I cannot see how its use can be other than beneficial. Doubtless this would be too expensive for a man with a large poultry plant and perhaps he would not care to go to so much trouble manipulating the curtains and sash but for the man with a small flock I can find no disadvantages.

R. L. Bundy,

Ohio.

POINTERS ON POULTRY RAISING

Improvement is being made along all lines of industry, especially with domesticated animals, poultry and in the vegetable kingdom. Forty or fifty years ago our fathers knew nothing about corn breeding and little did they seem to care for such things, but these are things today in which all farmers are interested. In the poultry business it is the man with the staying qualities who wins out nine times out of ten, and we wish to emphasize the fact that the breeder who will select a single variety and stick to it, will win out in the end. It seems to be a hard

thing for most people to keep but a single variety. They want to try too many kinds at one time. How much better a uniform flock of one variety looks, no matter what the variety may be. Of course we would advise all to select a variety not only pleasing to the eye, but one that is popular with the poultry world.

The writer has been in the fancy poultry business for the past ten years and has had lots of sport as well as profit. I was pretty shaky when I entered my first showings but when the show was over I had my share of the ribbons, and then I wanted to exhibit again. Now I would rather show my birds than to eat. My advice to the beginner is to show your birds. The show room is where you can find out your weak points. Of course there have been some cloudy days with us. It has not all been sunshine. The road to success is to read the poultry journals. Study the experiences of others and then use your best judgment. One should know his own birds best. We have never called in assistance in selecting birds for mating or for exhibiting. We believe the exhibitor often knows the quality of his birds better than the judge who is to judge them in the show.

Another point is to be strictly honest. We do not believe there are many dishonest breeders. Do not expect too much from a sitting of eggs. If you have a pen of prize winners do not think all the chicks you hatch will be first class stock. If you fail to get a good hatch, be careful in noting all the conditions and points and you can probably think of something that caused it. A satisfied customer is the best advertisement that you can get.

Winger Brothers,

Indiana.

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants it except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

MISSOURI NATIONAL EGG LAYING CONTEST.

Five Hens Pass the 200 Egg Mark in Eight and One-Half Months—Two Hens Ahead of Lady Showyou's Record of Last Year—Is the Hottest Month Experienced in Many Years—The Extreme Heat Is Cutting the Egg Yield and Causing the Hens to Molt Earlier Than Usual—Some Interesting Results of Contest and the Feeding Test.

WHILE five hens have passed the 200 egg mark in eight and a half months and two of them have thus far surpassed the record of Lady Showyou for last year, the extreme heat for the entire month has been telling on the hens, causing them to molt earlier than usual and cutting the egg yield. The thermometer registered as high as 105 degrees in the contest houses at four o'clock in the afternoon, of one day, a time of day when it usually begins to get cooler. In some other styles of houses it registered as high as 109 and 110 degrees. You can imagine how a hen must suffer when confined in a trapnest on a day like this, even if kept there only long enough to lay. We are surprised that they have done as well as they have. This continued extreme hot weather is unusual for this section. Hens suffer as much from hot weather in summer as from cold weather in winter.

The total number of eggs laid for the eight and one-half months amounts to 80,073 eggs. This makes an average of 118 eggs for each hen, good-bad and indifferent. The yield for the month was 9,687 eggs. The average for each breed up to date is as follows:

	Eggs each
30 Langshan hens average	132
30 Minorca hens average	124
30 Ancona hens average	122
120 Leghorn hens average	119
120 Wyandotte hens average	117
60 R. I. Red hens average	111
90 Orpingtons	110
120 Plymouth Rock hens average	106

There is nothing startling about these records but we think this a very good record. It is not the sensational which we are looking for in this contest, its the facts, let the records be what they may. If the hens did no better and did not lay another egg, the lowest average hen has already laid twenty-six eggs more in eight and a half months than the average Missouri farm hen lays in twelve months.

The silver cup for the best record for July was won by Mrs. Daisy Rose, of Bois D'Arc, Mo., on her pen of Anconas with 210 eggs. The R. C. White Leghorns, Pen 10, were only one egg behind them. The remarkable thing about the records for the last few months is the manner in which a pen of Black Minorca hens is laying. Half or more of the hens are about three years old, and they have gradually crawled up to fourth place. Buff Wyandottes also went to third place this month. One pen of Buff Wyandottes from Missouri is the third pen in the contest, another pen of Buff

Wyandottes from Vermont contains the leading hen, and the third pen of Buff Wyandottes from Missouri contains the third highest individual in the contest. Only seven hens laid in the English pen of S. C. White Leghorns and one died, but still they made a small gain over the other pens.

The ten highest pen records for eight and a half months are as follows:

Pen No.	Eggs
2 S. C. White Leghorns, England	1686
19 Silver Wyandottes, Iowa	1418
26 Buq Wyandottes, Missouri	1387
11 Black Minorcas, Iowa	1386
1 Anconas, Missouri	1385
20 White Wyandottes, Arkansas	1376
57 Black Langshans, Missouri	1369
30 Buff Wyandottes, Vermont	1368
9 S. C. Brown Leghorns, Missouri	1351
49 Black Langshans, Missouri	1319

The ten highest pens for July were as follows:

Pen No.	Eggs
1 Anconas, Missouri	210
10 R. C. White Leghorns, Missouri	209
17 Black Minorcas, New York	203
11 Black Minorcas, Iowa	196
26 Buff Wyandottes, Missouri	195
5 Black Minorcas, Missouri	182
18 S. C. Buff Leghorns, Missouri	176
9 S. C. Brown Leghorns, Missouri	171
8 S. C. White Leghorns, Calif.	170
2 S. C. White Leghorns, England	157

The ten leading hens to August first are as follows:

Hen No.	Eggs
860 Buff Wyandotte, Vermont	216
66 S. C. White Leghorn, England	206
600 Buff Wyandotte, Missouri	205
62 S. C. White Leghorn, England	204
61 S. C. White Leghorn, England	201
67 S. C. White Leghorn, England	190
735 Black Langshan, Missouri	190
77 Ancona, Missouri	189
72 Ancona, Missouri	188
55 R. C. White Leghorn, Missouri	188

The Feeding Test, Pen No. 68.

For the purpose of determining something about the likes and dislikes of hens, a pen of ten hens, composed of five S. C. White Leghorns and five Buff Orpingtons were placed in a house and yard at the Missouri State Poultry Experiment Station at Mountain Grove the fifteenth day of last November, and have had thirty different kinds of the most staple foods obtainable in our state placed before them in open hoppers where they might take their choice and help themselves. For the first eight and a half months the results have been as follows. They have eaten:

Grains.

102 lbs. wheat.
77 lbs. corn.
72 lbs. millet.

42 lbs. sunflower seed.
41 lbs. Kaffir corn.
29 lbs. hulled oats.
23 lbs. oats.
17 lbs. cane seed.
8 lbs. buckwheat.
5 lbs. cow peas.
4 lbs. rye.
4 lbs. barley.
2 lbs. rice.

Meat Food.

324 lbs. buttermilk.
2 lbs. dry beef scrap.
2 lbs. fish scrap.

Mill Products.

35 lbs. rolled oats.
22 lbs. ground oats.
14 lbs. corn meal.
13 lbs. shorts or middlings.
6 lbs. gluten meal.
6 lbs. bran.
2 lbs. flour.
1 lb. O. P. oil meal.

Grit

20 lbs. oyster shell.
5 lbs. grit.
2 lbs. charcoal.
2 lbs. hard coal ashes.

Green Food.

1 lb. alfalfa meal.
Water, 435 pounds.
Summary of results for 8½ months: 559 lbs feed consumed. 759 lbs. water and milk. 144 lbs. egg laid. 1144 number of eggs laid.

It will be seen from the above that these hens ate more wheat than any other one food. They ate principally wheat, corn, millet, sunflower seed, Kaffir corn and oats. They ate four times as much ground and rolled oats as they did corn meal. They consumed but very little bran. They used four times as much oyster shell as grit. In animal or meat food they only ate two pounds each of beef scraps and fish scraps, and drank 324 pounds of buttermilk. They were out of buttermilk practically a month during this time and this accounts for the fact that they drank a little more water than buttermilk. When they had both before them and could take their choice they drank about equal quantities of each. If this test indicates anything, it indicates that sour milk or buttermilk is a better meat food than beef scraps or fish scraps. They ate scarcely any alfalfa meal, in spite of the fact that this pen was kept on a bare yard and was given but little other green food. Our poultry will not eat alfalfa meal or shredded alfalfa, even when scalded, unless forced to do so by mixing it with other ground feeds. Out of practically every nine pounds of milk, water and feed consumed these hens manufactured one pound of eggs.

Taking the Hens through the Molt.

With the arrival of "Dog Days" comes the most critical time in the life of our hens, the time of the annual molt. The shedding of the old feathers and the growing of the new plumage comes just at the time when the vitality of the hen is at low ebb. The long laying season, together with the hot weather, has pretty well drained her strength and brought her to the place where she needs special care if

she is to go into the winter season in full vigor, and ready to do her share in replenishing the egg basket.

In a normal molt, about four months are required for a complete change of plumage, the first feathers beginning to fall about the first of July. During the fore part of the molt egg production is not materially decreased. But as the process advances and the drain of the system incident to the growth of new plumage increases, egg production gradually drops off until, by the first of September, it has practically ceased. As a general rule egg laying having once stopped will not begin again until the new coat of feathers is complete.

Fortunate indeed is the poultry raiser who can successfully bring his hens through the molt and get them to laying again by the middle of November. For, in that case, they will probably continue to lay right through the winter. On the other hand, if they do not get through the molt in time to commence laying before cold weather comes on, they probably will not begin laying until spring. This is the reason why poultrymen who wish to produce winter eggs for market are so anxious to get their hens through the molt early.

As a means to this end some have advocated forcing the molt. This may be done by practically starving the hens for a week or ten days, and then putting them on a heavy ration of rich food. While this treatment will cause the hens to molt quickly, yet careful experimental evidence has not shown it to be entirely successful in the matter of later egg production. This is probably due to the general shock to the system caused by the starving process, followed by unusually heavy feeding.

It is the general consensus of opinion that it is best to let nature take her own course, while man simply sees to it that the environment in which the hen lives together with her feed and care, are as nearly ideal as possible. It is especially important that molting hens be kept free from lice, and that their roosting quarters be kept free from mites, scrupulously clean and well ventilated. Hens are more susceptible to disease during the molt than at any other time, and it is for this reason that special precautions in matters of cleanliness and sanitation should be taken.

The feeding of molting hens should not differ greatly from the feeding of laying hens. Both eggs and feathers are rich in nitrogen, so that food which is adapted for making eggs is also adapted for making feathers. Feathers, however, are richer in oil than eggs, and some food of an oily nature should be added to the ration to supply this want. It has been determined conclusively that the adding of a liberal amount of sunflower seed, or flax seed, or oil meal, to the ration of molting hens, makes them molt faster, and leaves them in a stronger condition with more vitality.

In conclusion it may be said that the successful handling of hens during the molt is a matter of constant watch-

fulness and attention to details, pertaining to feed, water, care, housing, cleanliness and sanitation.

T. E. Quisenberry, Director,
Mountain Grove, Mo.

POULTRY SHOW AT THE ILLINOIS STATE FAIR.

The premium lists of the great Illinois State Fair, to be held in Springfield, Illinois, October 3 to 11, inclusive, are now ready for distribution, and we want every poultry fancier to have one. Premiums amounting to over \$100,000 are being offered and in addition to the poultry attractions the Illinois State Fair, with its immense buildings, beautiful grounds and splendid exhibitions, makes the date one of universal interest.

O. L. McCord will again have charge of the department. The foremost judges of the country will be engaged to place the awards. The poultry show at the Illinois State Fair is one of the big features of this great agricultural exposition, and the best place on earth to advertise your stock; thousands see your exhibit every day.

The poultry building is one of the finest in the country and the 1912 poul-



Mrs. William A. Ayres, of Falls, Pennsylvania, and her Brown Leghorn layers. An interesting account is given on Page 191 of this issue, or how her pullets beat the old hens in filling the egg basket.

try exhibit was considered by fanciers and poultry judges to be one of the greatest shows ever held in the United States. This year every effort is being put forth, by the increase in premiums and additional new attractions, to make the coming show still larger and better. The building is equipped with the Empire Coops and the show will be classified along the same lines of all the foremost winter shows, while every assistant in the department will be a poultry fancier who has had experience in the conducting of poultry shows. Special attention will also be given to water fowls in a department of their own.

Adjoining the poultry building a large tent will be erected which will be headquarters for the Illinois branch of the American Poultry Association, the Illinois State Poultry Association and the meeting place of all specialty clubs. All poultry associations and specialty clubs and those interested in the advancement of poultry culture are cordially invited to make this their headquarters.

For information regarding the poultry department, Illinois State Fair, address, O. L. McCord, Danville, Ill.

A STAUNCH BELIEVER IN BEEF SCRAPS.

Editor, Poultry Keeper:

In the last few months I have seen several letters in your paper condemning commercial beef scraps as a feed for poultry. Now I want to tell you the bad effect it has on my hens. I have one pen of last years pullets, hatched March 7th, 1912, that laid a few eggs in August of which I kept no record, but beginning September 1st, 1912, to July 31st, 1913, they have laid an average of 181 2-3 eggs.

This pen was fed as follows: To every 12 hens, 1 lb. of wheat, 1-3 lb. corn and 1-3 lb oats per day. They also had a mash mixture made according to the Maine formula with the exception of beef scraps, kept where they could get it at all times.

In a separate hopper was a continual supply of commercial beef scraps that they ate whenever they liked and all they wanted. From the time they were hatched to the present (August 1st, 1913) they have been exceedingly healthy and vigorous. They have had all the green stuff that they would eat at all times; have had a house 12x 24 feet for 100 of them and yard 30x 40 feet to run in in good weather.

One writer says he would not force his hens to eat anything that was not clean enough for himself. Let him turn his hens out where they take their choice and get what they seem to like best and see if they do not pick up several things that he would not care to assimilate.

L. O. Hardenbrook,
Washington.

ST. LOUIS POULTRY SHOW.

The Mississippi Valley Poultry Association of St.

Louis has been organized with a capital stock of \$5,000.00. The officers are E. W. Grove, Jr., president; W. W. Henderson, vice president; Henry Steinmesch, secretary and treasurer.

It is aimed to work in harmony with the Chicago Show and to make the St. Louis and Chicago Shows to the West what the New York and Boston Shows are to the East.

Our judges so far selected are Theo. Hewes, of Indianapolis; A. C. Smith, of the Minnesota Agricultural College, of St. Paul; C. S. Bvers, Hazelrigg, Ind., The Orpington Specialist; Fred Harrison, of Menominee, Mich., E. C. Branch of the Revision Committee of the American Poultry Association, Lee's Summit; Edward Joynson, late of Lancashire, England, who has judged at the Crystal Palace; Tom Woods, V. O. Hobbs and others yet to be selected.

Our dates are November 25th to December 1st, and the big St. Louis Cattle Show will be the place.

Premium list ready October 1st. For copy of same and other information write Henry Steinmesch, Secretary, 220 Market Street, St. Louis, Mo.

POULTRY CULTURE AND THE NEW HEDONISM.

As the German philosopher, Nietzsche has said, "The original sin is that there is too little joy in the world."

The poetical garden wherein was cradled the human race has evolved a vale of tears and the existence of mankind has too completely been stупed in misery.

In a world of beauty we have been trained to close our eyes to the beautiful. When surrounded by hardships the race has been willing to become resigned to its lot and the Calvins and Jonathan Edwards of centuries ago thundering against the joys of the senses have bequeathed to us their lingering influence, but fortunately in a greatly attenuated form.

There has come a reaction among the people and the old maxim "be virtuous and you will be happy" is being changed with "be happy and you will be virtuous."

A new era is approaching, a new era of enjoyment wherein the simple pleasures of nature will again play a great part in the lives of the people, when the soft after-glow from an autumn sunset, the song of the wind in the tall trees of the forest and the clear morning call of the blooded cock shall contribute to the softening and mellowing of each individual's life.

This article does not purport to be an article upon practical poultry culture. I would not have it such. Let us, for a little while, forget the ledger and market reports, forget that in a world of pleasure, the hard grasping hand of necessity has thrust the problem of maintaining life by close figuring and hard toil upon us, and for a moment enter into the spirit of this new world embracing attitude of cultivating the happier, finer side of our existence. The small things of life constitute the most beautiful, most satisfying, most stable of earth's enjoyments, and among these simple beautiful pleasures I want to place the rearing of thoroughbred poultry.

There are those who tell us that the rural residents are not progressive and maybe they are right, that the farmers are always twenty years behind the advanced thought of their day and in some respects perhaps that is so and yet in the face of this, how much better it would be if all of earth's humans could have a rural residence for part of each year, at least, and allow them to come into contact with the soil and its sedative properties and the opportunity it gives for that delightful occupation of poultry raising. The crime of the world has greatly increased during the past half century and in that time the world's population, particularly the American population, has changed from rural life to urban life.

This has occurred so completely as the result of machine production of necessities of existence that today we find great cities of working people, submerged in poverty, broken by toil and hunger, completely divorced from

the soil, and crime is rampant, and criminals are unhappy, therefore crime is bred in unhappiness and unhappiness has increased as the inhabitants of the country have been driven from the soil and from the association during their growing period with the animals and birds of the farm.

If each of the horde of human direliets that is marshalled each morning into the docks of the police courts of the city all over the land, could have known the happiness that attends the cultivation of a favorite breed of poultry, if he or she could have seen the little downy ball of animation, the result of careful selection of ancestors, break through the shell, could have cared for it, fed it, watered it, dusted it, groomed it through its various stages of growth to at last see it in the show pen competing with its peers; could these gentle stimuli have coursed through their nervous system giving play to the powers of observation and exercise to the proclivities for sport, would they be stealing, drinking, murdering in the miserable manner we behold?

To be able to enjoy poultry culture presupposes the wherewithal to maintain them, moreso than is found among the masses today. No one realizes more clearly than I that the great economic foundations of our present institutions are responsible for the sordid life led by the people of today and that it is utterly impossible as things are for millions of wretched humans to ever hear the melodius notes of Chanticleer as the sun comes beaming through the mists of the morning or to appreciate the music of that call if they should hear it, but if it were possible what bright rays of joy might be gathered from the mating and rearing of standard bred birds and disseminated among those of the earth who dwell in darkness.

To make this possible is the problem of today. Its solution is in sight, maybe not tomorrow nor the day after, but the day will dawn when the desire for a fuller life, more enjoyment of earthly pleasures shall be satisfied.

The country life of modern times has become monotonous to many. The long hours of work, lack of variety, lack of amusement, lack of fellowship, and intellectual life have thrown a stigma upon the life on the farm.

To a great degree is this the result of the neglect of cultivating the beautiful and interesting within the farm's immediate environment. The boy or girl who has been brought up in appreciative companionship with trees and flowers, blooded Jersey, Hambletons and Buff Plymouth Rocks, who has been taught the ideal of perfection to be striven for, who can see the beauty in a rose, a golden feather, the coloring of an eye, the symmetry of shape, will never find time hanging heavy for want of interest, nor thirst for city existence, unless forced by circumstances to gain a livelihood there.

But these things are not brought to the fore except in a small percent of

country families. From the time the child is old enough to understand, he imbibes the commercial atmosphere with which he is surrounded, the dollar is ever the objective point, the ultimate end of all activity. There is no breeding for beauty's sake in the mastery of the art of mating, all these are but means to the dollar, consequently money comes uppermost in the young mind and the steady drift is away from poultry yard, pasture and garden to the city money. Channels where the dollars roll in streams, although they are monopolized and the great white ways serve up artificial stimulants to clogged passions and the candle of life early burns to the socket. The race is reaching out for a more varied and complete existence but only a few today find it feasible to gain the good that is found in cities and still cling to their native soil.

It must be arranged so that all may come into close contact with the country, a decentralizing if possible in our manner of living at the same time enjoying the advantages of learning, association and amusement offered by city life.

Each one must strive to get into accord with his mother earth and her environment; to live according to her laws; to enjoy her beauties and experience the happiness that springs from that correspondence. That is what the new "Hedonism" means and that is what poultry culture from an artistic standpoint will help to do in a very decided way.

Therefore let us support and perfect the fancy in poultrydom, let us encourage the breeding of breeds with their wonderful selection of plumage, shape and oddities that the ability of man in directing the process of natural selection has brought about, let us breed our Americans, English, French, Mediterraneans, Asiatic, etc., and show them in all their glory, but also the breeds that have not proven so utilitarian. Sultans, Frizzles, White Faced Black Spanish now so neglected, Polish, Games, Bantams, Pheasants, Waterfowls and Turkeys, they lead the charm of variety and beauty to the eye that cannot be discounted for dollars and cents.

Let the enthusiasm for the fine points of standard bred poultry be spread among the people to serve as a spur to that day when every man and woman shall have a household and every household its flock of purely bred fowls, to assist in re-awakening the race to the pleasures in the simple beauties of its environment, to serve as demonstrations of those wonderful forces that in their workings throughout the centuries have produced the species we find living today upon the earth, a help in gaining an understanding of the oneness of all life upon the earth and with the earth, a contribution to the beautiful in life, an addition to the joys of mankind and therefore a force making for an advance in civilization.

G. Merrill Hawkins, M. D.,
Washington.

POULTRY AND SMALL FRUITS.

It has been said that the man who has learned how to grow two bushels of wheat where formerly only one grew, is a public benefactor. In a like manner, the man who discovers how to raise two crops upon the same land at the same time and each crop add to the value of the other, has rendered it possible for a larger population to subsist on the same amount of land. While it does not seem possible, it is, nevertheless, true and those two crops are small fruit and poultry. The accompanying picture shows a bunch of White Wyandotte chicks that have lived and grown in the raspberry patch just over the fence shown on the right in the picture. They are in a strawberry patch and were left there till they had cleaned it up.

This is the plan I follow. In the fall I cover both patches with a mulching of straw to protect them through the winter. In early spring while the chicks are quite small they have the run of both patches and thoroughly enjoy scratching for bugs and small seeds and by the time the strawberries begin blossoming, the straw is pretty well scratched over. By August first there is nothing left of the straw but dust. This mingled with the droppings makes a fine fertilizer over the whole patch. As soon as the strawberries begin to blossom, a temporary fence is run between the patches. For this purpose I find the poultry fence made by the Brown Fence and Wire Co., of Cleveland, O., to be excellent and it costs only 33½¢ a rod. It can be rolled up and moved anywhere and does well with very little stretching. I drive stakes in the ground and wire the fence to them, do not stretch it at all, and it stays straight and keeps the chicks where I want them.

By the time the raspberries begin to ripen the strawberries are gone and I turn the chicks into them. Most strawberry growers mow off the weeds and tops of the plants, let them dry and burn them, but it is better to turn the chicks into them for they clean up the grass, weeds and plantain first then eat off the strawberries and convert it all into chicken and high grade fertilizer.

By the time they get this properly done the raspberries have all been picked and the new growth of canes is coming on apace. I then trim out all the old canes, clean up the patch, and turn the chicks back to enjoy the friendly shade of the new growth, to pick up every bug and worm that plans an attack, and continue to enrich the soil. Then I turn my attention to my strawberries again. I go through them and dig up strips, leaving rows of strawberries about one foot wide. The patch is now clean and as soon as rains begin the berries set new plants and send out their runners which take root in the loose soil which I have dug up. The next spring these are all new plants and by repeating the operation the next summer and digging up the part left the year before, I have my patch re-set every two years and

get a crop of berries every year. On the back end of my town lot on a space about 40 feet by 50 feet, in spite of flood, late freezing and unusually dry June, July and August, we gathered about a bushel each of strawberries and raspberries, raised over 100 chicks and have the finest canes for next year's of raspberries I have ever had. I also have plum, cherry and peach trees on the same space but the late freeze cheated me out of the fruit from these. However they have furnished a lot of cool shade for my pul-

be watched most closely is to give them more room as they grow. I do not put over 25 in one brooder box if I can help it, though I have one that will hold 50 till they are six weeks old. A great deal depends upon the method of feeding in handling chicks. I attribute my escape from White Diarrhoea, so far, partly to the method of feeding. I had no trouble this year in making my White Wyandotte cockerels weigh two pounds at twelve weeks. I will say no more now about methods of feeding as I have taken too much space already.

H. W. Holycross,
Ohio.



Flock of White Wyandottes Pullets Owned by H. W. Holycross, Bell Center, Ohio. These are of the Famous "Regal" Strain, and there are sure to be some prize winners in the bunch.

lets in the hot July and August days. I have sold off the cockerels as fast as they would do for broilers so that I now have about 50 in the bunch.

I use Philo coops for my little fellows and as soon as they get to be about 1½ to 2 lb. size I change them to a colony house till they go into the laying quarters. I expect to house my pullets in the laying houses in a week or two. When I take them from the berry patch I will restock it with younger stock.

A good deal has been said in the poultry journals about fireless brooders and most poultrymen say they are all right for warm weather but will not do for cold weather. I have used fireless brooders ever since I began raising chicks and never have had any artificially heated brooders. I use a brooder box similar to those recommended by Mr. Philo and have had good success with them. The first year I had quite a good deal of trouble in getting the chicks to go in, but since then have had no more trouble than with a heated brooder. I do not use hens either for hatching or brooding but keep biddy strictly to business laying. I have better success with chicks in cool weather than in warm. The early chicks grow more rapidly and seem stronger than the late ones. I have never had a case of bacillary White Diarrhoea and scarcely ever a case of bowel trouble. I hatched chicks the first week in February this year and after keeping them a week or two in the cellar in a Philo coop without a top, I put them in a Philo coop outside on the east side of the house without loss. The thing that must

NATIONAL S. C. BLACK ORPINGTON CLUB NOTICE.

Seventh annual catalog will soon go to press, and all breeders of Blacks are urged to join in time to have names inserted.

Note—This club should not be confused with any other club devoted to the breed. This club has more than ten times the number of members of any other such club, awards a gold plated medal to every member winning a 1st in any American or Canadian show in competition with at least one other member and if ten members compete a silver cup. If member winning 1st has no competition from club members a silk ribbon will be given.

Dues to October 1st, 1914, are \$1, but do not send any money till you have seen the club catalog which is free to those interested, by addressing Milton W. Brown, Sta. L., Cincinnati, Ohio.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, if desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote you promptly.

THE NO-YARD POULTRY PLANT—RUNS CAN BE DISPENSED WITH WITH ADDED CARE AND LABOR.

Dr. N. W. Sanborn, Holden, Mass.

SOME people who wish to keep poultry have not the room for yards or grass range. Other folks who have the space do not wish to give it up to this purpose. What shall they do? Give up all idea of owning hens and chicks or try out the plan of raising chicks in coops and keeping laying stock in the house all the years? While I believe in the wide range plan of handling poultry I would take the no-yard plan rather than give up the satisfaction of keeping chicks and hens. I realize that to do without yards and range will increase the amount of work and care that comes to the poultryman. I know that the birds will require more attention, be subject to more troubles and usually do slightly less well than under ordinary methods.

The laying and breeding stock needs as large a house as the conditions will admit. It should be more ample, better planned, than if there were connected ample runs. Hens do not do well confined in the old style house that was close and warm. The no-yard plan calls for the fresh-air, open-front, modern house. You must give them as much as possible of the benefits of out-of-doors while still confined within the four walls, and under a tight roof. The no-yard house must be arranged to meet the zero weather of winter as well as the hot summer days of July. It will need to be closely shut up on ends and back through the winter weather and be planned to give free circulation of air all the hot weather days and nights of the summer season.

I should not be satisfied with the house that gets all its air through the front. It must have openings in both ends and would be improved by a long, low window opening in the back, under the droppings board. This rear window should be tightly shuttered in winter, but allows more sweep of pure air in the heated days of the year. One end of the house can have its ventilation through the wide open door, the opening being fitted with a wire covered frame to confine the hens. The other end may have a glass window that can be swung up, out of the way, when air is needed. This opening will need its wire sash for warm weather. The front of the house cannot be too widely open. It may need no glass, but some sort of protection will be required part of the year, and in storms. Good, strong, open mesh, unbleached, cotton cloth is the only thing I would think of using for storm curtains for the house front. Heavy cotton, when wet, is air tight. Most oil filled cloth is worthless when you come to try to get air through the cloth. You need fresh air without admitting snow or rain. There are days when the curtains must be closed that you need light through them, and the thin cotton cloth will do this.

The no-yard house needs the roof to slant so that the sun will not strike it "squarely." Most locations will be suited if the roof slopes to the north. Avoid the south slant of the roof of a poultry building. It makes a house that is hard to ventilate. Such a house is almost useless in the warm days of midsummer, and looks better on paper than in actual use.

This house can be bought ready made or built of good material at home. I prefer to build it to suit my location and needs. Boards should be at least three-quarter inch stuff and it is good judgment to cover the roof and rear with one-play roofing material. Studding needs to be two by three inches for small houses, and two by four inches for roof rafters in houses of ten or more feet across. Most no-yard houses are in such places as to call for two coats of paint. Then the house will not look out of place in the back yard or on the lawn and it will last to pay for the added cost.

The Fittings.

The furnishings of the house are the roosts, droppings boards, hoppers, nests and water fountain. All these should be off the floor so as to give every foot of space for the hens' use. The roosts and droppings boards, of course, are up in the air. The droppings board had better be placed high enough to give ample room for exercise under it, even when the house has its full amount of litter. The roosts need to be placed above the droppings board so as to leave room to use the hoe without too much labor. Along one side of the pen will be a shelf, twenty inches about the floor, to hold the hoppers, water fountain and nests. In order to eat, drink or lay, the hens will have to leave the floor. Arranged in this manner there will be little waste of food, no soiling of the water and slight danger of egg eating. I have seen some houses where the water and food was on a four legged bench in the middle of the house. This gives access to all sides of the dishes, but with open hoppers all the day the side shelf works out better.

Everything should be portable. No nailed-in roosts and droppings boards. No built-in nests. The roosts fit into slots, the droppings boards rest on cleats, the nest set on the shelf. With an earth floor you do not have to consider the dusting box. If obliged to use a board floor the dust box is best placed in front of a window, near the south side of the pen. I saw one no-yard house in New Jersey where the dust box was three feet above the floor. It was filled with coal ashes and the hens were not only dusting in it but several persisted in using it for nesting purposes.

Plain House Inside.

Every part of the interior should be plain. There will be mites to fight, mites to keep under and simple plan-

ning of the studding and posts will save much care and labor in white-washing. There will be times when you will need to use the broom on the ceiling and walls and if nothing obstructs its use you will do a better job. The nests should be simple, cheap, easily cleaned or replaced. Nothing is better than an orange box, turned on its side, a strip of wood nailed on to keep in the straw, giving you two nests for five cents. Orange boxes are so easily obtained and are so low priced that you can well afford to turn them into kindling wood for the kitchen fire and get new ones. Avoid the nests that are made part of the house and cannot be taken out to clean or replace.

Have One Story Houses.

There is a fad for two and three story poultry houses for the back yard. Most of these have just a few feet to each story and the birds are carried for by reaching in from outside and doing what work you can. They look nice on paper and appeal to the beginner when he starts in with hens, but are a delusion and a snare. You think you are getting more floor space under the same roof. You are. But at the expense of much labor and some cuss words.

I would not even advise setting the house on posts with an exercise space underneath. This is often done and works well in a few cases, but should be tried out on a single house. It is much like the getting of eggs under the old fashioned country barn, getting down on hands and knees, lying flat at times, trying to reach the stolen nest way inside. Did you ever try to get eggs in such a place? Perhaps you used a hoe, a rake or a stick. Make every hen you own lay her eggs right in sight, within the house and not take chances with that dark, low space under the house. The nearest approach to a second story will be the roosting space above the droppings boards. Every foot of the floor is useful for scratching. Half the droppings are caught on the droppings boards and removed before it fouls the air and floor. I urge you to try out the droppings boards thoroughly before following the teachings of some of the writers who advocate dispensing with droppings boards. Try this through one winter, weigh the droppings that fall on the boards in a single week, estimate how much you remove in three months, and then ask yourself the question: Do I want all this filth mixed with the litter of the floor? It is safer to get rid of the body waste as early in its history as you can. Two or three times a week is none too often to clean off the droppings boards, in this house of the no-yard plan.

More Effort to Keep Busy.

It will take more effort on your part to keep the hens busy than if they had the long yard, or the free range. The ration needs to be more bulky and less attractive to the birds, the litter used more freely, and the food itself less fattening, than for birds on range. A dry mash is better for the shut-in stock than the wet mash. The wet mash is quickly eaten and the hens

stand around waiting for the next meal. The dry hopper plan keeps them at work twice as long, at least, as the wet mash. A dry mash that would suit the free range hens and pullets is improved for the shut-in flock by adding a fifth more of bran. More oats and less corn is the best advice I can give for scratch feed. Never more than one-third corn, even in winter; equal parts corn, wheat and oats being good for winter, and two parts oats, two parts wheat, one part corn being a good summer ration for layers.

With our wide range and big yards we clean out all litter in the late spring and do not replace it till autumn. In the no-yard house we cannot get the needed exercise without some litter in summer. Litter in warm weather has its dangers, the worse being that it is a good breeding place for red-mites. These do not multiply much in clean litter, but let it get dirty and filthy and no one can tell how rapidly they will grow and beat you at your poultry work. Summer litter needs to be dry, or at least dry soon after it is put in. If you have a garden at hand all the weeds can be thrown in as they are pulled and serve for green food while fresh, and when dry make good scratching material to scatter the grain in.

Lice in No-Yard Houses.

The hens will not dust as thoroughly and often in the no-yard house as if they were in the open. Out of doors they find just the quality of soil that appeals to them for dusting purposes. There is a happy medium of soil and dampness that they prefer and it is hard to supply it within the house. They will accept the dusting material that you supply and use it some. The hens in this shut-in flock of our need looking over for lice and when found in any numbers promptly dusted by hand. The best thing to look for that I know of is the collection of eggs, or nits as they are called, on the fluff feathers just below the vent. If you find many of these you should keep up dusting weekly till the clusters fail to show up on the looking. Dry dust or any sort, be it fine and slightly damp, will answer. Most of the commercial lice powders, with fine ground tobacco stems as a basis, are all right.

Summer Conditions.

We often say, give summer conditions and you will get plenty of eggs. This is partly true. Then hens need the variety of the flock on range, need the exercise of the large yard and should be kept free from vermin. Apply all this knowledge to the care of the flock in the back yard house.

The Birds.

The flock of hens that I have in mind, needs to be replaced every year. I would buy pullets in late September, buying those that looked as if they would lay in a month and let them take the place of the yearling hens that have been sold for eating. I would not raise birds under no-yard conditions. I say, I would not. Perhaps you can, perhaps you have, but even then let me advise that you buy a free range cockerel every year. The careful man can raise better birds in close

confinement than can the careless man on the best farm range. But give the careful man the advantage of the splendid farm range and he will beat the careful man with the no-yard plant all the time. You must have sturdy birds to stand the close confinement of the no-yard plan, well bred stock to give you eggs all through the winter, and too much care cannot be given to selection of your flock. Do not try the no-yard plan unless you must.

NOTICE TO SHOW SECRETARIES.

The American Buckeye Club offers the following specials during the coming show season. Shows desiring them placed with them, please print the following notice in their premium list and send a copy to the club secretary who will at once send them a list of breeders.

"The American Buckeye Club offers a handsome silver cup for best pen provided there are two or more exhibitors in the class. The club also offers four special ribbons, one each for best colored male, best colored female, best shape male, best shape female. Competition open to members of the club. Send one dollar to A. H. Weisberg, Secy-Treas., Nevada, Mo., for a years dues. The club catalogue will be sent to any address on receipt of four cents in stamps."

On page 166 of the August issue we stated that the last Roseworthy (Australian) contest showed an egg record of 182 eggs each for 804 hens and that it equaled the best individual record at the last Missouri contest. This was a mistake on our part as the best individual record for the Missouri contest was the White Plymouth Rock hen, No. 717, which laid 281 eggs. The average, however, for the 655 hens in the Missouri contest was 134 eggs. A full report of both the Missouri and Connecticut contests was published in the December, 1912, issue of the Poultry Keeper, and a reference to the official figures in these reports will show the full details of the contests.

BIG BONE CUTTER VALUE AT \$5.

It is to be hoped that none of our readers will overlook the generous offer of the Stratton Mfg. Co., Box 43, Erie, Pa.

This firm manufactures the famous "Dandy" Green Bone Cutter, a staunch, rapid, large capacity machine, retailing at the extraordinary low price of \$5.00 and up.

To show what confidence the manufacturers have in the "Dandy" Bone Cutter, they are perfectly willing to ship the machine for 30 days free trial to any poultryman or farmer. We would advise all readers desiring a good bone cutter to get in touch with this firm right away.

TO KILL BATS.

In the July Poultry Keeper a reader wished a rat recipe. Here is a good one. Sift corn meal, mix enough plaster-of-Paris in corn meal to make it a little white. Mix and feed the two dry. Keep plenty of water in a shallow dish for the rats to drink. This hardens in them. Keep from poultry or any other stock.

J. E. Thayer.

The Illinois State Poultry Association will hold its twentieth annual show in the State Arsenal Building, Springfield, Illinois, January 5-11, 1914.

The Illinois State Show has always been a success and exhibitors are assured that all claims will be paid promptly.

The R. C. Black Minorca Club will hold its annual meeting at this show. Secretary McCoy has an attractive offer to any specialty club desiring to hold its annual national, state or district meeting at this show.

O. L. McCord, D. E. Hale, George A. Heyl, J. C. Johnston, and J. H. Minshall, of Brantford, Canada, will judge this show.

No other show has more new features than the Illinois State Show and exhibitors are given a chance to make as many winnings as possible.

Send in your name and address to the secretary, Theo. S. McCoy, Gollconda, Ill., who will send you a catalogue about November 15.

To any reader of Poultry Keeper sending us a list of twenty names, of people interested in poultry raising, no matter whether they keep one or a hundred hens, we will send free of charge a copy of our booklet number four on "Feeding for Eggs." This booklet contains much information on this all-important subject of service to those wanting winter eggs.

THE IMPROVED ALUMINUM CHAMPION LEG BAND. PRICES REDUCED.

The Champion Leg Band is the oldest and most popular band on the market. It is made in one piece, in two sizes, adjustable to fit any fowl.

25

PAT. APPLIED FOR

This band always stays securely where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the board part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend the two lugs over the loose end as shown in cut. Cut off surplus with scissors.



Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state that you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

IMPORTANCE OF GOOD HEALTH.

Editor, Poultry Keeper:

In looking over the American Poultry Journal I find there are many abandoned poultry houses, through the country. Some on account of ill-health or wanting something to do after work hours have built poultry houses, expecting to make money from the start, having read accounts of some who had succeeded in their first effort by using good judgment and going slowly.

Chickens require a lot of care, especially baby chicks, and those shut up in small places. They must not be neglected one day if you expect good returns. They must be kept clean and dry, must have bugs and worms or their substitute, meat, charcoal, grit and green stuff. If the owner intends to breed he must look to the fertility of the eggs. On this point writers differ. Some say the cock must be vigorous, have hens with him that he likes, be fed on hard grain, corn and oats and have lots of green stuff and a free run. Those of us who live in town cannot give a free run or the neighbors would soon be talking very emphatically.

On last Decoration Day I received, by express, six baby chicks. I opened the box and found six of the weakest, sickest chicks I ever saw. All had the diarrhoea. One was dead next morning. All died but two in a few days. Of course the eggs they were hatched from were fertile, but the germ was weak and the chickens were weak. I decided at once that the hens that laid the eggs from which they were hatched were sick with bowel trouble and hence sick baby chicks. I never keep a cock or hens to breed from that has been sick.

While on the diseases of chickens will give my cure for roup or cold. Heat an iron red hot. After the chickens are on the roost hold the iron under the roost and pour on carbolic acid. Close the door and let them smoke and sneeze. This is the best remedy I ever used.

To be sure of fertile eggs keep about seven hens with the cock. Give them different kinds of grain, plenty of green stuff, green bone and plenty of fresh water.

My way of feeding baby chicks is very successful. Feed sparingly for four or five days, gradually increasing. Give toasted bread crumbs soaked in milk, then chick feed. Give milk or water from the first charcoal, sand and bran. Begin with meat scraps when they are a week old and give a little every day. After the first week or ten days you can almost see them grow.

D. H.,

Ohio.

THOUGHTS AT MOLTING TIME.

The molting period is a trying time for the poultry. It is, in reality, the most critical period in their existence. They must have the best of care at this time if we are to expect them to go through this trying ordeal with the least possible lowering of strength and

vitality. Especially is this true with regard to show birds or selected breeders. To neglect them will often do untold harm.

A show bird, if carelessly handled at molting time, can often be ruined as far as its winning qualities are concerned. And selected breeding birds, if allowed to become run down and out of condition on account of vermin, poor feed and filthy, illy-ventilated quarters, seldom regain sufficient health and vigor to produce robust chicks—the kind that will prove a source of profit to the owner.

On quite a few poultry farms the males and females are allowed to run together the year round. This is a practice that I do not favor. The sexes should be separated at molting time. The breeding season being over and hatching eggs not desired, it is best to break up the breeding pens. Both the males and females will be better off as a result. The hens will then be free from the constant annoyance and attention of the male bird, and will be happier and more contented. The females can all be yarded together, giving them roomy, airy quarters in which to roost at night. The males can be kept in separate enclosures with ample room for exercise.

Shade is one of the most necessary requirements for the fowls during the molting period. This is the time the hot rays of the sun effect them the most. Their unprotected bodies are easily scorched and burned if forced to remain in the hot sun. One should have shaded runs for the poultry during the hot summer months. If natural shade is lacking one will need to put up shelters, under which the birds can stay when the sun shines. The top only should be covered. The sides should remain open to allow free circulation of air. White fowls, especially, should be kept in the shade as they tend to molt out whiter. Brass, and mottled plumage is often caused by keeping the birds confined in the sun while growing their new plumage. Place the water vessels in the shade by the shelters so the fowls can help themselves at will.

Do not overfeed the molting fowls. It is easy to get them into an overfat condition at this time, as they seldom get the exercise they require. Do not give them feed of fattening tendencies. Plenty of green food should be provided, in fact, give them all they are capable of eating. A good mash should be fed once a day. It is advisable to add a little linseed meal to the mash as it has a tendency to encourage the growth of new plumage and give it a better lustre. Sunflower seeds are also excellent to produce glossy plumage. Should the fowls get off their feed, it is a good plan to give a dose of Epsom salts and withhold all feed for a day. The salts should first be dissolved in water at the rate of a half teaspoonful to each grown fowl, and the water used to mix the mash.

Birds intended for exhibition should be watched carefully at molting time. It often happens that twisted or off-colored feathers make their appear-

ance. These should be pulled out at once so that new feathers, which will usually be of the proper color, will have time to grow in before the show. —(Exchange.)

DOES POULTRY PAY?

The way some flocks of poultry are yarded, housed and fed there is very little or any profit for the owner. Unless we keep a strict account of all receipts and expenditures it is absolutely impossible to arrive at the profit, if such there be.

One lady I have in mind sent to a neighboring state for a sitting of White Orpington eggs. A good price was paid and she was fortunate in getting a good hatch. Good care was taken of the chicks until one night the man of the house forgot to close the door of the brooder and rats did the rest. Just figure the price paid for eggs, \$3.00, add express charges, then the feed. Was this put down in the loss column? If we send away for day old chicks they cost us 10, 12½ or 15 cents each. If one or more is lost they must be put down in the loss column.

Another lady says she has her own chickens and that her eggs cost her nothing. I asked her if she paid out anything for feed. No she had not thought of that.

The poultry business is just the same as any other business, in that it requires careful bookkeeping. Otherwise it is a business that one can unconsciously put lots of money in and seldom get very little out. I have read of large egg yields, and some feed bills but you seldom read of any accounts giving the entire loss, such as eggs failing to hatch, the number of chicks lost, cost of running the brooder, the oil, lamp, etc.

I know of many farmers keeping flocks of 200 or more hens and these same hens did not produce enough eggs in the winter to pay for the feed. As a rule the cause of this is because they are all housed in one house, too small for half the number of hens. They are fed principally on corn. Some hens get more than their share while others get only enough to keep the hens alive.

This same condition exists on the city back lot, too many hens and not enough house room. When most people keeping poultry learn to successfully house and feed 12 hens they can then add a few more and if you are doing well with 12 hens do not think 24 will do twice as well, as 12 more hens means more feed and more work and unless you can meet these conditions then you will be always keeping poultry and not the poultry keeping you.

Joe Elpers.

Indiana.

"Success With Poultry" is worth more than all other Poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount (\$1.00) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

STRONG CHICKS FROM COCKEREL MATINGS.

Having read so much the past few years on mating pullets to cocks and hens to cockerels, I thought I would write about my experience. A year ago in August I sold off all of my birds chickens, but later in the fall I had thinking I would not keep any more another attack of hen fever and in November I bought six Barred Rock pullets, June hatched, and a few weeks later bought six Rhode Island Reds about the same age, all from good stock. With the Reds I also bought a rooster which the man said he had used the year before to head his own pen. This rooster proved to be a failure. He was lazy and all the attention he paid to the hens was at feeding time, when he would drive them away and eat the feed himself, so I thought the best thing to do with him was to cut his head off and cook him. My pullets began laying in December and kept it up steadily except for a few days they missed when they were molting, and the two or three that were broody in the spring.

After disposing of the old male bird I could find nothing to take his place, until one day a friend brought me a nice E. C. Red cockerel, and I decided to take the chances with him, so I mated him to the pullets and secured as fine a lot of big, healthy, vigorous pullets as one would wish to see, and although they were late hatched their combs are reddening and they will soon be laying. The eggs were remarkably fertile, nearly every one having a chicken in it, and out of the thirty hatched in May and June, only five were cockerels. I never was very partial to the Reds but they have finally won me over completely, as I find them very good layers, stopping only about a week through the molt. Of course, it takes lots of work to care for chickens as they should be cared for to obtain good results. I have between forty and fifty and take nearly all the care of them. Neighbors say I live with my chickens, but I get eggs to sell at high prices when they are wondering why they do not get any.

I like the articles in the Poultry Keeper, and find many helpful articles in it, especially on feeding. I use coops built on the Philo plan and give my hens a variety of food and plenty of it. I like to read the experience of others, especially the amateurs, as I am only an amateur myself.

Mrs. E. Wilson,

Connecticut.

ANCONAS AS THEY ARE AND AS THEY SHOULD BE.

Undoubtedly a good many Ancona breeders know the merits of these handsome fowls, both as layers and fancy birds, but for the benefit of those who do not know, I will state what can be expected from a flock of Anconas.

First of all any person having Anconas is never short of eggs at any time of the year, except at hatching time, on account of the great demand

for eggs for hatching. I have as yet to hear from a breeder who could supply the demand he has for eggs and chicks. This is not due to broody hens for Anconas seldom want to sit. I do not mean to say that the Ancona is strictly a non-sitter as when some breeder claims he has a strictly non-sitting strain of birds, whether Anconas or others he is handling the truth a little recklessly. My belief is that it is nature for a hen to sit and I do not think that anyone can counteract nature's laws.

The shortage in eggs at hatching time is due to the great demand for them all over the country as the Ancona is fast coming to the front, and it will not be very long before the Anconas will be the leading general purpose fowl in the country and I think that the credit belongs to them now.

It is no uncommon thing today to hear of a flock of these handsome birds having an egg record of 200 eggs per hen as an average for the flock.

I saw in the August number of Poultry Keeper that the Anconas and Leghorns have been given the weight clause which I think is a very good thing as it will stop a lot of talk in the show room and it will also bring into the show room birds of a more uniform size. It certainly does not look right to see a 2 and 3 pound bird win over a 4 pound bird which happens in too many instances, and this will be avoided by the weight clause. One thing I do not think is right in this clause is that the Leghorn and Anconas are given the same weights for the original weight of the Anconas is one pound heavier than the Leghorn and I think that this one pound will pull the Anconas down below their original weight, which will be hard to overcome by the breeders. I think Ancona breeders should look into this and have it to suit Ancona breeders in general and not as the committee sees fit to publish in the standard.

There is still another point I wish to bring out to the breeders and that is color. The standard wants the Ancona too dark. The original Ancona of Ancona, Italy, was nearly white but this is too light. What a good many breeders want is about four black to one white tipped feathers which would make them very much more beautiful in color.

So many people have the idea that the Ancona is a cross between the Black Minorca and White Leghorn but this is not true. The Ancona is a native of Ancona, Italy, and is a distinct breed by itself, and has no other blood in its veins.

Peter Feltman,

Michigan.

ABOUT WYANDOTTES.

I have bred White Wyandottes for eight years and have had my ups and down as well as other breeders. I find them a hardy chicken and their size makes them good broilers in a short time, maturing sooner than the other breeds. I have tried many of the other breeds, just a couple of sittings to test them out. I find the

Wyandotte chicks strong and easy to raise, through they must have good care. I had a cockerel last year that weighed 6½ lbs. when six months old. The pullets commence laying when about five months old, and the hens are good at it too, until they are three years old. I have no trouble getting eggs during the winter and do not have to pet my birds to make them lay.

I use a curtain front house for my hens and keep them in on cold days, otherwise they have free range. For feed I use whole grain, mixed, that is, oats, wheat and corn, fed in about eight inches of straw, so that the hens have to work for it. They should have plenty of fresh water at all times, as laying hens drink lots of water. Last winter was the worst I ever saw. One day it went to 35 below zero, and that day I got 18 eggs from 24 pullets, and they did not let up laying, either. They were fed the whole grain with a little meat and potato peelings.

To the beginner I will say that it does not pay to buy cheap stock at any price. I got over buying dollar stock long ago. It is expensive stock even at this low price. Better write to some one who has good winter laying stock. Do not mind the price if you get good stock, for you can sell sittings of eggs and surplus cockerels and possibly a few breeding stock and get much more than you could for scrub stock. I am a farmer with 160 acres, and all my stock, for the money invested will not pay anything like my Wyandottes. Last year from January 1st to June 1st from fifty hens I got over \$50 for eggs, some sold for sitting and others at market prices, which I consider a good showing.

Fred Lind,

Nebraska.

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Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

SEPTEMBER, 1913

No. 6

The Connecticut Agricultural College will hold its third egg contest beginning with November first. A few changes will be made. Instead of five females in each pen there will be ten. This has seemed a desirable change. The pens are six by twelve feet, too large for five females, as in the past, and better fitted for ten birds. The larger number will keep more comfortable in winter, in the below zero weather, while there is ample room in the hot nights of summer. There are not only the wide open fronts to admit air, but there is a window in each end that gives abundant air when opened nine months of the year. Another change has been the reserving of ten pens to house birds that are to be tested along varied lines of feed and feeding. These will hold the same number of birds as the other pens. The fowls will get the same care and feeding and will be trap-nested and just the same records kept. We believe that more will be really learned the coming year, under the changed plans, than in the past contests.

The poultry shows, last winter, gave some attention to entries of table eggs. More interest seemed to be shown than in past years. It was not so hard to get the entries made and the visitors were decidedly attracted to the egg show. It was noted that poultry people had no standard in their minds to follow. Most of them paid little attention to the point that counts most, "uniformity." To get the full attention of the judge it is best to have the plate of eggs all of a same size, shape, color. A single egg, in the dozen, that is different from the other eleven almost spoils a chance of getting the blue ribbon. There will be more shows the coming season that will include exhibits of eggs in the offerings of the premium lists. It will be helpful on the part of our readers if they will plan to accept this chance to make more of table eggs at our standard shows. The practical side of poultry keeping needs to stand out more prominently and larger entries of table eggs

will help. Methods of packing can well be demonstrated if opportunity offers. Suggest to your local show managers that you wish premiums offered on eggs.

We are glad to know that poultry writers and lecturers are more moderate in their statements of the prospects of those entering on the keeping of poultry. It is well to face the fact that all folks do not make good with hens, that some people are not constituted to do the little daily duties that are required on the poultry farm. It is no disgrace to fail in the raising of chickens and the caring for laying hens, if you have done the best you can. It is asking too much when more is expected of a man who takes up poultry keeping than if he went into the grocery business. It does not prove that poultry keeping does not pay because of the empty houses that we see on our travels. No one can tell whether he will succeed with poultry until he tries. Lets us carefully consider all sides, good and had, before entering on the keeping of hens. If fitted for the work, the hens will keep us. If unfitted by nature for the business, then we shall have to keep the hens, until we get out once for all.

Sour milk is one of the best of foods for poultry. The curd of the milk is splendid food, while the germ life in the whey prevents many of the bowel ailments of hens and chicks. Milk in any form provides good protein for the growing of chicks or the making of eggs. Sour milk can well be fed as the first drink of the day-old chick and worked into the daily ration of the pen of egg layers. Sour milk is best fed when mixed with some common mash and fed quickly to every living bird on the plant. In hot weather it can be mixed cold and keeps well for several hours. One of the most successful poultry farms we know, feeds it at noon, giving a quarter meal to growing chicks, and what is left goes into the pens of layers. Dry mash

is before the chicks and hens all the time. A full feed of scratch feed is given just before dusk, but the sour milk is fed soon after the noon hour of the day. Some of the experiment stations are testing out the results of sour milk feeding and until the bulletins appear, we must be satisfied with the word privately given out that feeding sour milk pays.

There is no more sensible way to get exercise out of housed birds than the use of plenty of litter. Litter could be used all the year were it not for the danger of breeding red mites through the warm months. Between the middle of September and the last of May the floors of the houses need a covering of scratching material. If fortunate enough to have harvested a field of winter wheat you have the best sort of litter at hand. Unless for the danger of rats and mice getting most of the grain we would never thrash wheat, but feed it in small bundles, the straw for litter and the heads for supplying grain to the hens. Did you ever take out a big forkful of unbrushed wheat to the chicken yard and watch the birds work out the grain? Try it. Next to wheat we like cut corn fodder for litter. Neither wheat straw nor corn fodder is as good for litter as are common leaves, but leaves cannot be had in large quantities and those you use are soon broken up and gone. Three inches of litter is enough to start with, increasing to six inches in the freezing days of late November. Never have litter so thick that grain that gets through to the floor is left untouched. The grain fed should all be eaten within twenty-four hours.

Until the law gives the poultryman more protection against stealing of his birds he will have to keep the wide-awake dog. One eastern state gave a man two months in jail for being found stealing poultry. Let the same man steal a loaf of bread from a bakery and he is likely to get a more severe sentence. Until the owner of poultry is allowed to fire his gun into a disturbance in his poultry building he is at the mercy of the thief. It is not right that a man cannot protect his live property as he can his watch or pocket book. A Massachusetts man was given a state prison sentence this summer for killing a man who had entered the hen house in the dark of the night. The owner fired in the direction of the noise, the hen stealer was in the range of the shot, and the man was found dead a half mile away in the morning. The poultryman was quickly pardoned as soon as his friends got busy. This was right.

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Don't put off using Germozone until your birds become sick. It's easy to keep a healthy hen healthy, but it's hard to cure her and still harder to get her to laying again. Learn the "LEE way." "Lee's Poultry Book" and "Pointers for the Amateur" are both free.

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PROFITABLE ADJUNCTS TO POULTRY KEEPING.

By J. E. Willmarth, Amityville, N. Y.

BUT few poultrymen keep poultry exclusively. Nearly every one has one or more sides lines to help out and some of these are almost necessities to insure a profitable return from the poultry business.

Where one has more land than is needed by the poultry all the time, he tries to turn this land to some profitable use. Here may be grown a part of the food for the stock and some vegetables for the poultry keeper's table are often included. In fact this cultivating of the land is a practical necessity, not because we thus obtain a part of our supplies, but this growing vegetation is just what the land needs to keep it in proper condition to be occupied by the chickens at some other time, and of course we will take advantage of any outside profit accruing from the growing of such vegetation, and also should so plan our work and varieties of vegetables grown to get the greatest profit, consistent with the most good to the land in way of fitting it for occupation by the stock after the crop is harvested.

Shade is another necessity for the poultry, and as fruit trees answer as well for this purpose and at the same time give an additional profit in the fruit they bear, we naturally plant fruit trees.

But this planting and vegetable growing was not what we had in mind when starting this article. We were thinking more of what live stock could be profitably combined with poultry. In speaking of poultry we generally mean chickens, but one can often combine other kinds of poultry with profit. Ducks, for instance, do very well but they are apt to dirty the drinking water and make it unfit for the chickens if they have to drink from the same vessel. Where one has a pond or stream or separate drinking place for the ducks, they will turn in a profit, even though kept in small numbers, that will help out very nicely on the poultry farm. Probably guinea fowls will produce the best profits for the number kept. A small flock will

be practically no trouble and their cost of maintenance will be practically nothing if one has a large place over which they can roam. They will steal their nests and bring off a fine flock of youngsters which will sell readily in the fall.

Geese are another profitable proposition if one has facilities, although they have the same fault as ducks. Their requirements are good pasturage, when they will require but little other food. Turkeys seldom do very well now days, when kept on the same plant with chickens, because of the prevalence of the black head disease, which seems to be much more severe under such conditions. A small flock of pigeons will pay nearly every poultry man. They can be allowed their freedom, do but little damage, and their squabs turn in a nice profit, and the amount of food consumed is hardly noticeable.

We might class all this stock as poultry and all can be profitably combined on a general poultry farm, but there are other kinds of live stock that will also prove a profitable adjunct, where one has the facilities and knack of handling them. Bees are one of the best, where one has steady nerves and a large stock of patience. The care of them is easily learned, but if one lacks the above two requisites we advise him to cut out the bee proposition. When properly handled bees are probably the most profitable kind of live stock to keep, especially where one raises any fruit.

Next to bees, possibly one or more cows will be our best adjunct. These supply a family need and luxury, and if their surplus product cannot be profitably retailed direct, their milk in any form is a valuable poultry food. Cows go well with chickens, and there is nothing harmful about them, but the same cannot be said about swine, for the majority of them will eat eggs and poultry, both large and small, if they can get at them, and they can never be trusted in this respect. Nevertheless if handled properly they are

(Continued on Page 190.)

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PLANS, TRAPS, BANDS AND RECORD SHEETS.

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F. O. Wellcome
Box C, Yarmouth, Maine.

HANDY FEED BOX.

Having been greatly troubled by rats which made incursions upon ordinary barrels and bags, containing chicken feed, I was forced in self defense to build a box in which to store the grains, bran and mash feed, to keep them from the voracious prowlers.

The front and back are three feet high, the sides two feet wide. The front was made with a hinged drop door, formed of one of the boards. The top was hinged to a strip, two inches wide by four feet, 3 inches long, nailed upon the side. A screw hook was fastened upon the front edge of the lid so that when the lid is raised the hook catches in an eye screwed into the shed roof. The interior of the box is divided into six bins, with cleats formed of building

lath sawed in half lengthwise and nailed upon the sides, so as to form cleats in which short boards may be dropped to form partitions that may be lifted out in case it is desired to throw two bins into one.

Soon after the newly arranged box was installed in the feed and storage house which had been over-run with rats, I noticed that the box was sinking and upon making an examination, discovered that the pesky rodents, finding themselves cheated out of their customary toll upon my stores of feed, had actually undermined the earth, so are to permit the legs which projected six inches below the bottom of the feed box, to sink into the soil. They had apparently calculated on gnawing holes through the bottom when it touched the ground and releasing the grain for fresh meals. I was obliged

to move the box for a while and replace the earth with concrete and brick floor a foot in depth. Even at that the four footed thieves have made efforts at times to know holes through the side of the concrete floor. If there is any animal that can beat the rat for devilish ingenuity, I want to know what it is.

M. F. Reeve,

Pennsylvania.

If you are interested in advertising send for a copy of our rate card which shows our charges for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our "classified ad." department in the back part of each issue furnishes an easy way to get started at a low cost.

FIRST COCK

FIRST HEN

FIRST PULLET

**REGAL STRAIN
WHITE WYANDOTTES
WINNERS OF
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AT
SYRACUSE N.Y. 1908**

FIRST COCK

FIRST HEN

FIRST PULLET

FIRST COCK

FIRST HEN

FIRST PULLET

H. P. J.

A.O. Schill

RECORD OF A HOME FLOCK OF CROSS BREEDS.

Editor, Poultry Keeper:

Following is my egg record for 32 hens from January to December, 1912. The hens are a cross between Rhode Island Reds and Buff Plymouth Rocks. We had thirty-two hens at the start but sold hens at times for broodies and for eating, until at the end of record we had only 7 hens left.

January	4 eggs
February	95 "
March	413 "
April	533 "
May	329 "
June	334 "
July	296 "
August	253 "
September	164 "
October	95 "
November	15 "
December	15 "

Total	2566
Or 213 5-6 dozen.	
We sold 120 3-4 dozen and used 93 1-6 dozen at home.	
Total for eggs sold	\$30.48
Total for chickens sold	13.75
	\$44.25

93 1-6 dozen eggs used at home	\$18.63
5 hens used at home at 75c	3.75
	22.38
Total	\$66.61

Paid out for feed and poultry supplied	\$37.10
--	---------

Profit	\$29.51
Roy Kirkwood,	
Pennsylvania.	

FINDS ANCONAS EXCELLENT LAYERS.

Editor, Poultry Keeper:

Am sending you a two month egg record of fifty Ancona and S. C. White Leghorn hens and hope you may find space to publish same in your excellent paper.

December	507 eggs
January	471 eggs
Feed cost 13 cents per lay, or \$8.06.	
Eggs sold for	\$20.60
Cost of feed	8.06

Profit	\$12.54
--------------	---------

The decrease in egg production during January was mostly due to my having a number of my best birds at the shows, so received no eggs from them during that time.

I do not desire to take up your time describing the Leghorns as they are recognized as egg machines, but would like to give your readers a few of the good points possessed by the Anconas.

The Anconas are of a greenish-black, spangled with white plumage. They have red wattles and white ear lobes. Their carriage is erect, with quick, alert movements, and they present a striking appearance. They are hardy and layers of large white eggs. The pullets mature at the age of five months. I have one hen that laid an average of twenty eggs per month for the year 1912. The hen has not quit

8-WEEKS-OLD CHICKS

Buy Them and Avoid the Risk of Poor Hatches

There is no need for you to run the risk of poor hatches. We can sell you 8-weeks-old chicks and guarantee to deliver them safely to any part of the country. These chicks are all healthy and well past the unsafe stage. Here's another point: You take no chances of loss from white diarrhoea and similar ailments to which young chicks are subject. Another thing: loss by rats and other animals that prey upon young chicks is avoided.


For the beginner these chicks are especially good. Avoid the great loss from lack of experience by getting these 8-weeks-old chicks from us. You can select any number of pullets or cockerels desired. If you hatch your own eggs, you have to take whatever comes along.

On September 1st we will have 10,000 8-weeks-old chicks, all in proper condition for laying next spring and summer. Our special summer prices will be continued during the month of September. Get your order booked this month.

Our Exhibition Stock is still winning as many prizes as ever. This stock is second to none for exhibition purposes. If interested, write us.

Our Day-Old-Chicks are selling faster than ever. We guarantee safe delivery. We always have them on hand and will deliver to anyone at any time.

PITTSFIELD POULTRY FARM CO.
410 Main Street
PITTSFIELD, MAINE



laying so far, although not quite through the molt. I have had experience with many breeds, but find the Anconas the most profitable as they are wonderful winter egg producers, and owing to their plump bodies, and yellow or slightly mottled legs, they are well suited for the table or dressed poultry market.

My two year's experience with a 256 egg strain (Sheppard's) has led me to believe that they rank among the very best stock to have for large egg farms. I am breeding them along with three other standard breeds, all good varieties, but would discard the Anconas the last of all.

Paul Boerger,
Ohio.

SATISFIED WITH THE REDS.

I have a flock of R. I. Reds for winter layers and a flock of White Wyandottes for summer layers as I find they suit me the best. One pen of 17 April hatched R. I. Red pullets have been laying steadily since September. August 18th I got my first egg from these pullets, making them 4½ months old. I do not force them for eggs but just feed them all they will eat and certainly I get results.

They have a dry mash before them all the time, also grit, oyster shells and fresh water. Water with a great big W. I should as soon let them be without feed as without fresh water. I think that one of the reasons I get eggs when they are higher, is the fuss I make over the water pail.

Another point, I insist on them having fresh air. My windows have the top sash of muslin as this hen house is an old one and so I have had it fixed over to my new fangled notions, as my flocks tell me. These frames are removable so that when it does not storm my hens have all the good, pure

air they want, and also the sunlight.

The R. I. Reds are my favorites and a good bit I make off of them. Last December I had 30 pullets in one pen that laid over 500 eggs during that month, and it was cold weather at that. Hardly ever have a sick hen and then it is not for want of fresh air.

I feel each year that the year gone by has been of great help to me in my poultry business and with study and reading what others are doing I get eggs when eggs are high in price as well as low.

Mrs. Cora A. Mellen,
Massachusetts.

ANCONAS LAY IN FIVE MONTHS.

Editor, Poultry Keeper:

In reading over my Poultry Keeper I notice egg records of different flocks of chicks, so I thought I would send you mine.

I have 16 Ancona hens (Sheppards Strain) hatched May 29, 1912, which have laid since January 1st, 1913, 1713 eggs. They commenced laying in November, 1912, but I did not have them separated until Dec. 1, 1912, in which month they laid 149 eggs.

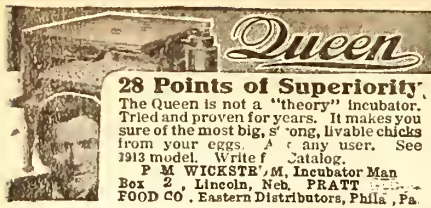
I also have 18 Ancona pullets hatched February 21, 1913, which commenced laying July 11, and laid 75 eggs in July and 74 to present date August 10. I get 8 one day and 9 the next, one day I gathered 10 eggs.

I feed wheat and heavy clipped oats in deep litter and Park & Pollard mash with Shoemaker's Stock Food, ½ of each. All open front houses.

Record by month.
January, 275; February, 281; March, 350; April, 339; May, 250; June, 218; total, 1713.

How is that for a record? Actual record as I keep it. Housed in an open front house 6x16 feet.

Frank P. Potter,
Pennsylvania.



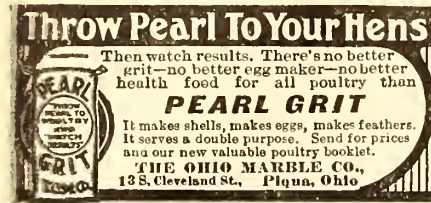
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The Queen is not a "theory" incubator. Tried and proven for years. It makes you sure of the most big, strong, livable chicks from your eggs. A C. any user. See 1913 model. Write Catalog.
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Business Buff Wyandottes

Buff Wyandottes are winning out along practical lines. Sanborn-bred pen ahead in American breeds at the Napa, Calif., egg contest. Birds you will be glad to own at prices you can well afford to pay.

Three books by Dr. Sanborn for a single dollar. Sewell illustrated circular for the asking.
DR. N. W. SANBORN, R. F. D. No. 24, HOLDEN, MASS.



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THE OHIO MARBLE CO.,
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Winners at Toledo, Detroit, Cleveland and Chicago, and many other shows in strongest competition. 36 prizes in one season. Stock of my raising has scored 94 points in competition.

Eggs, \$3.00 and \$5.00 per 15 straight.
One pen of Barred Rocks for sale, \$3.50, consists of male and four females.
838 WEST GROVE PLACE, TOLEDO, OHIO.

FALL

hatching is a success if you let the Magic Egg Tester pick out the eggs you are going to use. If you buy now you get the longest time for trial. One Tester (with absolute guarantee), by mail \$2.00. Four money back after trial if desired. Ask for circular and testimonials.
Magic Egg Tester Works, Dept. E, Buffalo, N. Y.

PROFITABLE ADJUNCTS TO POULTRY KEEPING.

(Continued from Page 187.)
one of the most profitable forms of live stock to keep. Some buy young pigs and fatten them, disposing of them when of a marketable size. The profit from this method depends mostly upon the keeper. Personally I would prefer breeding them where one had quarters for the brood sows. These consist of a house and some pasture, and where the latter is good, but little other food is necessary, as we would sell the young pigs as soon as able to be weaned. Such pigs, if just ordinary stock, will bring \$5.00 or more per pair, if in good condition. Goats and sheep are other animals often kept by poultry men, but unless one has a lot of rough land, cattle would answer the purpose better.

ABOUT FIRELESS BROODERS.

Editor, Poultry Keeper:
In the June issue of the Poultry Keeper I read an article written by "L. T.," who does not like the fireless brooder and also thinks a person that expects to raise chickens in a fireless brooder has very poor judgment.
I was not like L. T. In the first place this party did not believe in the fireless brooder from the start and I would like to know how any one could expect success if he did not believe in a thing he was going to use.
I have been satisfied from the start that under proper conditions and a little common sense, I or any one else, could have just as good success raising chickens in a fireless brooder as in one heated.



BROWN FENCE

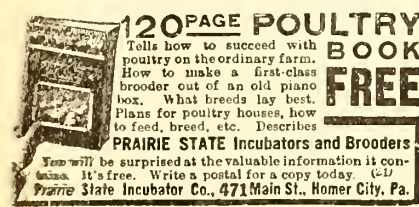
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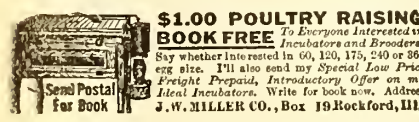
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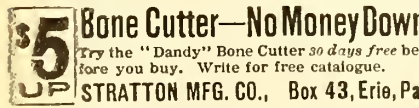
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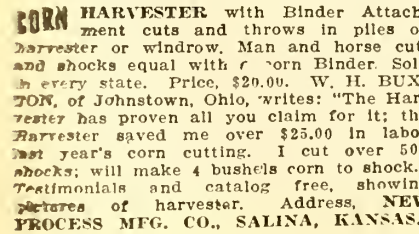
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A horse? Well much depends on the poultryman's location and conditions of his plant, but if it is any considerable size, one or more horses are a practical necessity. Generally a small animal will answer best. Such can be used for shallow cultivating and other light work, and on a small place it is generally found to be most profitable to hire the heavy plowing done.

In these side lines much depends on the poultryman's individual likings. Handling that kind of stock which he likes best he will generally make more profit from it than when he tries some other variety of stock, just because he thinks there is good money in it. Then, again there is a big difference whether one wants to handle just common stock or try the pure breeds. The latter will pay best where one has a particular liking for that particular kind of stock and breed. One should go into these side lines slowly, until he finds what suits his purpose best, but practically every poultry keeper will find it to his profit to combine one or more of these side lines with his poultry business. Possibly we might say that they are a necessary part of such business.

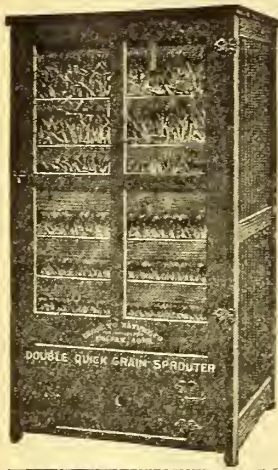
Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

On May 1st I received fifty R. C. Rhode Island Red day-old chicks from Ohio, and they had been on the road two days and two nights. I put them in a fireless brooder I had made out of a piano box and have raised forty-nine out of the lot and there is not a finer lot of birds around here at the same age (three months old) weighing from two to two and one-half pounds, raised in a village lot without a run except a small yard I made for them.

I made my brooder 5½ feet long by 3½ feet wide, with a slant roof, 13 inches in front and 9 inches in back. That was taking the boards as they came off the box. This brooder was divided into two parts with twenty-five chicks in each part. I have two window glasses 8x10 inches, for light and left a space for air of 3-4 inches in front, putting a box in each corner 7x18x18 inches. This was covered with two thicknesses of burlap and we had some nights in May that were as cold as any time in March. On these cold nights I added two more thicknesses of burlap. The bottom of brooder was all covered with about three inches of alfalfa and in this I put the chick feed and made the chicks scratch for what they got and I never had a chick to suffer with the cold and they were always ready to eat.

The first ten days I fed them commercial chick feed five times a day, just about what they would keep clean-

Eggs! Eggs!-SPROUTED OATS-Eggs! Eggs!



MRS. LUCIE SHIELDS, MT. CARMEL, ILL., Says, "I have used your grain sprouter for six months with great results. It has paid for itself several times over by an increased egg yield."

L. T. DAVIS, CORSICANA, TEXAS, writes, "I have my No. 6, Double Quick Sprouter in operation and it does everything you claim it to do. Is indeed a great machine. Would advise anyone in the poultry business, large or small, to get this machine for it will get the eggs any season of the year." SPROUTED OATS IS THE ONE GREAT FEED THAT NEVER FAILS TO BRING THE EGGS, and the

Double Quick Grain Sprouter

The Perpetual Poultry Silo.

Is the MACHINE that SPROUTS THE OATS. Makes TWO to FOUR Bushels of Feed from ONE of Grain. Sprouts in 24 HOURS and forces growths of 2 INCHES per day. The DOUBLE QUICK is the ORIGINAL SPROUTER. Is now FOUR years old. THOUSANDS now in use, and has added a MILLION DOLLARS to the egg income. Made in Six Sizes from Six quarts to six bushels—from a FEW hens to 1,000.

Close-To-Nature Co.

20 FRONT ST.

COLFAX, IOWA.

ed up, with plenty of good fresh water. After the first few days they had grit, charcoal, beef scraps and a well-balanced ration of dry mash before them all the time. After eight weeks old I fed them developing food and what green grass they would eat, after the first few days.

When ten weeks old I divided the yard off which I had my old fowls in and put the chicks in that yard, which was about fifteen feet square. I think this proves that L. T.'s opinion of the fireless brooder is a little off color.

F. D. Brown,

New York.

REMEDIES FOR RATS AND CHICK-EN AILMENTS.

Editor, Poultry Keeper:

I read the articles in your journal where so many are bothered with rats. Let me say that rats are not dummies and will not stay with the fellow who keeps after them. About one or two nights is the length of time a rat bothers me. Here is my remedy. Take a piece of bacon rind, nail it to studding and set two traps under it; the rat goes up after the bacon and slips down into the trap. If he is too slick for this, make a ball out of bread the size of a marble, put some rough on rats in the center of the ball and you will not be bothered with that rat very long. Here is some more advice that costs nothing. Set your eggs under hens, then give the chicks you hatch chick feed and clean, fresh water and you will not have much bowel trouble, if your chicks are not allowed to get chilled. Sit a dirty incubator where the air is bad and you will have all the bowel trouble you are looking for. If you set eggs from diseased hens, what can you expect? Take the human race for an example.

Take a bluegrass straw, strip off the seeds, and you have the best gape extractor in the business. I never lose a gape chick and have taken as high as five worms from one chick.

I am willing to tell anyone all I know about raising chicks and I know a good deal, but not all, but I would

like to have some one tell me how to keep young chickens from getting colds and roup about the time the frosts come. My coops are up-to-date, properly ventilated, cleaned twice a week, feed and pans that are clean, the best of cracked corn and wheat, no lice, eggs from healthy hens. Now can anyone tell me why this occurs about the time the frosts come and can anyone give me a cure for same? I cannot tell of a real cure for I have tried most all the remedies that are advertised.

Mall D. Hall,

Ohio.

BROWN LEGHORN PULLETS VERSUS HENS.

I have one hundred Brown Leghorn pullets hatched from the first of April, 1912, to the middle of May, 1912, and also have ninety-three Brown Leghorns hatched the same period in 1911. As I keep my pullets in a separate pen from the hens I can tell exactly the difference in the egg yield from hens or pullets. Last November the pullets laid seventy-seven dozen and the hens sixty-seven dozen, making 144 dozen, at 40c, \$57.60; cost of feed, \$12.00; profit, \$45.60.

In December, the pullets laid 118 dozen and the hens 58 dozen, making 176 dozen, at 40c, \$70.40; cost of feed, \$12.00; profit, \$58.40.

It will be seen that during the month of December the hens laid only half as many eggs as the pullets. If the flock had been all pullets the results would have been quite different, even for the same month of December.

For the morning feed I give a mash composed of middlings, meal and beef scraps, and cold pancakes and table scraps mixed together. The grain is corn, oats and buckwheat, scattered in deep litter, for them to scratch in.

Our new coop is twelve by thirty feet. We built it ourselves and it did not cost much as we got out the lumber on our own place and had it sawed. The frame is of 2x4s, seven feet high in front and five feet in rear. We first built a wall about 18 inches high, front and rear, and then double point-

(Continued on Page 194.)

FEEDING FOR EGGS

Whether you keep 12 or 1000 hens you want them to

Lay when Eggs are High

HOW TO FEED WHAT TO FEED

The profits in poultry are in eggs—profits in eggs are during the cold months and not during the summer.

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COMMON SENSE IN THE POULTRY BUSINESS

In a recent poultry magazine (not this one) there was an article giving the reason why a white feathered chicken was better adapted for table use than a black one. It said on account of the pin feathers to always use a white chicken. Now I want to ask our poultry people if in their experience do they find in dressing a fowl that the black chicken has all the pin feathers and the white ones none? Oh, ye learned ones! The way I look at this proposition is that in dressing a black feathered chicken you work and work to get all the pin feathers removed, where in a white chicken you just double up and eat pin feathers, chicken and all. Am I right? And I venture to say plenty of people eat many a pin feather.

There has some questions arisen in regard to the results of a hatch after the eggs had been set on each day, as one or more hens laid an egg in the nest, thus it is claimed keeping the eggs warm more or less until the laying was out. I have found that it made no difference as to incubation. I have had a few times hens to steal their nests, lay, sit and hatch, and bring off as many chicks as where the eggs were placed under the hen at the time she began to sit. It seems to me if the eggs were kept as warm as it is claimed, that when the hen began to hatch that they would come one chick each day till the hatch is over, thus imitating a canary bird.

Some of our poultry lovers are partial, almost wedded, to the Leghorns, because they say these are chickens that wont eat their heads off to produce eggs. Well, a member of the family concluded to try Leghorns this year and since I feed them I know something about what it is to carry feed to chickens. Not a chicken on this place can eat, stuff, and hold any more than these Leghorns. They fly over, scoot under and dance all sorts of jigs, just so they get the feed, and no eggs are showing up yet. The eggs were bought of a party who had purchased first of the season a \$7.50 cock and the egg record was first class, some of the pullets laying at four and one-half months of age. However, I like the birds some, and perhaps I would like them more if I had nothing else but them.

The analysis of the properties of chicken feed has been brought down to a fine point and to many it is valuable knowledge, but to our amateurs and those who have little scientific knowledge, such things as carbohydrates and any other kind of "drates" and "tiems" or "tems" are enough to scare them out of the chicken business, thinking they could not possibly get or be able to buy chicken feed by such a big name. Our grandmothers fed corn as corn and thought nothing more of it. Let us have plain common methods, experiences, along with the analysis and perhaps both parties will be benefited.

Isn't it wonderful how much neglect our old chickens can stand and give

us something in return for this neglect? One instance I can give, where a whole drove of chickens take almost entire care of themselves and bring in eggs. These chickens live their entire lives at a barn and the only feed they have is just what they work for an get at the barn themselves. Some of these chickens roost in the trees and some in the barn. They are all kinds and colors, some full blood, others mixed.

This leads me to believe sometimes that we cuddle and paniper our chickens too much, make hot house flowers out of them, or is it that we are running so close after the dollar that we take more pains to keep our chickens under our eye to see what we can make them do? I want to add, too, that at this barn the young chicks are set off the nest with their mothers and mighty little attention is given them afterward. There is bound to be some success in this method, for the chicks and eggs prove it by the numbers—the eggs and chicks are there to show for it.

Another party has Blue Game chickens and he claims that he never feeds his chickens at any time. He lives close to wooded land and the chicks pick up all they subsist on. To my own knowledge this man brings in eggs to the local market that many of us would like to get at the time that eggs are very scarce.

Mrs. M. E. Henderson,
Tennessee.

TO HELP KILL MITES.

Paint the roosts with hot tallow. When the chicks go to roost at night the heat from their bodies softens the tallow and the mites going to or from the hens wire in the soft grease.

L. A. D.

The best favor you can do Poultry Keeper is to tell you poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special club offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; \$1 for three; \$1.50 for four; \$1.75 for five; \$2 for six. The clubbing list on another page will show what some of these papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.

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Let me try to please you. Send for circulars containing best lot of testimonials put out by any breeder. Ten years a breeder of Buff Wyandottes.
ORIGINATOR "HIGH QUALITY" STRAIN.

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It is easy for one to secure two new subscribers in almost any locality. All it takes is a little energy and a few minutes, time.

There are many interested in poultry raising who would subscribe for the Poultry Keeper if they understood the value of the paper. Others are securing their papers without expense to themselves under this offer. Are you willing to do the same?

Below is a subscription blank on which the names and postoffice addresses may be written. We urge an early effort to secure three names under this liberal offer. A dollar will reach us if sent in a letter.

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Enclosed find \$1.00 for three subscriptions to Poultry Keeper for one year.

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WYANDOTTES AS WINTER LAYERS.

Editor, Poultry Keeper:

Enclosed find an egg record of two of my breeding pens of Buff Wyandottes, for the month of January. These birds all score 90 points and over. Pen 1 has 3 pullets and 2 yearling hens. Pen 3 has 8 pullets.

January	Pen 1 Eggs	Pen 3 Eggs
1	3	4
2	3	3
3	3	3
4	4	6
5	3	3
6	2	3
7	4	4
8	2	4
9	4	4
10	3	4
11	5	4
12	3	6
13	4	3
14	4	4
15	3	4
16	5	5
17	2	3
18	4	6
19	3	5
20	4	2
21	4	5
22	3	4
23	2	4
24	4	4
25	3	5
26	2	6
27	4	4
28	2	4
29	4	4
30	3	6
31	2	5

101 Ben H. Netzley,
129

Illinois.

TO CURE EGG EATING.

Editor, Poultry Keeper:

I saw a question asking what to feed to keep hens from eating eggs. Mix sour vinegar with chops, so it makes a wet mash. It has always stopped mine.

J. R. Montague,
Pennsylvania.

GETTING A START.

Editor, Poultry Keeper:

No you can't secure a dozen hens let them hustle for themselves, and get a living from the hens. It takes a good flock of hens, properly cared for, to bring you a living. If you are like the fellow who was going to quit chickens because he couldn't conscientiously feed chickens on Sunday and attend church and Sunday school, too, better stay out of the chicken business for biddy must eat and drink on Sunday the same as Monday. Oh, it takes work to make a success with chickens. Yes, work, work 365 days in the year, and the fellow who is not on friendly terms with work does not need any chickens.

But if you're a hustler and have any love for chickens you'll find the work both pleasant and profitable, that is if

you get a good strain of thoroughbred fowls of one of the standard varieties.

There is always some fellow ready to tell you there is just as much money, or more, in mongrels than thoroughbreds and that mongrels will lay more eggs, but that is not correct. The thoroughbreds will lay just as many eggs and generally more than the mongrel, and if the thoroughbred stock is right, there is always a good demand at fancy prices for the eggs the lay, to be used for hatching purposes, while the mongrel eggs must be sold at market prices and when it comes to selling fowls you must cart the mongrels off to the butcher, while the thoroughbreds can always be sold at a good price for breeders.

Then, too, there is lots of pleasure in owning a pen of birds that are good to look at and be admired by friends and passers-by. No one admires a pen of mongrels that consists of every color of the rainbow and then some.

Of course the first cost will be a great deal more in starting with thoroughbreds but one soon makes back the extra cost if he sells stock or eggs. and it costs no more to feed a good hen than a poor one, so the first cost is the only extra cost.

In purchasing foundation stock one must consider whether he wants to run an egg plant, broiler plant, or keep a general purpose fowl, and then select the breed he likes best and the one that is adapted to his purpose, and once your start is made, remember, it

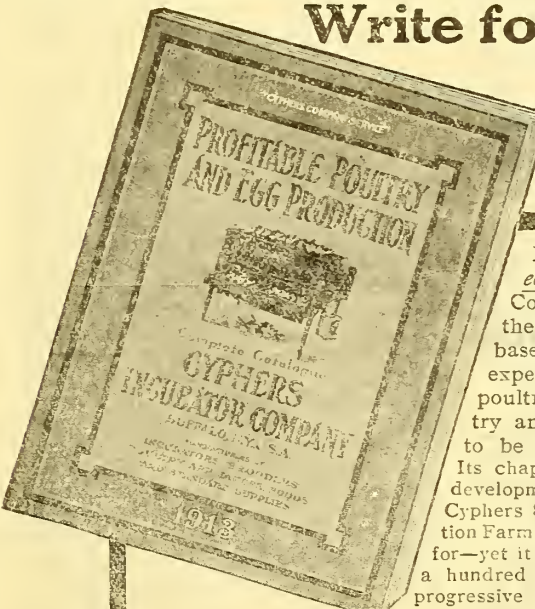
takes patience, perserverance and determination, and don't expect to get rich in a year. It takes time to build up a good business. Beginners go slowly until you have gained experience, then enlarge the business as knowledge increases.

Visit at least one poultry show each year, as many more as you can. If you have standard bred fowls, enter some at your local show. Even if you don't get a premium you can compare your birds with those of other exhibitors and learn what your birds' weak points are. Every breeder who enters birds can't carry away the blue ribbons and you're not a true fancier if you can't accept defeat. Perhaps next time you will receive the honors.

Mrs. B.,
Colorado.

We have a special offer for "Poultry Keeper" for three years to any address in the United States, upon receipt of One Dollar, or we will send the paper for one year to three separate addresses. Either of these offers means one subscription free of charge. In sending in your own subscription, by making a little effort right in your own neighborhood, you can get two others to send in their subscriptions with you and get all three subscriptions for one dollar. This will be a material assistance to us and will be appreciated.

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It is *more* than a catalogue—is *educational, helpful, valuable.* Contains 244 pages—many of them filled with *sound advice* based upon the knowledge and experience of some of the foremost poultry authorities. "Profitable Poultry and Egg Production" deserves to be called a poultry text-book. Its chapters on right methods, newest developments and proved results at the Cyphers \$75,000 Poultry and Demonstration Farm make the book well worth paying for—yet it is *free*. Also lists more than a hundred articles needed and used by progressive poultry keepers.

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 Tells the facts and describes the incubator which has enabled over 400,000 users to make big money. sent free for a postal. **Johnson Incubator Man, Clay Center, Neb.**

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 Eggs for hatching in season. From now until fall will have good layers, (yearlings.) This year's chickens for sale. **Thos. H. Kean, Box 521, Nantucket, Mass.**

75c Adjustable clutch — no better Poultry Bands made. 25 for 20c; 50, 35c; 75, 50c; 100, 65c; 200, \$1.00. No stamps accepted. **FRANK CROSS, Manuf'r., Box 512, Montague, Mass.**

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BROWN LEGHORN PULLETS VS. HENS.

(Continued from Page 191.)
 ed the wall with lime and sand and then cemented the bottom. The house is boarded up and down on the 2x4s and the cracks battened. We have a door in the middle of the coop, which comes down clear to the ground, without any wall at that place. There is also an inside door covered with muslin, so that the outside door may be opened to give the chickens air.

The windows are on hinges and may be opened whenever we please. It seldom gets cold enough in this house to freeze and the house is nice and cool during the summer.

Our old coop has been built for years. It is twelve feet wide and fourteen feet long. It is a good coop, but is too high up in the air. It was built before the days when chickens were thought to be of much value. I can well remember eggs at 10 and 15c a dozen.

Our chicken yard has about two acres, all well fenced with poultry netting. There is a large run party set in plum trees. My husband is an extensive fruit grower, and has about five hundred trees, all in good bearing — apples, peaches, pears, plums and cherries, with lots of berries. Our place consists of sixty-nine acres, about half cleared, the balance in timber. Our market is Scranton, about nine miles distant.

Mrs. Wm. Ayres, Pennsylvania.

HOW I STARTED IN THE CHICKEN BUSINESS.

A friend of mine had nine hens that wanted to sit and I had thirty-nine eggs but no hens. So he said I could take three of his hens and set them on the thirty-nine eggs if I wished and I did wish for I knew from what I had been reading in some poultry magazines that I would be on the road to wealth if I could only get some chickens started. Why! One man made fifteen hundred dollars on a city lot no larger than mine in six months, another made six dollars and fifty cents per hen per year from his bunch and here was I with the opportunity staring me in the face and I grabbed it with both hands and held on tight. I had some barrels and I took three out behind the house, cut a square hole in the side of each, stood them on end, went and cut four sods with plenty of grass and dirt on them, put one sod in each barrel, grass side down, then got some hay and made a nest in each, put in thirteen eggs for each hen to sit on and then went and got three hens and put them on the three nests. I covered the barrels over to keep out the rain, put boards in front, held in place by sticks driven in the ground to keep out intruders. Every evening I let the hens out one at a time to feed, drink and exercise and I was on the road to affluence. This was about the Fourth of July for I only bought the place I lived on the last of June, and I could not possibly wait until the next spring to get started in the chicken business in which there was so much money waiting to be extracted.

I applied for a license to keep hens for Newton is a city of forty thousand inhabitants and some of them might get nervous if I sprang a lot of cackling hens on them too suddenly. A member of the board of health came and looked the situation over, told me where I could set the hen house and went away. In a few days I received a license and it said I must build the house in fourteen days from that date. So I interested one of my neighbor's boys and we built a house eight feet wide and thirteen feet long in about a week. It was seven feet high in front and five in the rear and I covered the top and sides with tar paper neatly fastened on with what looked like silver buttons when it was finished. I painted all this covering with green paint, partly for looks and partly to make it last longer. The door was in the west end and in the front, facing south, I had large windows 6 feet by 3 feet hung on hinges so I could have them hung up on the inside in the summer or tightly fastened down in the winter. I had no fixtures on the inside but I was not in a hurry as I had no chickens as yet.

The hens were attending to business all this time and on the twenty-sixth of July hatched twenty chickens, not as many as I expected but that was the number I got. I took one hen and put her in the new hen house in one corner on the ground and gave her the twenty chickens, while I took the other two hens home. All the chickens lived eleven being pullets and nine cockerels. I was glad I had a nice lot of pullets and after the hen was weaned and had gone home I and the rest of the family passed the summer days watching them grow and thinking them very handsome for they were Columbian Wyandottes.

When I got the first egg on the last day of the year I was as tickled as a boy with his first pair of pants. All this happened several years ago and I have been quite successful gathering in the coin. I have made several hundred dollars. It has benefitted my health for I have been kept out in the open air a great deal and it would be a lazy fellow who would fail to make money getting the prices I do. I have also learned a lot about hens that I never even mistrusted before and am getting on to new wrinkles every year. It is an interesting business if a person likes hens, otherwise you had better buy the cold storage article.

O. F. Black, Massachusetts.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU!

NOW IS THE TIME

To start the chicks that bring the high prices in December and January. They do well in September and October, and make a handsome profit. Our Brooder Hovers are second to none in simplicity, convenience and sanitary construction. They take care of the chicks and start them right with the least trouble and expense, and we are making

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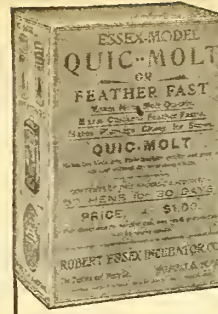
With every Round Brooder Hover and every O. K. Brooder Heater ordered in September, we will send you free of charge a galvanized iron chick drinking fountain, and two feed troughs suitable for bran, dry mash, milk, or any sort of chick feed. This makes a complete equipment, and our prices are the lowest. Send for our free catalog, A-20, giving description and cuts for our Brooder Hovers and a complete line of Poultry Supplies.



Hover complete with lamp, curtain and hover cloth, \$1.80 to \$3.00.

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Send for our **BIG FREE CATALOGUE** containing illustrations of Best Brooders made—the kind that raise strong chicks. It also contains 5 Chapters on Poultry Raising written by Robert Essex, and 30 Photos of the latest Experiment Station Poultry Houses. Address nearest office.

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 67 Barclay Street, New York City

THE FEED AND CARE, NOT THE BREED, TO GET WINTER EGGS.

I live on a small farm and keep hens for profit as well as for pleasure. I have tried a number of different breeds, among them being R. C. and S. C. Brown Leghorns; S. C. White Leghorns, White Wyandottes, Barred and Partridge Rocks, Black Orpingtons, etc. I have been trying to find a fowl that would be a good general purpose fowl for the farmer. One qualification that I wanted it to have was this, a good winter layer.

I think my greatest trouble has been jumping from one breed to another, looking for something better. I have taken one or two poultry journals most of the time for a number of years, and in looking over the advertisements I would read of some breed (different than the one that I had, of course) that were such grand winter layers, and of course I would want to try them, and after getting them would be no better satisfied than before, but when I began studying how to feed, what to feed, and when to feed, and the proper care and housing of the laying hen, and put this knowledge into execution, then I could get winter eggs. At this present time I have S. C. White Leghorns and Black Orpingtons. Both flocks are fed alike and they are both giving me a nice lot of winter eggs at this writing (February 13th) with the mercury at the zero point, so I have made up my mind it is the feed, care and proper housing of the hen that gives us the winter eggs, instead of some certain breed, as some over-ambitious advertiser would have us believe.

When purchasing stock I would look to the strain rather than the breed and buy from a breeder whose hens have a record for winter laying.

My advice for the farmer would be this. Get a start either with eggs or stock of any one of the general purpose breeds. Select the breed that you like the best, as to size, color, etc.; build good warm houses for them with plenty of light, sunshine and ventilation. Raise early chickens. I would not hatch later than May to get pullets for winter layers. If you want to cull your flock very closely don't set eggs from the whole flock. There are always a few

hens that are more active than the rest, have brighter combs, lay earlier in the fall, and seem to have a more rugged constitution than the rest. Sort out these few active hens and mate them with a male bird of the same strain that is not too nearly related. Select a male bird that is of good size and color with plenty of vigor. Don't make the mistake that most farmers do of buying a male bird of a different strain every year in order to get new blood. If you get a good strain to start with and do not care to line-breed, when in need of new blood buy males of a breeder that has the same strain. Don't be afraid to spend a few extra dollars to start with, as it will be money in your pocket in the end.

E. B. McKercher,

Michigan.

The Close-To-Nature Company, 20 Front Street, Colfax, Iowa, have found it necessary to further enlarge their business to take care of increased business. The Close-to-Nature sprouters have been on the market for the past four years, and have given satisfaction wherever used, being made in six sizes and covering the needs of any size flock. The present year, with its wide spread drouth conditions have been very trying to hens having to pick up their own green food, but where artificial oat sprouters are being used, it is possible to have a constant supply of succulent growth that the hens prefer even to cut grass or clover. If you would like to know more about these sprouters, the Close-to-Nature Company will gladly send you their literature.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year if sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

RHEUMATISM

A Home Cure Given by One Who Had It.

In the spring of 1893 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. If, after you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free? Don't delay. Write today.

Mark H. Jackson, No. 310, Alhambra Bldg., Syracuse, N. Y.



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118 Pages, (9x12 inches Handsomely and Extensively Illustrated. Printed on Embossed Paper. Describes Different Breeds, tells how to Feed and Care for Old, and Young. How to Run Incubators and Brooders.

Price \$1 per copy. By special arrangement we will send book postpaid and a year's subscription to the Poultry Keeper for \$1. Address

POULTRY KEEPER PUBLISHING CO., Quincy, Ill.

FULL YEAR RECORD FOR TEN BARRED ROCKS

I have been a subscriber and reader of the Poultry Keeper for about six years and have read a number of other poultry papers and literature besides, but have found none as practical as the Poultry Keeper for the reason, I think, the Poultry Keeper is composed out in the chicken houses and yards, while most other papers are composed at the editor's desk.

kept would be a paying investment. My greatest trouble was dampness. My place consists of about an acre, with garden and all, with a small brook running through, which at times becomes a raging torrent; the greater part of the land is low and swampy, except where I have gone to a great expense to fill it up, some places as high as five feet, and only this past summer I got my coops out of what I call the high water reach. So this

	November	December	January	February	March	April	May	June	July	August	September	October
1	2	3	7	5	5	8	6	5	8	6	6	5
2	2	7	6	5	5	7	5	4	4	4	4	5
3	3	7	3	2	5	6	6+	4	8	6	6	5
4	3	6	9	5	4	8	6	4	9	4	5	3
5	3	6	9	5	6	7	5	4	7	7	4	2
6	2	6	5	5	5+	5	5	2	6	6	4	3
7	2	7	8	2	7	7-	6	3	6	7	4	3
8	3	6	8	4-	5	6+	6	3	5	7	5	2
9	3	6	7	4	6+	7	3	2*	5	6	4	4
10	5	7	6	5	4	5	5	3	4	5	7	4
11	1	8	6	3	6	8	3	1+	3	3	6	5
12	5	5	5	6	6	7	5	3	4	5	4	3
13	2	7	4	3	6	7-	6-	4	3	6	5	2
14	4	7	6	5	4	8	6	6	5	3	1	4
15	3	8	5	3	4	4	5	4	4	5	5	2
16	5	6	6	4	6	9	3	6	3	5	4	3
17	3	8	5	4	7	6	4	5	3	6	2	4
18	3	5	4	3	6	6	5	7	4	7	2	..
19	3	8	6	5	6	7-	5	7	3	4	1	5
20	7	9	4	5	7	7	4-	7	2	4	3	2
21	4	7	5	4	5	6	4	7	6	5	1	2
22	5	8	7	4	7	5	5	6	7	5	3	4
23	7	8	6	4	4-	4	5+	9	3	6	3	4
24	5	5	6	7	5	5	4	6	3	1	3	2
25	7	8	7	5	3	4	5	5	5	7	6	3
26	7	7	5	6	7	7	6	7	5	6	6	4
27	5	8	8	5	7	5	5	5	6	3	3	2
28	7	8	8	7	5	6	5	9	3	4	8	3
29	8	7	4	6	5	7	3	8	3	2	5	3
30	5	6	2	..	4	6-	5	6	5	4	5	2
31	..	4	6	..	8	..	4	..	4	4	..	2

* Four hens were put back in laying pen on June 9th. Pennsylvania Jas. A. Seaber.

I have been in the poultry business for about 16 years and in that time have had many and varied experiences in the work; discouragements enough to make an ordinary man quit, while at times I had encouragements enough to prove to me that poultry rightly

may give you an idea of what some of my troubles were. I have kept a record of my eggs for several years for a part of the year only until this year I kept a record of a pen of ten Barred Rock pullets for the whole year from November 1, 1911,

to November 1, 1912, which I enclose with this article. I would like to explain how I have my coops, etc., but as this is my first article I do not wish to weary you too much. The minus (-) marks mean one hen for each mark taken out for hatching purposes in that month and date where it appears. The plus (+) mark means one hen for each mark returned after leaving chicks. The record by months is as follows:

November	124
December	208
January	183
February	131
March	175
April	190
May	150
June	152
July	146
August	133
September	125
October	107
Total	1834
Average per hen	183.4

POINTERS ON TIME AND LABOR SAVERS.

It is probable that most poultrymen and farmers who read these lines have been contending with lousy hen roosts as long as they have been in the business, and the poor hens have been tormented for generations.

This may be considered as a sort of "Emancipation Proclamation" for all such.

It is generally understood that grease of any kind is fatal to a louse, as well as to many other kinds of insects. Kerosene will kill them, but it has to be applied frequently since it will not "Stay put." Eternal vigilance has been universally believed to be the price of freedom from mites in the hen roost and brooder. Their habits, like the bed bug, are nocturnal. They feed at night, and hide during the day in the nearest crack or crevice. They die or become dormant during winter. Enough always seem to survive to furnish "seed" for next summer's crop. If this "seed" gets caught in a pot of grease the first night he starts out on a foraging expedition, that is the end of him.

Moral: Smear the perches with grease that will fill the pores of the wood and all cracks and crevices, and stay there, and then see to it that the hens spend the night sitting on the greasy perches, and no where else. Plain tallow (either beef or mutton) just fills the bill. It should be melted and applied while hot some mild day in the month of March each year, with a paint brush. Turn the porches over and paint all four sides, particularly where they rest on the supports. Paint the supports at the same time, and also some of the siding, etc., nearest the perches. This one application will be sufficient for a whole year.

When building a new hen house, always grease the perches before introducing the hens, at any time of the year. The hens' feet will wear some of it from the top surface of the perch, but neither summer's heat nor winter's

cold will remove it from the pores of the wood or the small crevices where the lice seek to hide.

This is no idle theory. I have proven it out for the past four years with hens by the thousand, in roosts that had previously been lousy in many cases for years. It has given me absolute freedom from the pests.

I use the Orange County Poultry Houses exclusively, all the fixtures of which are perch proof at night, compelling the hens to perch where I want them to, on the greased poles. The designer of the house kept the slogan constantly in mind, "Let your head save your heels."

The especially constructed roosting room in the rear, is also used as a brooder room. A large hover 6½ feet square stands in the center of the room and hovers 700 chicks all in one flock. Before the day-old chicks are introduced, the floor is painted with tallow and hay seeds, chaff, etc., from the barn floor, spread upon it. This insures freedom from lice until the chicks are old enough to leave the floor and take to the perches. The hover is then removed and perches installed in its place. By this plan there is no moving of the birds from the time they are a day old until they go to market or until old age overtakes them.

When they get too old for profitable laying they are disposed of, perches removed, and the floor given a good cleaning and disinfecting. The hover is then again installed and a new start made with day-old chicks. A small coal heating boiler furnishes hot water for the radiator which is placed in the center of the brooder room, under the big hover.

The hardest problem in connection with an egg farm—that of raising young chickens—seems to be solved. I can raise from 90 to 95 per cent of all chicks placed in this mammoth brooder. The males are removed as soon as fit for market, and the pullets culled down to about 250.

Other points observed in order to "make the head save the heels" are:

First. Keep the laying hens in flocks or units of 250 to 300 each. This size flock can be fed and watered as quickly as one of twenty or thirty. It takes less time and labor to take care of one of these units of egg producers, than it does to take care of one milk producing cow.

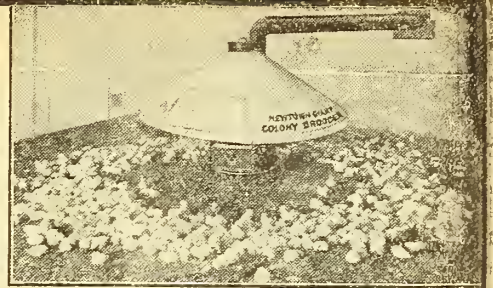
Second. Using dry mash instead of wet feed. This is placed in a hopper holding a week's supply and kept open all the time.

Third. Giving the day's allowance of mixed grain all in one feed. I find that I get equally as good results as when I fed two or three times a day. I don't see as it makes any difference whether they get it morning, noon or night so long as they get it regularly.

Fourth. Piping water to them by gravity, so that the water troughs are filled or emptied by turning a faucet or pulling a plug. The pipe is laid above ground, on an incline, from a tank containing cold water in warm weather and hot water in cold weather. A faucet at the lowest point quickly drains the water out of the pipe as

Coal-Burning Self-Regulating

Colony Houses are perfectly safe from fire with the Newtown Colony Brooder. 8 cents a day buys sufficient coal for brooding 1,000 to 1,500 chicks in cold weather.



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Fill coal magazine once in 48 hours in the severest weather. In mild weather it requires less frequent attention. Rake ashes once in 24 hours.

Heat automatically regulated by thermostat. Temperature always right. Built in two sizes to accommodate 300 to 1,500 chicks. Heat Deflector need not be raised to coal and shake the fire nor to remove ashes.

Ask your dealer to show you this economical, coal-burning, self-regulating Colony Brooder, or write direct for Colony Brooder Catalog AD.

NEWTOWN PRODUCING CO., Newtown, Pa.

soon as all the troughs are filled, while it is still warm. This obviates all danger of freezing and bursting the pipe.

I now have eight of these units or colonies, containing about 2000 hens and I take care of them in less time than it takes my hired man to take care of my nine cows, and I do not have to begin my work nearly so early in the morning, or keep it up so late at night.

The sales of eggs from the hens are more than double the sales of milk from the cows, as are also the profits. This is not because the cows are inferior ones either. Last year I sold an average of \$165 worth of milk from the nine cows, besides \$5.00 each for the calves.

From 1500 hens the sales of market eggs amounted to \$3,452.21, selling to regular dealers in both cases. I am not sure but that egg production offers the best "Emancipation Proclamation" from the slavery of milk production that there is in sight. It gives shorter hours of work, better pay, and eliminates the city milk inspector from the problem.

Don't forget to give the hens a greasy perch in time to catch the first louse that wakes from his winter sleep.

O. W. Mapes.

New York.

WHITE ORPINGTONS GIVE GOOD WINTER EGG YIELD.

In some of the numbers of the Poultry Keeper there has been quite a lot printed about the integrity of dealers and breeders. While I am only a woman and an amateur in the poultry business. I do not pretend to know it all, yet I feel like agreeing with the writer who said he would like to shake hands with the honest dealers, for I have

found only honest and fair treatment so far. All of the advertisements I have answered were from dealers who used the Poultry Keeper for their medium, excepting one from the Poultry Review. I do not think that any of us should judge from the two or three who have happened to be unkind.

Perhaps your readers would like to know what nine S. C. White Orpingtons did for me last winter. Five of the pullets were hatched the 20th of February and three the latter part of April. Since these pullets were two to six months old they laid three to five eggs a day until December. During January and February they laid from five to eight eggs a day. They have a common house, dry with sand to scratch in, with plenty of ventilation and sunlight, and the house is kept clean. They have plenty of fresh water daily and are fed cracked corn, wheat, oats and buckwheat mixed. They also have a dry mash (the formula for which I took from Poultry Keeper) before them all the time. They did not have a hot mash more than three or four times all winter. When fed it consisted of vegetable parings, boiled partially soft, and wheat bran and meal enough to thicken, with a little red pepper mixed in it. I have only a small back yard in town and think my pullets have done as well as most flocks of their number, no matter of what breed. There are men right here in town who have from twenty to thirty R. I. Reds and all the winter and the fore part of the winter they did not get an egg, although later in the winter they get nine and ten eggs a day. There are several looking for sittings of eggs from my Orpingtons. There's a reason.

Isabelle P. Clarke

Massachusetts.

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Saturday Evening Post	1.50	2.00
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Woman's Home Companion	1.50	1.75
Youth's Companion (new sub) ..	2.00	2.25

Send in list of the publications you wish and we will quote a reduced rate on the lot. Address,

Poultry Keeper Pub. Co.
QUINCY, ILLINOIS.

AMERICAN POULTRY ASSOCIATION ANNUAL MEETING 1913.

We were pleased to be able to attend the annual meeting of the American Poultry Association, at Atlantic City, N. J., August 11-16, 1913. While we were in favor of Detroit, in voting for place of meeting, we are glad we were out-voted and were present at Atlantic City.

The location and time were satisfactory, bringing out over five hundred members of the Association as well as several hundred more of the relatives and friends of the members. Atlantic City is a place of great conventions. It is always ready to tuck away in its halls, hotels and homes another gathering of any sort. No matter how full the rooms, how crowded the dining halls, in some way they can take care of you.

The local place of meeting was well chosen. It was out beyond the breakers, on the million dollar pier, in what has been named the Greek Temple. No matter what the temperature on shore, or on the "Board Walk," we always got a breeze from the ocean. Never was it necessary to open all the windows to keep us cool. With the windows of one side of the hall open, and a single window open on the other, we were perfectly comfortable, all of us, except those who felt called upon to deliver lengthy addresses, or fight for some motion before the meeting.

The New Jersey Branch of the A. P. A. did much to make us welcome, supplying a beautiful badge to every one who registered, as well as seeing that we all got a long chair ride on the Board Walk, admissions to other piers that presented amusements of various sorts and a dip in old ocean right off the beach and in the breakers. Through all the waking hours we could hear the roll of the surf as it broke under the pier or up and down the beach on either side.

Right on the pier was the summer poultry show of the Poultry Item. Here were gathered seven hundred specimens of good poultry, a few good dogs, as well as poultry commercial exhibits of many sorts. Besides the booth of the Poultry Item were good paper exhibits of the Poultry Advocate and Poultry Husbandry. Nothing could be bought on the pier. When we passed the gate and common folks paid their fifteen cents by day and twenty-five cents by night, we had no chance to spend a dollar, much less a nickel. Everything on the mighty pier is free—once you get inside. There is an immense ball room where dancing was in progress ten hours a day, a theatre seating several thousand, a roller skating rink where five hundred persons were not in each others way. At 11 a. m. and 4 p. m. were added the attraction of seeing the drawing of the nets, with their contents of the briny deep. Best of all, to us, was the certainty of finding a cool spot on the pier. On Sunday, when the town, the boardwalk and the beach, was sweltering in the heat, we found absolute comfort out on the pier, be-

you'd the line of breakers, in the shade of a building and in the ease that comes in the occupancy of a rocking chair. Leaving the heat of the town as soon as the dinner hour was passed, we remained in that chair till supper was surely ready. Half an hour on the pier caused the drying of all perspiration, and the coming of a sense of comfort that was agreeable. From the security of the rocking chair we could view at pleasure the tens of thousands who were trying to cool off in the water of the beach. Most of the folks kept within the line of breakers, though a few venturesome ones could be seen swimming or floating in the smoother waters outside.

Did we spend our time outside the meetings? Hardly. We got to Atlantic City four days before the meetings opened and had done the attractions fairly well before the opening of the convention. The real business was done in the three days of the week set aside, Wednesday, Thursday and Friday. From 9 a. m. to 11 p. m., (and later) something was doing, either in the convention or in committee.

There were made in the Standard of Perfection many changes, to take effect in 1915, as well as a few motions passed that affect poultrymen. The two changes that will mean much to breeder were, first, the making of the "back" of the Wyandotte "slightly short" instead of "short," and secondly the putting of a weight clause on the Leghorns. A standard Leghorn pullet is to weight three pounds, when shown at any A. P. A. show and will be cut for weight if below or above this mark. Affecting poultry journals was the vote that no poultry journal man who judges shall solicit advertising at that show. We wait to see whether this is to be carried out and what the penalty will be.

This is the first A. P. A. convention for years when some city did not make an earnest effort to attract the next meeting. Washington, D. C. had a banner in sight at one time but it was kept in the background so far as we could see. Doubtless the convention of 1915 will be at San Francisco, but where that of 1914 will be held will depend on what is offered by various sections in the months right ahead.

We believe in the work of the American Poultry Association, in the need of a better Standard of Perfection, in the benefit that will come from breed and utility standards and will be found ready to help in time of need.

Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind, or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 14th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

TROUBLE WITH INFERTILE HATCHING EGGS.

Editor, Poultry Keeper:

I have been an interested reader of the Poultry Keeper for several years and would like to tell of my experience. In the spring of 1912 I bought a Rayo Incubator and decided on raising the Rhode Island Reds which I have never regretted. I bought one hundred eggs from a reliable poultryman, who has bred nothing but Reds for the past thirteen years. The eggs came about six hundred miles and not an egg was broken. I set a few hens and the balance of the eggs were placed in the incubator. I hatched 86 large, healthy chicks and not one died. They grew like weeds and were a nice bunch of Reds, being so tame that I could pick up any of them. I sold many of the young cockerels for breeding stock. People in autos stopped to look at my birds and many of my neighbors wanted cockerels for breeders, but when I told them my price they objected, thinking that as they were my neighbors they ought to be able to buy the birds at butchers' prices.

Out of the 86 birds I got thirty two pullets. They started to lay before they were six months old and did very well. While my old scrub hens were molting and resting the Reds laid steadily, keeping it up all winter. On the first of February I put twenty-two of the best pullets in a separate pen with two cockerels which I had kept. The cockerels were large, vigorous birds, weighing 8 and 8½ lbs. The pullets averaged six to seven pounds. They were all dark red, with only a few black feathers in wings and tails. I started to save the eggs for hatching and lots of days would get 22 eggs, and never less than 16 eggs. I set the incubator with 146 eggs, also four hens, on the first day of April. On the twelfth day I tested the eggs, and some of the hens had only three fertile eggs. Over half of the eggs tested out as infertile. I hoped that they would get better later on, but each successive hatch was poorer. Later in the season I removed one of the male birds, but with no better results. Many wanted eggs to set, but those I had promised eggs to I told them of the situation when they came to get the eggs. One of my neighbors persisted in getting one hundred eggs to fill her incubator. She hatched only 25 chicks, which displeased her very much, and as I was also dissatisfied about it, I agreed to replace all the infertile eggs. I brought the infertile eggs home and fed them to my hens. My husband objected to giving the eggs away on account of poor fertility and said to hatch all the eggs we could up until June, no matter how few chicks hatched. The last hatch was 15 out of 146 eggs and 21 hens, which I had set in the barn at one time. I set nearly eleven hundred eggs and hatched about three hundred chicks, but some were dead in the shells. The chicks that did hatch I had no trouble in raising.

One evening a man came to get a



See That Bare Spot?

Don't let lice get hold of your flock—to breed, cause endless irritation and all manner of skin diseases and sore spots. Take quick steps to get rid of lice.

DR. HESS INSTANT LOUSE KILLER

KILLS LICE. Kills them quickly—surely. Sprinkle and rub it thoroughly into the feathers. Put it in the dust bath, sprinkle it in the laying nests, roosts, and cracks. Instant Louse Killer also kills lice on farm stock, bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes, etc.



DR. HESS & CLARK,

Ashland, Ohio

sitting of eggs. I told him of the trouble we were having with the fertility and objected to giving him the eggs. He then told me of the trouble he had one spring. He said he had 13 nice Red pullets and a very nice and vigorous cockerel. He set one hen and not a chick hatched. The eggs were all infertile. A neighbor said he would exchange male birds to see if it would make any difference and the second week he set another hen and every egg hatched. He said he was certain that the male was responsible for all of the trouble.

Now can any one tell me where I make a mistake? I feed the very best grains, and have all kinds of hoppers and exercisers with plenty of green food. Have an oats sprouter and also feed cabbage, steamed lawn clippings and dry mash, grit and charcoal are always before my hens. Sometimes I boiled potatoes for a change. The droppings boards are cleaned every morning and kept covered with lime. There is a dust box with lice powder mixed in the dust. The birds have a run of eight acres with plenty of fresh water.

I have exchanged made birds with fancy breeders who want new thoroughbred stock, but the trouble is that I get smaller birds than my own stock. I let the cockerels run with the flock (about 65 hens) until February, when I penned them with the 22 pullets. I notice there are many breeders who keep the male birds away from their flocks except during the breeding season. I will try again next spring, but should like to hear from some one about the secret of getting fertile eggs. Also will some breeder of Buckeye Reds tell me something about them. I presume they are just as good layers as the R. I. Reds, and are much

heavier.

Ohio.

E. S. S.,

(Editor's Note.)

Only fresh eggs should be set. Every day they are kept injures the hatching possibilities. This may have had something to do with the poor results. Also there should be but one male in a pen. It would have been better to have eleven pullets in each pen and alternate the male birds each week. There is a big difference in male birds, and nothing but a known vigorous and sure male bird should go into a breeding pen. It is a good sign to see a bird active and full of scrap, but to have a second male bird in the same pen means useless battles for supremacy. It is far better to have a single pen of twelve to fifteen good pullets and one sure male bird, than to have so many pullets and two male birds. Better set half as many eggs and let those be of the best fertility. If any of our readers wish to add anything to our remarks, especially as to information about the Buckeye Reds, we shall be glad to have it.

SPECIAL CLUBBING OFFER.

By special arrangement with the publishers we can furnish any poultry paper at one-half price, providing the order includes a year's subscription to Poultry Keeper at regular price. For instance, for 75c we can furnish a full year's subscription of Poultry Keeper and your choice of Reliable Poultry Journal, American Poultry Advocate, or any other 50 poultry paper. Make up a list of the papers you desire and let us quote you a reduced price on the lot. Address Poultry Keeper Publishing Co., Quincy, Illinois.

QUESTIONS and ANSWERS

DRY MASH FOR GROWING CHICKS.
 I am a subscriber to your magazine and would like you to give me a good dry mash recipe for growing chicks. I am raising pure bred Barred Rocks. I feed nothing but corn and they are on free range and of course get all the green food they want. I want to force them both for layers and broilers. What is your opinion of meat scraps, fed in hoppers, or would you feed it in a mash? I have excellent success in feeding both cracked and whole corn to them, but would like your opinion as to something that will force them more rapidly.
 E. A. A.,
 New York.

A good dry mash for growing chickens is made of four parts each by weight of bran and corn meal, one part ground oats, one part bone meal and one part fine meat scrap. This can be fed from the time the chicks are a week old. Fattening chicks and layers should be treated differently. As the pullets approach laying add one part gluten feed to the above and keep the dry mash before them all the time. To fatten the broilers or roasters use only half the quantity of bran and add one part ground oats. This mash can be fed both dry and moist. If you have skim milk give one feed a day of moist mash, using the milk after it has become sour. You can feed beef scraps from a separate hopper, but we prefer to mix it in the mash. As some chickens will eat too much while others will not touch it. When in the mash they get just the right quantity.

POISONING HAWKS—LICE—RHEUMATISM IN TURKEYS.

1. Some time ago I read an article on poisoning hawks. The poison was to be fed to chicks and the hawk eating the chick was killed by the poison. Can you give the name of the poison and how to use it?

2. This year I have had poor luck in raising chicks. The legs of some would turn a slate or pale color and they would die before they were ten days old. Others would droop around. They apparently had lice and would refuse to eat, although I could find no lice on them. They died mostly during the night and would smell very badly in the morning. Can you explain?

3. Give cause and remedy for rheumatism in turkeys.
 S. S. K.,
 Indiana.

4. Nux vomica is sometimes fed to chicks for the purpose of killing hawks and also lice on chicks. It is claimed that the chicks can take enough to so poison the flesh that it will kill hawks and crows which eat it. The method of administering is to place a teaspoonful in each quart of drinking water. Do this every day for a week, then skip a week. You must watch the chicks and if they become too lively and the eyes excessively bright discontinue the medicine or it will kill the chicks. We do not know who wrote the article you refer to.

5. The trouble is probably due to mites in the coop. The mites do not stay on the chicks. Spray the coops often with Zenithene.

6. Rheumatism is caused by uric acid in the blood. Turkeys are not often troubled with this disease. If the parts are swollen and inflamed bathe in hot mustard water and wipe dry.

INDIAN RUNNER DUCKS.

I have Indian Runner Ducks. How many ducks should I have for one drake? What should I do they stop laying?
 Alabama. Mrs. R. C. McB.,

One drake to one drake is the proper number. They have no special time in which they stop laying. Some ducks cease to lay at while others will lay until October. It depends on when they molt. Of course, they do not always lay when they are molting but this is a matter of care and other conditions.

LOCATING THE INCUBATOR.

Will you please tell me through your paper whether an electric sub-station will be a good place to run an incubator? I am sub-station operator and think I shall get an incubator next spring. Can you or any of your readers tell if a sub-station will be a suitable place or not? I do not raise many chickens, but what I do raise are of the best quality I can get.

Ohio. J. M.,

If there is a good place for the incubator, where the temperature does not vary greatly and still is well ventilated, a sub-station is as good as any place. The main point is to have a good location for the incubator. You can't place it in a corner of a poorly ventilated room where the temperature changes widely and expect good results.

LIGHT BRAHMAS.

Should Light Brahmans have dark tint (smut) in feathers of back, besides black tips on hackles, tail and wings?

N. F. A.,
 Ohio.

The under-color of the back of the Light Brahma male is white, bluish-white or slate. of the female, white or bluish-white.

GENERAL QUESTIONS.

1. What is a reasonable number of eggs for one hen? That is, the best I can take as a basis to figure on for profit?
2. Can I take care of one thousand hens by the Ott Poultry-Flat System?
3. Can I hatch and raise six hundred chicks each year with one hundred breeders? That is, will they furnish enough eggs to incubate that many?
4. Is well-cured alfalfa hay good for winter green feed? How should it be fed?
5. What would be a safe clear profit to figure on for 1000 hens for a year's labor?

E. G. T.,
 Kansas.

1. That will, of course, depend on the hen and the care she gets. On the White Leghorn egg ranches the average is about ten dozen for hens and eleven to twelve dozen from pullets. The average of the hens of the country is a little less than eighty eggs.

2. We do not know about the practical working of the Ott Poultry-Flat System or the amount of labor required to operate it. On the commercial egg farms where hens are run in large flocks and kept in long houses, or even on the colony plan one man can tend from 2,000 to 5,000 hens, according to the system he employs and the arrangement of his plant. There is more work caring for a large number of hens in small flocks, but the egg yield may be slightly larger from the small flock.

3. Yes, as this will only necessitate that the hens lay twelve to fourteen eggs each during the breeding season. By using a 350 egg incubator and starting it the second week in February you can get off three or four hatches during the season. It would be better, however, to have a larger incubating capacity so that all the chicks wanted can be taken off at two hatches.

4. Yes. It can be fed in almost any old way. It is most economical to cut it fine or milled, but this is not necessary, as it can be fed whole, allowing the hens to pull off the leaves. By this method some is wasted but it can be used as litter. Unless cut the hens will not eat the stems.

5. The profit on hens is something you can't figure. It has to be worked out. Some men, with a favorable season might make \$2,000 or \$3,000 on 1000 hens while others would scarcely break even. It depends largely on the hens, and here is where good stock counts for everything. It need not be exhibition stock, but it should be stock suited to the purpose for which it is kept.

FOREIGN BODIES IN EGGS.

Can you tell me what causes small, black specks in eggs? They seem to be in the skin, but do not show unless the egg is boiled, they then speck up the white part.

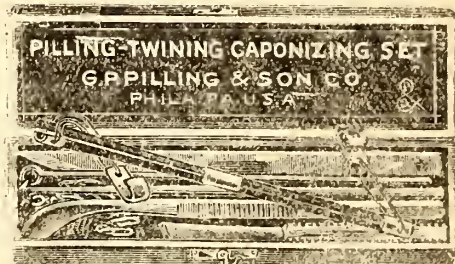
Missouri. J. K.,

These specks are usually designated "meat spots" or "floaters." They may be small portions of the oviduct of the hens or they may be other organisms. The egg is produced as follows: The yolk develops in the ovary, which is a large, conglomerate mass, the appearance of which may be compared roughly to that of a bunch of grapes of different sizes. When the yolk reaches its full development in this organ the membrane containing it breaks and it is discharged into the oviduct. In passing through the oviduct it is surrounded by albumen, known as the white of the egg. The development of the albumen requires about six hours. In the lower part of the oviduct it remains for about twenty-four hours and during this time it becomes covered with a membrane and shell. If foreign bodies or parasites of any kind are present in the oviduct they may become incorporated with the albumen and in that way become enclosed in the egg. There are a number of parasites of poultry that have been found encapsulated in this way.

ENGLISH INDIAN RUNNER DUCKS.

Should English (Brown and White) Indian Runner Ducks have black or brown head and tail points?
 G. W. C.,
 Nebraska.

We believe they do. If such a Standard has been made you should get a copy. We understand that this variety is to be given a description in the new Standard. Now there is nothing authentic. The Standard of the English Poultry Club does not describe our America-English Indian Runner. The Standard of the English Poultry Club gives the color of the head as grayish fawn in the duck and brone green in the drake, with narrow bands of white dividing the base of the bill from the head and along the cheek; the neck, wing flights and fluff are white, and the rest of the body fawn or in some cases even gray.



PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

HOW I BECAME THE OWNER OF A FLOCK OF AMERICAN DOMINIQUE AND THE POSSESSOR OF A GOOD DIGESTION.

I was in a condition that eggs were about the only thing my stomach would digest and they were high in price and very scarce in the cold months, and when they were more plentiful in the warm weather their quality became questionable, so I thought eggs from my own flock would be more satisfactory and having an ordinary hen house and leisure time enough to care for them and the desire to produce my own table fowls and eggs I decided to buy a number of pullets.

In late summer I found a lady who wished to dispose of her flock consisting of about 30 old mens and about the same number of pullets and cockerels. I did not care for the old hens but all had to go or none at all. I purchased them and took them home and the next day began to gather eggs.

I cooped the cockerels and fattened them and what I did not need myself were sold in the market; several hens were disposed of in the same way.

As I had in the past had considerable experience in balancing rations for dairy cattle I tried the idea on my hens and during the first year learned many things to do as well as things not to do, in fact, am learning yet.

I kept studying my old hens and was much surprised in them as I always supposed that a yearling hen was no account except as a breeder or for market. Some of mine were Rose Comb and making records. They were different than the rest of the flock and much better.

One day when near the farm they came from I called and asked about my Rose Comb hens. The lady was sur-

prised and wanted to know if I did not know that they were thoroughbred American Dominiques? If she had ever told me I had not remembered as before this hens were hens to me. The cock, she told me, had a few years before, when he was a cockerel, won at two local shows. She had loaned him to a breeder who had returned him only a short time before I purchased the flock. He had been exhibited by his former owner. This breeder gave the cock and his hens to the lady on account of his breeding game birds at that time. He is now breeding the American Dominiques again.

I returned home and at first thought I would dispose of them, but they were good layers, healthy, hardy and looked as good as yearlings, even though they were several years old.

Their good points won out and I decided to keep them. I purchased a cockerel and the first season raised but a few birds, but from these sold two fine cockerels and won my first blue ribbons and now have a fine flock of this grand historic breed, the American Dominique.

B. J. Dorsey,

New York.

Have you derived any benefit from the numerous suggestions and articles furnished by some of our other readers who have given you the benefit of their ideas through the columns of the Poultry Keeper? Possibly your success or failure furnishes some idea of value to other readers who may avoid loss by knowing of your experience. We shall be glad to print your experiences on practical lines if you will take the time to write them out. Simply get the matter up in your own way and we will properly edit the copy before printing it in our columns.

POULTRY SHOW CALENDAR.

PLACE.	DATES.	JUDGES.	SECRETARY.
Akron, Ohio	Nov. 24-29	Chas. McClave	C. M. Woodring.
Beardstown, Ill.	Dec. 1-6	J. C. Johnston	Victor Adelmann.
Brazill, Ind.	Jan. 12-17	T. F. Faulkner	J. C. Macdonald.
Buffalo, N. Y.	Nov. 25-29	(International Association)	J. H. Drevenstedt.
Charleston, W. Va.	Jan. 8-14	Simmons and Cook	Julian E. Byrd.
Dyersville, Iowa	Dec. 2-6	U. J. Shanklin	Frank Fahs, Jr.
Eaton, Ohio	Feb. 2-7	L. C. Taylor	Ora Overholser.
Goshen, Ind.	Dec. 8-13	H. A. Pickett	Dartt Emrick.
Hempstead, N. Y.	Nov. 10-15	Stanton & Story	R. H. Wilcox.
Springfield, Ill.	Oct. 3-11	(Illinois State Show)	O. L. McCord, Danville, Ill.
Kansas City, Mo.	Dec. 1-6		E. L. Noyes, 409 Manhattan Bldg.
Lisbon, Ohio	Jan. 12-17	Chas. McClave	W. T. Bennett.
Manitowoc, Wis.	Dec. 4-7	George M. Wells	A. P. Schenian.
Paterson, N. J.	Nov. 19-22		Dr. G. Johnston.
Piqua, Ohio	Jan. 19-24	F. L. Platt	Geo. W. Ellerman.
Rochester, N. Y.	Sept. 15-20	(Industrial Exposition Show)	Edgar F. Edwards.
Rochester, N. Y.	Dec. 15-20	(Flower City, Ass'n Show)	Bean, Kenner, Nixon, Andruss, Story, Jager, Etc. J. F. Tallinger.
St. Louis, Mo.	Nov. 24-29	Byers, Emery Heck Rhodes, Roantree and Mertins	Jas. J. Long, 4115 Louisiana Ave.
St. Marys, Pa.	Dec. 16-18	F. V. L. Turner	F. D. Lambert.
Syracuse, N. Y.	Dec. 7-13		H. Augustus Eller.
Upper Sandusky, O.	Jan. 26-31	Luther A. Stream	F. M. Mealey.
Washington, D. C.	Dec. 2-6		
Westerly, R. I.	Dec. 11-13	Stanton, Ballou Shove	Roger F. Dunham.

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FRANK H. DAVEY, Superintendent.

A PHENOMENAL SHOWING.

Mr. Maurice F. Delano, who succeeded to the business of the famous Owen Farms last season, has recently captured twenty out of a possible twenty-two first prizes on his varieties which he entered in the Greater New York Fair. These prizes were received on entries of Buff, Black and White Orpingtons; White Rocks and White Wyandottes. It is extremely fortunate that the business of the Owen Farms should have fallen into Mr. Delano's hands, especially since he was so closely associated with Mr. Owen in the former management of the business and had much to do with its great success. This insures the buying public that they may be perfectly free to place order for stock with Mr. Delano, with the full assurance that he can give them just what they are in search of, and exactly what he agrees to give them—quality stock.

The poultry business of the country owes very much to the success of such farms as this one, where honest intention is coupled with the ability to produce strictly first class birds. The Editor of Poultry Keeper feels sure that Mr. Delano will make every effort to maintain the high standard of efficiency and reliability set by the Owen Farms, and that he will make a success of the business in an assured fact. Mr. Delano will be glad to send some of his high class literature showing what he has to offer this fall, to any one who will write him. Address, Maurice F. Delano, 127 William St., Vineyard Haven, Massachusetts, and let him have a chance to fill your order.



Win at Your Fair with Ferris Leghorns!

Special prices this month on show birds of the finest type, having low tails, good heads with smooth five point combs, long backs and ideal shape and color in every section. These birds are the cream of 10,000 we raised this year, and are well developed—ready to lay and win for you. We ship on approval and guarantee perfect satisfaction or refund your money. Cockerels, pullets and hens as low as \$2.00 each; cock birds of unusual quality \$3.50 each. Write for particulars; we will be glad to quote prices on trapped laying stock or exhibition birds for any show.

If you have not had a copy of our 132-page Catalog you have missed one of the best books on Leghorns that has ever been published. It contains so much information of value to Leghorn breeders that it will pay you to write for it and learn our methods of breeding for eggs and for exhibition. Send a postal today and let us send it and quote prices on laying, breeding and exhibition stock that you need.

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909 Union Avenue - - - Grand Rapids, Michigan



POULTRY SCRATCHINGS (AND A SIX MONTHS RECORD.

I have found a lot of good and many valuable hints in poultry keeping, by reading the experiences of others as published in different poultry magazines. Indeed, I have often gotten more good from the letters of those almost amateurs in poultry than from many accounts of the wealthy man's huge plants, though these I enjoy reading, also. So Mr. Editor, I would like to add my little word of comment and experience and thus may be the "other fellows" somewhere, will get a possible new idea.

In no other business have I ever seen so many "opinions" and so many different directions as in this, how to raise chickens and get eggs. If one man has a "system," the best and only published perhaps in Poultry Keeper or some other journal, quite likely in the same issue, or in some other magazine of the same or near date, another writer with another system directly contradicts the first one, and so the beginner is knocked down in his choice of a system again and again. I have read widely on poultry subjects the past two years or more and find myself today in hearty accord with Mr. J. D. Scouller, as expressed on Page 275 of October number of Poultry Keeper, where he says: "I find that in all my reading in relation to chicken knowledge that the two or three years experienced chicken growers can always tell the best methods how to raise and feed them. Better, in fact, than men with half a century's experience."

By this I do not discount the experience of others' many years, but a beginner's account of his success (and of his failures too) with a small flock, is far and away more useful to the new beginner in poultry who has from 20 to 50 birds, than the experience of the ten year man who handles 500 to 5000. This is why the correspondence columns of our poultry magazines are so eagerly read and so much enjoyed by most amateurs in this great and growing industry.

I greatly enjoyed the communication of W. W. Thompson & Son in the October issue of this paper, Page 249. His is the kind of an article I had in mind while saying the things written in my last paragraph. It will help many beginners. If you missed reading it turn now to it and get a whole bunch of good hints and helps to success.

In Mr. Thompson's description of winter coops, made of dry goods boxes and buggy crates, which description is so helpful to us all who are beginning

small and with not too much expense. He omitted to say if he used a board floor, or set his coop directly upon the ground, using the earth for a floor. Being in Michigan one would infer that a board or plank floor would be quite a necessity, in winter, at least I find many men are of many minds as to the floor question for coops and houses. Under most conditions in the northern states I would have a floor of wood.

Without intending any comparison with others, I want to commend to the attention of every beginner—indeed all poultry keepers—the writings of Dr. N. W. Sanborn. For good common sense and practical things for every day use along all poultry lines, he is hard to beat. If one follows his lead and advice he cannot go far astray. Read all you see under his name and say in a years time if I am not right.

Now I want to give you a six months egg record of 16 pullets, not at all a remarkable record, but one showing results of ordinary good care and the best of feeds. I have said I would not publish such a statement for the reason that a partial record of only the best months of the year is not a fair showing of what a pen of pullets can do the season through. But such record does tell always a number of things of interest, and inasmuch as this will help somebody, here goes.

Coming south last November, on account of my health, I brought along 8 Buff Rock pullets which I had bred myself. They began to lay December 1. The latter part of December I got 8 Columbian Wyandottes from Kentucky, a few of them then laying. These 16 I put into one pen with no male. During December the 8 Buffs, with a few eggs from the others the last five days, laid 101 eggs. During the following months, beginning as early as January 15, much egg time was lost by broodiness of the birds. I wonder if this early broody state was caused by the change of climate? Who can tell us about this?

I wonder if these winter coops, up there in Michigan, were covered on the sides and ends with Paroid, or similar roofing paper, or shingles, or what? I am familiar with weather conditions in New England, New Jersey and Pennsylvania, but not in the west and the states of the Great Lakes region.

I have never seen or read of such unique "feed boxes" as Mr. Thompson made. If his figures are correctly put his birds must reach up some 10 inches from the ground or floor to get into the box for the feed. This would be a big stretch for his Leghorns. The Wyandottes might manage it. If made to go in a house with litter I can see

the advantage of putting the floor of the feeder 6 inches from the bottom of the ends of it. I like my hoppers made with lower openings, especially those for dry mash, so that the partly grown chicks can get to it and learn the mash habit early. The hens also waste less. The chicks are better fed, though in a separate house or pen. If feed boxes are put where litter is they should always be placed on 12 to 14 inch platforms, or hung on a side partition, so that no dirt or droppings can be scratched into them.

Here is the record for the first six months of 1912:

	January	February	March	April	May	June	
1	5	7	9	10	10	5
2	4	8	9	8	12	4
3	5	7	9	13	9	7
4	5	9	11	9	6	7
5	5	10	10	13	8	7
6	8	8	8	14	6	8
7	5	8	13	7	7	9
8	8	12	9	12	6	12
9	10	6	11	9	7	9
10	8	10	13	7	9	12
11	7	11	8	12	7	12
12	10	8	10	7	8	9
13	8	9	14	7	4	8
14	10	11	11	11	8	9
15	8	9	10	7	9	7
16	8	11	14	11	10	10
17	10	10	12	5	9	3
18	7	10	10	12	9	8
19	7	13	12	8	13	9
20	9	11	14	10	12	8
21	7	11	9	9	10	6
22	7	12	11	11	11	8
23	8	11	12	8	11	9
24	6	11	10	10	10	8
25	8	10	11	12	9	7
26	7	11	9	10	7	7
27	11	11	10	11	9	9
28	7	11	12	13	4	8
29	8	10	9	14	4	7
30	11	.....	7	9	7	8
31	10	.....	11	.....	4	.....

237 286 328 299 255 240

Total for 6 months, 1645.

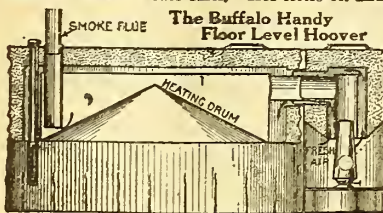
114 dozen eggs were sold to private families for \$36.00. The rest of them



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Offer No. 0—50 to 60 Egg Size, Ship. Wt. 65 lbs. \$10.50
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CHAS. A. CYPHERS, President Buffalo Incubator Co., Buffalo, N. Y.
467 Dewitt Street

were used at home, the money value being \$8.62. Total value of eggs in this market, \$44.62. Expenses during this time for feed, supplies, adv., etc., \$18.04. This leaves a balance of \$26.58 to the good.

These pullets were fed the best of grain and meals. Equal parts of wheat, oats and cracked corn for scratch feed, and for mash feed what is known to many as "Hunter's Mash" very little different from the Maine Station formula—only, ground oats and gluten meal is not to be found in feed stores in this part of the south, so had to be omitted.

When the birds came from the perches in the morning and found less than a pint of scratch food in the litter to begin the day upon. At 8.30 they were fed a crumbly mash in a trough, as much as could be eaten in three or four minutes. At 1 o'clock a quart of dry mash and all kitchen scraps made in a family of three. The mash was usually gone by 3 p. m. At 5 o'clock a scant quart of scratch feed was thrown on hard, clean ground in the yard. Fresh water early and late, changed often in hot days, and grit and oyster shells always before them. Ground green bone or scraps of meat was given 2 or 3 times a week, with green stuff and vegetables often.

As the heat came on in April the quantity of corn and corn meal was greatly reduced and oats and middlings increased. At this writing (October) the corn is again fed and the dry mash hopper open all the afternoon. Droppings were, and are, cleaned up every morning—a three minute job only—and dry, clean earth renewed under the perches.

Clean up and keep clean is the best remedy I know for all poultry ills. This remedy should be given in very liberal doses every day—and before the ills begin.

W. H. Swallow,
South Carolina.

FROM A R. I. RED BREEDER.

When I was young I had a strong inclination for poultry, and I remember distinctly how I secured my first hen and eggs. I rode a sulky corn plow, driving the team for my uncle and labored at this task for about a week. When I was ready to start for home, my uncle and aunt presented me with a broody hen and fifteen eggs. I took them home and prepared a suit-

able place for them and raised about a dozen nice chickens, but they were mostly mongrels. I cared for them the best I could and paid little attention to the variety, just so they were chickens, but a party here had Reds and they struck my fancy so I secured a few sittings and started to raise R. C. Reds and have stuck to them ever since. I sent away for eggs at different places for several years, but I have concluded the better way is to secure stock—a trio at least, and then you will be in position to know your line of breeding and can mate them to much better advantage.

I reside in a village of nearly five hundred people, with space of about half a lot for chickens. I have two pens this year, one of utility and the other fancy. The latter is just a trio, headed by a Red that is red, with the two pullets of the same line of breeding. The sire of the birds won several firsts in 1911-1912, and one of our local fanciers, of several years experience pronounced his sire the best Red ever seen. I am endeavoring to secure a nice bunch of Reds and then sell stock and eggs at reasonable prices. I sometimes set hens in boxes about 3 feet each way and take out bottoms, sitting them on the ground and then use opposite side for roof. Of course I take it off and slant first and wire, then cleat it and place it over and also take off one or two boards near top and either wire or slat so it will permit light. Then I spade up the soil, where it is to be placed and get a cheese box and knock out the bottom and place in the ground so that the top is about the same as surface in box. The cheese box is filled over half full of soil, and then the straw and eggs put in. There should be a can of water and receptacles for other necessary things.

A barrel also makes a good siting place. Excavate a trench as long as the barrel and put the barrel in and then place some loose dirt against the barrel to make it solid. Put some of the soil back into the barrel, using a cloth to cover the dirt and keep the nest from changing position. This latter way is suitable for chickens having free range and the former way if they are confined.

C. C. Leiter,

Ohio.

Insecticide Warning

The Insecticide Law requires the plain printing, on each package, of the amount of inert material used, or the material which the Government considers of no value for insecticidal use. Every purchaser of an insecticide should consider this point and should see that the Insecticide guaranty is given by the manufacturer on every package.

Lee's Lice Killer contains only 3 per cent inert matter (water). Others contain from 10% to 80% inert matter. Used for poultry and hogs. \$1.00 per gallon.

Lee's Dip contains less than 10 per cent inert matter (water). Others, from 10% to 30%. Used for killing lice, etc., on horses, cattle, hogs, sheep, dogs, etc.; also as a disinfectant.

Lee's Insect Destroyer (powder) contains less than 10 per cent inert matter (Fuller's Earth, used to prevent caking). Others, from 25% to 90%. Used for chickens, pet stock, vegetables, etc. 1 1/4-lb. package for 25c, 3-lb. package 50c.

Lee's Fly-Curo contains no inert matter. Others, 10% to 75%. Best to keep flies and mosquitoes from horses and cows. \$1.00 per gallon.

This is one reason why the Lee Line is outselling all others and especially accounts for the great increase in sales since the Insecticide Act went into effect. We give greater value to the consumer, better formulae, always strictly maintained; less inert matter; in most cases a bigger package for the money.

The Lee line of Foods, Insecticides and Remedies is sold by more than 10,000 dealers in the United States and in many foreign countries. If not at your town, send for latest poultry hook and name of nearest agent.

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W. W. KULP

Box 30. Pottstown, Pa.

INCREASING THE EGG YIELD.

The breed is not everything in the poultry business, a good deal is in the man who handles the breed and a good deal also in the method of breeding. The 200-egg hen is not produced by haphazard breeding, nor is the 150-egg hen, which is a pretty good hen, a profitable one to keep, by all means. The 250 egg hen we sometimes read about exists most often on paper, though I do not wish to be understood as saying that she never exists anywhere else. The 200-egg hen is not common and to produce a flock that will produce 150 eggs for each hen in the flock is a matter of labor—and it is a difficult matter for the man who buys such a flock to keep it at that yielding point. It requires experience bred of failures to produce the right kind of knowledge to do this. It is hard, it will work, but the success that comes with experience and the profit that comes with success makes it worth while.

I have had an interesting experience along this line and my records for the past year have been so interesting that I am constrained to write about it. A few years ago, perhaps more, I kept some hens and got some eggs from them, as many are doing today and that is the whole story. They were fed, but not scientifically or properly, they laid well for a while in summer and never laid an egg in winter—quite a common experience I think. After that a change of residence made it impossible for me to keep poultry, but I saw a poultry paper occasionally and acquired a desire to keep some hens and care for them in the right way, so I read up on the matter quite a little and four years ago the opportunity to put into practice my newly acquired knowledge came. I bought some White Plymouth Rock hens and some pullets that were mixed, but I don't know just what the mixture was. I soon found out that my knowledge and my confidence had been misplaced. We used what few eggs those birds laid and at the birds—there were not many of them—and the next spring bought a lot of day old Barred Plymouth Rock Chickens, also eggs for hatching and an incubator, and raised a good flock of birds from a good strain, and had better luck though not quite up to expectations. I kept a careful record of everything and that year got an average of 93 eggs from my hens, counting every hen kept, and financially we broke just about even, not counting anything for labor. The next year I bred from the same birds, selecting the hens that had been the best layers in their pullet year and breeding them to a good cockerel of the Orono strain and the stock thus produced proved considerably better when it came to laying than that of the year before.

Last year I also bought 100 Rhode Island Red eggs from a breeder in Massachusetts and as many from one in Maine, from which I raised a fine flock. That was a bad year for hatching, it will be remembered (1911) and some of the chicks died, but I had a

REGAL FACTS

Are you a breeder of White Wyandottes or are you thinking of taking up this splendid variety? Let me present a few facts for your consideration.

I. Regal White Wyandottes being bred in a northern climate have always been noted for size, vigor and silvery white plumage.

II. Eggs hatch phenomenally well and the big plump chicks grow like weeds.

III. Regal White Wyandottes in the past twelve years have won more prizes than any other strain. New York State Fair, Boston, Toronto and Guelph, 264 regular prizes not counting specials.

IV. At Boston, the home of the White Wyandottes, the greatest winning ever made, was made by the Regals, winning best display with a score of seventy-two points.

V. As a heavy laying strain, they can hold their own. One pen of nine females averaged last season 199½ eggs per hen and I have individual records sworn to by customers running as high as 235 eggs per year.

VI. The Regals hold a unique position. They have all the utility qualities which recommend them to a market poultryman while on top of all this they can go into the largest shows in America and win over the exclusive exhibition strains.

To quote Judge Drevenstedt, the greatest living authority on the Wyandottes: "Your birds have been bred to the Wyandotte type most consistently every since I first handled and judged them at Toronto, many years ago. They are true Wyandottes in shape and have the color to go with it." All over America my customers are winning the blue ribbons. Why not send me a trial order and become acquainted with America's Finest White Wyandottes?

Send four cents in stamps for the Regal White Wyandotte Book. Catalogue and sale list free.

JOHN S. MARTIN,

Box 408.

PORT DOVER, CANADA.

good flock, from which I have bred until now I have some of the finest and handsomest birds I have ever seen. The average yield for that year, from both flocks, was 106 eggs per bird, the Reds laying better than the Rocks, but also causing more trouble from untimely broodiness. My 1912 flocks were bred entirely from my own stock, and the showing in eggs for that year was far better than that of 1911. This was due in part to the improvement through breeding and in part to the more judicious handling of the food rations. It takes time and experience to learn how to properly balance the grains with the dry mash, meat scraps, green stuff, charcoal and the like, and it also takes time to learn that best results can be obtained without the use of any of the stimulating foods that are sold under a promise that they will make the hens lay when nothing else will—there is not a word of truth in it.

I started 1912 with seven pens, five of Reds and two of Rocks, and now have two of each, one of hens and one of pullets. The size has varied from twenty to sixty, without appreciable difference in results. The average number of eggs laid by the whole outfit, including all flocks, was, in 1912, 128 eggs per hen, the Plymouth Rocks averaging 109 each, and the Rhode Island Reds 145 each, a difference in favor of the Reds which is quite marked. Both breeds showed a profit, but of the two the Reds showed far the greater, both because of the greater number of eggs laid, and the greater demand for eggs for hatching. But I have no reason to complain on this score, for I found an easy market for all the eggs I could produce which I considered suitable for hatching purposes, and set my own incubating machines (mostly hens) late, that I might accommodate others.

My 1912 pullets began to lay the first of November with great regularity and have not let up at all yet, and the hens have laid well all the fall and winter, at no time going below a 20 percent yield and remaining as low as that but a short time. Judging from present indications the 1913 record will far exceed that of 1912.

Four years ago I also started in with Indian Runner Ducks in a small way,

and have been breeding a few each year since. The eggs have been in great demand for hatching, and I have never had enough to supply all who called for them. They have proven very prolific layers, eat next to nothing and I have found them far more profitable, reckoning them individually, than any hens I have ever had. In 1910 I kept no accurate record of eggs laid. In 1911 the average yield per duck was 65 eggs, but one of the four ducks that should have been laying was injured and did not lay an egg for nearly a year, though she has laid as well as any in 1912, when the average per duck was 108 eggs. All the books I have read about the Indian Runners say they will begin laying the first of March and continue to lay until October, and will then rest until the next March. This has been my experience until the past year. My ducks began to lay the 17th day of February and laid until the first of August, when they molted, laying no eggs that month. They began again the first of September and laid straight through until into January, and are still laying, about a 35 per cent yield, at a season of the year when they are not expected to lay at all.

In 1912 I made a clear profit slightly exceeding \$5.00 on every duck in my small flock, which, if it could be managed with a large flock, would certainly be a handsome product.

I do not give this as a remarkable record, for it is not. It is a fairly good record, showing what care and study will do, and is being equaled and exceeded every year by thousands of careful poultrymen. But there are thousands of others who might do as well or even better than this if they gave their poultry proper care and attention, who are now keeping their flocks at an actual loss, though very likely they are not aware of it.

Maine.

H. L. Goodwin,

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 10 for 60c.

UNINTENTIONAL CHEATING OF CUSTOMERS.

There are various ways of a dealer cheating his customers without really intending to do so, and it can always be traced to ignorance or inexperience on the part of the dealer. It may be in shipping stock to a customer. The dealer may be a beginner in the business and the birds may look good to him and he really thinks that they are good birds, and well worth the money that he asks for them, but the truth is he don't know how to judge a bird and don't know type or blood lines if he sees them, so consequently the customer is cheated, and the dealer don't know what an injustice he has done. When it comes to selling eggs for incubation, this same dealer makes another great mistake by not knowing how to mate his birds properly to get the best results and after the mating he probably don't know how to feed properly to get good, strong, fertile eggs and so once more he unintentionally cheats his customers.

Still another way to get cheated is by getting stock or eggs from a man who lets his male bird run with hens of another breed than the one he is mating with, and a very good illustration of their trouble was given in the October issue of the Poultry Keeper in an editor's note (Page 271) and this brings to mind an experience I had a short time ago.

I knew a breeder who had some nice stock of S. C. White Orpingtons direct from Kellerstrass farms, and as I wanted a male bird I went over and bought a cockerel of him that was a dandy in size and type, and I thought that I had looked him over pretty thoroughly and was well satisfied with my bargain but after I had him for a couple of weeks I was looking him over one day and I nearly fainted away upon discovering one fine red feather in his tail that I had over-looked when I bought him, as it was underneath. I went over and told the man that I bought him of and he would not believe it till he came over and saw it himself and it was caused by his male bird running with Rhode Island Reds as well as with the Orpingtons and the blood had been transmitted that way so that makes another way for a dealer to cheat his customers and not intend to do so.

So it behooves us to buy stock and eggs, when possible, from dealers that we know understand their business and we will run much less chance of getting cheated.

C. H. Cooper,

New York.

HOW I STARTED IN THE CHICKEN BUSINESS.

February 1, 1899 husband and I were married and started housekeeping on a farm and of course we had to have some chickens. We started with 40 mixed bred hens and bred mixed stock for two seasons, then we decided on the Barred Plymouth Rock. We bred them during the season of 1901 and 1902 but for some reason they did not

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Keeps Hens Laying All Year

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The Reliance is built along lines that make it most efficient. Double walls, heavy insulation, galvanized iron lining, galvanized trays, etc. Best lumber used throughout, front contains more glass, which brings more sprouts. Also economical heating and best ventilating system.

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Manufacturers of Incubators, Brooders, Grain Sprouters.

seem to be healthy and we lost a good many, so we decided to change breeds.

In the spring of 1903 we sent to Iowa and got a sitting of Light Brahma eggs from my mother and hatched and raised about 50 Light Brahma chickens; also a goodly number of Barred Plymouth Rock chickens.

The season of 1904 found us with the chicken fever worse than ever. We sent to Illinois for some more Light Brahma eggs, and to Iowa for a trio of Dark Cornish chickens, which we kept in a pen by themselves. The male seemed to be weak as only a few of the eggs were fertile. During the winter I sold off most of my dark chickens, keeping all of my Light Brahma cockerels and by this time I had learned to love the Light Brahmas.

My Dark Cornish chickens did not do well this season either, so I sold them all off; also culled my flock so that I had all Light Brahmas to start the season of 1906, and I have bred the Light Brahmas ever since, and like them better than ever. But my story does not end here.

I live on a main road between Seward and Milford, also the main road between Seward and Lincoln. My Light Brahmas attracted a great deal of attention. People began to stop and to inquire: "Are your chickens pure bred? What is you price?" And as I asked only the market price I sold and exchanged all the eggs I gathered, but the exchanging of eggs was lots of bother, and I decided that if people wanted my eggs because I had better chickens than they had, they ought to pay for them, so in the spring of 1908 I put an advertisement in our local paper. "Light Brahma eggs at 2½¢ each." and there was a good demand for my eggs. Then it was that my husband and I disagreed, I wanted to

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advertise as a breeder of pure bred Light Brahmas, and he said, "It is no use."

In the spring of 1909 I began to advertise. That fall I took some of my chickens to the Seward County fair and brought home the first prize money. It was not till the fall of 1912 that I exhibited at the State fair at Lincoln, and on six entries I won three, and one four and one fifth premium. I have never attended a poultry show, but intend to.

I have the largest and best flock of hens and pullets I ever had and headed by the best male birds I ever owned. There is good money in pure bred poultry, but let me say to the one who wants to start, don't try to start too quickly. Take time to learn your breed and the chicken business.

Raising chickens is more than hatching them. Selecting and mating chickens is more than paying for them and turning them out and letting them run, and care and judgment are necessary.

Sarah M. Bennett,

Nebraska.

Is your paper marked with the blue X this month, showing that your subscription has expired? Is so, do not neglect to renew and do us the further favor of getting someone else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

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Poultry for Profit

Than any other book published. It treats of every branch of Practical Money Making Poultry

And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

- HOW TO GET STARTED
- LEADING STANDARD BREEDS
- CHARACTERISTICS OF BREEDS
- PRACTICAL POULTRY HOUSES (Plans)
- FOWLS: CARE AND FEEDING
- MODEL BROODING HOUSES (Plans)
- CARE OF ADULT FOWLS
- FEEDING FOR EGGS
- A HEN CATECHISM
- FEEDING YOUNG CHICKENS
- CARE OF GROWING STOCK
- ARTIFICIAL INCUBATION
- INCUBATOR CELLARS
- BROILER AND BROILER RAISING
- CARE OF BROODER CHICKS
- PEKIN DUCKS FOR PROFIT
- 5000 DUCKS WITH STANDARD-BRED POULTRY
- PROFITABLE EGG FARMING
- TURKEYS: CARE AND MANAGEMENT
- CAPONS AND CAPONIZING
- POULTRY AND FRUIT COMBINED
- DISEASES OF POULTRY

The publisher's price of "Success With Poultry" is \$1. We will send it postpaid and Poultry Keeper one full year for price of book alone, \$1. If already a subscriber, we will extend your subscription one year and send the book to any address you furnish. If taken alone the price of "Success With Poultry" is \$1. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

PROFIT FROM A SMALL HOME FLOCK.

Editor, Poultry Keeper:

I have been reading with much interest your paper and the egg records published therein, and I will give you my record and experience, if you care to publish it.

When moving to our present address we bought a small poultry house of the family moving out. The owner could not take it along with him so sold it to me for \$2.00 and all it was worth too, as it was so light I could move it anywhere about the yard I wished without help. Our back yard is about 40x15 feet with a 2½ foot cement walk off the side. I moved the pen against the back fence, the pen being about 5 feet by 7 feet, and 5 feet six inches high in front and 4 feet 6 inches high in back. I then made a shed from the pen to the partition fence thus giving me an open front pen about 7 by 12 feet. I then purchased 10 hens at \$1.25 each and a cock at \$2.00. This was on April 18, 1911, and from that day I kept an account of everything. I set 73 eggs and hatched 45 chicks, only 14 of which were raised. Thirteen of the largest ones were drowned in a hard thunder storm by the box in which they were covered up being flooded, the 14 being saved only by my wife taking them into the house and putting them in the oven and over the hot stove to dry. They were lying on their backs kicking when she found them. The others were lost through gapes, canker of the mouth, etc.

On December 31st, 1911, I took an account of stock, having in the pen 10 hens, 10 pullets, one cock and one cockerel, and three culls were penned up for fattening. Below I give you an idea of how I keep my account so I can tell whether they are paying for their keep or not. By the way, the reason I started keeping poultry was that we could not get good fresh eggs at reasonable prices.

Credits.

10 hens at \$1.00 (allowing 25c for depreciation)	\$10.00
1 cock at \$1.50 (allowing 50c for depreciation)	1.50
1 cockerel at \$1.00	1.00
3 pullets at 75c	2.25
5 culls at 25c	1.25
Pen, (allowing \$1.00 for depreciation)	1.00
Wire netting, sprayer, drinking fountains, remedies, etc. ..	2.62
Feed on hand	2.80
Value of eggs, 150 at 25c doz.	\$3.12
Value of eggs, 324 at 30c doz.	9.72
Value of eggs, 33 at 30c doz. ....	.99
Value of eggs, 310 at 35c doz.	10.85
Value of eggs, 76 at 38c doz.	2.88
Value of eggs, 122 at 40c doz.	4.88
Value of eggs, 15 at 50c doz. ....	.75
.....	28.22

Total Credits \$54.39

Debits.

10 hens at \$1.25	\$12.50
1 Cock at \$2.00	2.00
73 eggs for hatching at market price, 30c per doz.	21.90
Pen	2.00
Wire netting, roofing paper, drinking fountains, remedies, sprayer, etc	5.44
Feed, straw, shells, etc.....	23.31
.....	47.08

Profit \$7.31
Average price per dozen eggs, 32 9-10c.

Average number of eggs per hen in 258 days, 103.

Would say that my method of feeding was equal parts cracked corn, wheat and oats until the hot weather, then only wheat and oats, together with table scraps. Of course they had good fresh water, charcoal, grit and shell before them all the time.

I also give you herewith my egg record for April 18th to Dec. 31.


Record of 10 hens:

	April	May	June	July	August	September	October	November	December
1	7	7	4	5	4	6	0	0	0
2	7	3	5	6	6	5	1	0	0
3	6	7	4	7	6	4	0	0	0
4	6	6	5	6	7	5	1	0	0
5	8	6	6	5	6	5	0	0	0
6	9	5	3	6	8	7	1	0	0
7	8	3	3	4	5	2	0	0	0
8	6	5	7	4	7	5	1	1	1
9	5	4	7	4	6	5	0	1	0
10	9	4	4	3	6	5	0	0	0
11	7	5	6	2	7	3	0	1	0
12	7	4	5	1	5	6	0	1	0
13	8	4	6	5	6	4	0	0	0
14	7	4	4	2	6	5	0	1	0
15	7	4	6	5	5	3	0	1	0
16	4	5	8	3	4	6	0	0	0
17	5	4	8	3	7	6	0	1	0
18	5	7	4	6	6	5	4	0	0
19	7	7	3	5	3	4	3	0	1
20	0	7	5	8	5	5	3	0	1
21	4	7	5	6	3	4	3	0	0
22	2	6	3	6	6	7	3	0	1
23	5	5	6	5	5	4	3	0	0
24	0	7	3	6	6	6	4	0	0
25	4	7	4	5	8	6	4	0	2
26	4	7	4	7	5	7	2	0	0
27	4	7	4	6	6	5	2	0	1
28	5	6	3	8	7	5	0	0	0
29	4	7	2	8	6	5	3	0	1
30	6	7	5	6	5	6	0	0	0
31	7	..	10	7	..	2	..	1	..
Total	50	210	131	183	149	170	118	4	15
Average per	hen	5	21	13	18	15	17	12	..
Value of eggs, \$1.04, \$4.83, \$3.27, \$4.90, \$4.34, \$5.15, \$3.93, .13, .63.									

Harry W. Manning,
Pennsylvania

Have you any stock or eggs to sell? Our cheap rates shown in the classified ad. department will enable you to make the desired sales.

The Same Amount Of Feed Will Raise Each



I Bring 30¢ per Lb.

I Bring Only 15¢ per Lb.

DOUBLE PRICES

On the market capons bring double price and are cheaper and easier to raise; they require less feed and less care. Caponizing is easy and soon learned.

PILLING CAPON SET

Will enable you to caponize all your young cockerels and add greatly to your poultry profits. Sent prepaid, with "Easy-To-Use" directions, on receipt of \$2.50. Any one can do it. You can make money caponizing for others. Write to-day for our booklet on Caponizing. It's Free.

G. P. PILLING & SON CO.
23rd and Arch Streets Philadelphia, Pa.



"If Chicken Chowder won't make your hens lay, they must be roosters." Full particulars and 48 page Poultry Book free for the asking. Purina Mills., 803 So. 8th St., St. Louis, Mo.

125-Egg Incubator and Brooder

Freight Paid East of Rockies Both for \$10

Hot water; double walls; copper tank—best construction. Write for Free Catalog.

Wisconsin Incubator Co Box 52 Racine, Wis.

Build Own Incubator Easy

My Big Free Book of Plans and Instructions makes all simple as A B C. Shows how my patented Lamps, Regulators, Thermometers, Tanks, Egg Trays etc., save money and worry. Thousands enthusiastic. Write now for Big Free Book. H. M. Sheer, Dept. 3 Quincy, Ill.

POULTRY GROWING IN CALIFORNIA.

I have read the Poultry Keeper for twenty-five years and feel that I must tell you my name. Is it not beautiful? Spell it backwards and you all have one. I read an article some time ago from a lady who says, "Do not under any circumstances let the little chicks get their feet wet." My heart came up and almost choked me. For not a hundred yards from the house is a lake and you can see one thousand chickens in from 2 to 3 inches of water, around the shore, picking up snails and worms by the millions. Must I send to Paris and get rubber waders for them? Strange to say though they got their feet wet they were laying inside of five months. Conclusion? Well I live in California. Have not seen one inch of ice in four years. A fine climate for poultry. Every person must judge his climate, equipment and above all, ability, and operate his business accordingly, to success or failure as his ability and his judgment lead him. Every one cannot let his chicks wade around a lake as I do mine in this climate.

I have lived in Wisconsin, Illinois, Iowa and Nebraska before coming here and no two places require the same conditions to make a success with poultry. I have heard of individuals who were contented to sit down and go to sleep on a five dozen poultry plant. Now I do not think a plant of that kind would set a very plentiful table and I for one have everything on my table which the market will afford and you bet mistress hen has to pay the bill. 500 hens are easy to care for and will support one person nicely. Remember this is only my judgment as regards conditions where I am located.

I hatched 4,500 chicks last year and saved 800 choice hens from them. I have an arrangement with a first-class commission firm in the city who knows that the produce I send them is always high class and worth top notch prices.

Point No. 1 for success. I keep, with my crude equipment, all the chickens I can care for from day light until dark.

Point No. 2 for success. I have 5 acres of land to raise feed and produce to maintain the plant as far as possible. One small piece of ground 25 feet wire and 75 feet long does not concern the hens. That supplies

strawberries for the table from May to October. How does that sound to you people who have strawberries in season for one or two weeks a year?

During October, November and December, with eggs at 45 and 50c per dozen, I sent two to three cases of eggs per week to market. Eggs were high because the market was short on the product. That is the time to get the mental machinery to work and feed for eggs. Make bidly shell them out regardless of her desires. I started one machine February 1 this year. 400 eggs. With everything green and the beautiful warm sunshine, spring is open and orders are pouring in for baby chicks. It begins to look as though two more machines will be necessary, which would give me 1600 egg capacity. A small matter compared with what some men (and women) are doing, but I am trying to do my best for my district, my equipment, my ability as judge.

Now kind reader, oil that mental machinery so it will run smoothly, mount your throne and with judgment of your location, climate, equipment and ability, success will be yours. To over-do is more dangerous than to under-do. I prophesy that the next three years will be some of the most successful years in history for the poultry business. Prices will be higher and demand stronger than ever before. I certainly enjoy reading articles from the fraternity through Poultry Keeper and here's health, happiness and prosperity to every member of the Poultry Keeper Lodge.

W. O. Rood,

California.

We desire to extend our readers the opportunity of giving their experience at poultry work and shall be glad to publish these letters. The letters can be gotten up in your own way and we will edit them properly before printing them in Poultry Keeper. Doubtless you have been interested in reading the letters which have been sent us by other subscribers, and they in turn will be interested in reading your letter.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

ORPINGTONS, WHITE, BUFF and BLACK.
Prices will be made that must move them. Write me your wants. Specials at \$1.50, \$3.00, \$5.00 each. Satisfaction guaranteed. Progressive Farm, J. C. Reare, Fort Cass, Ill.

Ideal Aluminum Leg Band
To Mark Chickens
CHEAPEST AND BEST

12 for 15c; 25-50c; 50-25c; 100-60c; 175-81.00; 200-81.10; 500-82.50. Price list and sample on Frank Myers, Mfr., Box 44, Freeport, Ill.

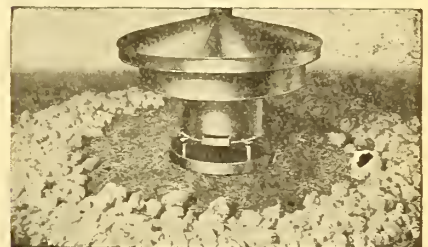
Smith Sealed. Prices postpaid
12, 20c; 25, 30c;
60, \$1.00; 100 \$1.50; 500, \$6.50; 1000, \$12.50.

LEG BANDS

Leader Adjustable. Prices postpaid
12, 15c; 25, 25c; 50, 40c; 100, 65c; 250, \$1.50; 500, \$2.75; 1000, \$4.25.

SAMPLES FREE

Write postal or order now Satisfaction guaranteed. Address THE REESE-DAVIS CO., Inc., Dept. 532 Battle Creek, Michigan



The Simplex Brooder Stove is an Unqualified Success

Thousands of stoves in the hands of successful breeders everywhere prove that the Simplex System is not only practical but positively is the only successful way to raise chicks. It not only saves labor and money, but actually raises chicks. It makes the wonderful profits of the poultry industry a possibility—not a dream. Wake up and get the profits. Now is the time to get your brooder house ready. You can do the work. We will show you how. Nothing complicated about it. Our catalogue tells about raising chicks around a brooder stove without hovers. We send it free with testimonials from customers in all parts of United States and Canada.

SIMPLEX BROODER STOVE CO., 205 14th St. Grand Rapids, Michigan

John S. Martin, Box 408, Port Dover, Ontario, Canada, writes us that he has over five hundred early hatched pullets and cockerels hatched from his famous "Regal Strain" White Wyandottes. These birds are sired by male birds winning first prizes in the big New York and Boston shows and are sure winners for any one wanting to enter birds in the coming poultry shows. He also has over one hundred of last year's breeders for sale and is in splendid condition to fill orders for either old or young stock. Wyandotte fanciers will do well to get in communication with Mr. Martin about some of these quality birds.

OYSTER SHELL \$1 A TON!

Elsewhere in this issue appears the advertisement of The Nabob Remedy Co., Box 2, Gambier, Ohio, in which they make the remarkable statement that they will furnish the available elements of lime from a ton of oyster shell for \$1 and a sample for 5c equal to the amount to be had from a hundred pounds of shell.

It has been scientifically proven that a ton of oyster shell contains only two pounds of material available for egg shell making which the hen can extract only at the cost of 200 pounds of feed and the expenditure of much valuable stomach acid.

The company claim that their Prescription No. 4 contains this necessary egg shell making material (organic lime), in a pre-digested form ready for the hen, and the feed instead of being consumed to make stomach acids, can be directly utilized for egg making.

They claim that if their Prescription No. 4 is used according to directions, it will save from 10 per cent to 50 per cent in feed bills in producing a given number of eggs.

The following is a sample of many letters coming to their office daily:

Columbus, Ohio, 7-7-13.

The Nabob Remedy Co.,
Gambier, Ohio.

Gentlemen: Your Prescription No. 4 makes good every claim that you advertise for it.

We believe that if it is fed continuously, breeding stock will have such high vitality that White Diarrhoea will not appear in the chicks, at least we have not been troubled with the scourge this year.

Prescription No. 4 is a wonderful egg producer and feed saver as well. If directions are followed, no beef scrap, grit nor charcoal are needed. It insures the hens an easy and healthful molt. It breaks up the egg eating habit.

We can use your No. 4 to a great advantage in our laying mash, for which we are having an increasing demand. We wish to make this the best mash on the market and we know of nothing which we can add to it that will increase its value as a feed and egg maker so much as your Prescription No. 4. Please quote us at once your best price on a half ton lot.

Yours truly,

The Hartman Poultry Farm,
Carter & Hoffman, Props.

5 pounds of this Prescription No. 4 may be had for \$1, with the guarantee that you can have your money back after using it all if you are not satisfied. Trial carton 25c, sample 3c. Remedy circulars and Profit Sharing Coupon will be sent free for the asking.

PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capons tools is sold for \$2.50 A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipts of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.



**DR. GILBERT HESS (M. D., D. V. S.)
At Work in His Laboratory.**

Dr. Hess is one of the most widely known veterinarians in the United States. His scientific stock and poultry preparations—particularly Dr. Hess Stock Tonic and Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer—are used by millions of farmers throughout the country. That they have

stood the test for 21 years is evidence galore that they are preparations of genuine merit. Dr. Hess has written over a quarter of a million prescriptions for the American farmer without charging any fee for his services. This is a monumental work when we consider that the doctor diagnoses each individual case and prescribes accordingly.

PROFIT OF \$1.20 PER HEN.

Editor, Poultry Keeper:

In a late "Poultry Keeper" there is a request for items of egg record, which I will submit for publication if you think it worth it.

I began last year with about 100 hens and pullets. The expense for feed, etc., was \$93.00.

I will give you the record each month, and the amount sold.

My hens are S. C. W. Leghorns. Two dozen of those sold were hens which further decreased the number to lay. You will notice that there were about 1063 eggs used beside those sold, which are not credited to the hens. These were used for sitting, etc.

C. F. Shupe,

Colorado.

January, laid	391	eggs, sold	30	doz.	\$14.20	price 50 and 40 cents
February, laid	1005	" "	81	"	28.80	" 40 " 35 "
March, laid	1027	" "	70	"	20.55	" 40 " 35 "
April, laid	1034	" "	84	"	23.20	" 30 " 25 "
May, laid	1059	" "	66½	"	16.62	" 25 "
June, laid	935	" "	66½	"	16.62	" 25 "
July, laid	484	" "	39	"	14.05	" 30 " 32 "
August, laid	767	" "	63½	"	20.32	" 32 "
September, laid	490	" "	38½	"	37.47	" 35 "
October, laid	247	" "	23	"	8.85	" 35 " 40 "
November, laid	116	" "	9½	"	4.27	" 45 "
December, laid	174	" "	14	"	6.30	" 45 "
	7729		555½		\$187.25	
Chickens sold					26.60	
					\$213.85	
Less					93.00	
Net					\$120.85	—\$1.20 per hen.

DON'T SUBSCRIBE

To any poultry journal, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and journals and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. (cost ten cents per word for all four months), is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

Classified Ads

Rates for ads classified under proper headings are as follows:

1 month	4c per word
2 months	8c per word
3 months	9c per word
4 months	10c per word

ANCONAS.

PURE BLOOD ROSE COMB ANCONAS; White Minorcas, both combs; Buff Orpingtons, both combs; cock, cockerels and trios. for sale. Palace Poultry Pens, Cain Lord, Proprietor, Equinunk, Pennsylvania. 8-4

LOOK HERE, WYMAN'S FAMOUS ANCONA breeders at \$1.00 each, while they last. Must have the room for young stock. Write for catalog. E. F. Wyman, Route 2, Brunswick, Ohio. 9-4

BANTAMS.

"MOHAWK" STRAIN. Superior Black Reds. Silver Duckwings, Red Pyle Game, Partridge and Buff Cochins. Shipped on approval. Eggs. Mohawk Bantam Yards, Box J., Schenectady, N. Y. 11-12

RARE BARGAINS. GOLDEN AND SILVER SEBRIGHT, BUFF, BLACK, White and Partridge Cochins, Rose Comb Black, Black Tailed Japanese, Red Pyle and Black Red Game Bantams. Proper & Son, Schoharic, N. Y. 8-12

DUCKS.

CUMBERLAND (WHITE EGG) RUNNERS. Young's S. C. White Leghorns. Mrs. Galvin Wilcox, Spencer, N. Y.

BUFF ORPINGTON DRAKES and ducks, \$3 to \$5. Chas. Snyder, Jr., Phoenix Mills, N. Y.

WHITE AND FAWN and White Ducks for sale; also Single Comb White Leghorns of quality. Chas. J. Ranch, Jenera, Ohio. 9-4

SEND 1c STAMP for Duck Culture for beginners Show Pekins and White Runners for sale. Oscar Wells, Farina, Ill. 10-12

BUFF ORPINGTON DUCKS, largest flock in state. First-class stock for sale in large or small lots. Now is time to buy. Watch for egg ad later. Pherson, Bainbridge, Ind. 9-x

SEPTEMBER BARGAIN SALE. Extra fine White Indian Runner Ducks. Pair, \$2.50; trio, \$4.50; pen, \$8.00. Corwin Phillips, Fairbanks, Indiana. 9-1

ENGLISH RUNNERS, trio, \$500. White Guineas, 50c. Jennie Sloan, Boicourt, Kas.

WHITE INDIAN RUNNER ducks with racy type. Early hatched stock, \$6.00 per trio. D. Kemp, Morristown, Ind. 8-4

MAMMOTH PEKIN DUCKS. Big breeders from stock that has won at state and other big shows. 16 years' experience breeding and showing Pekins. White eggs always, \$5.00 per 100. Oscar Wells, Farina, Ill. 10-12

WHITE RUNNERS. We have the long racy type, high standers. Will out-lay hens. Eggs, \$1.50 per dozen, July and August. Pedigreed Fox Terriers. R. C. Brown Leghorns. Carl A. Farthing, Salem, Illinois. 1-12

LEGHORNS.

S. C. WHITE LEGHORN COCKERELS, the kind that pleases. Write Clyde L. Rigg & Son, R. 4, Mt. Sterling, Ill. 9-4

SINGLE COMB WHITE LEGHORNS. I have a fine lot of young stock to sell at prices to suit. They are hatched of trap-nested hens. J. Neubauer, Troy, Ill. 9-4

(BLANCHARD-WYCKOFF) finest White Leghorns. Hens, \$1.00 now. Cockerels. Catalog free. William Albers, Lombard, Ill. 9-12

SINGLE COMB WHITE LEGHORNS. Cockerels for sale. Good combs, fine shape, low spread tails and pure white. \$2 to \$5; pullets, \$1.50 to \$2.00. Bred from winners scoring 95 to 96 3-4. Birds shipped on approval. George W. Klein, Defiance, Ohio. 9-1

SINGLE COMB WHITE LEGHORNS, EXCLUSIVELY. Will sell now at bargain prices hundreds of choice hens, great layers white eggs. Cocks, cockerels, big, vigorous, pure white fellows from record laying stock. Circulars free. Write wants. R. T. Ewing, Atlantic, Pa. 8-4

SPECIAL SALE OF CHOICE YEARLING S. C. W. LEGHORN HENS AND PULLETS for \$110.00 per 100. Express paid. 300 for sale. A rare bargain. Cedar Hill Farm, Saugerties, N. Y. 8-1

ROSE COMB BROWN LEGHORNS. Stock and eggs from first prize winners at two Missouri, two Illinois state shows; Indianapolis, Centralia, etc., seven silver cups, first cockerel, seventeen times in nineteen shows. Oscar Wells, Farina, Ill. 10-12

YOUNG STOCK. Rose and Single Comb Buff Leghorns from 2 oz. or over eggs, from excellent hens laying two successive days. Mates non-related, equal quality. J. C. Benedict, Chevy Chase, Md. 11-12

WOODROWS POULTRY FARM has 500 yearling hens, S. C. W. Leghorns. These hens are of large size, pure white, raised in open front houses and free range. These are yearlings, not 2 year olds. \$1.00 each, in any quantity. W. L. Woodrow, Oskaloosa, Iowa. 9-3

MINORCAS.

"A-1" ROSE COMB BLACK MINORCA COCKERELS, \$1.00 up. Satisfaction guaranteed. Rev. Paul E. Wagner, Beaufort, Missouri. 7-6

ORPINGTONS.

SINGLE COMB WHITE ORPINGTONS. Annual sale yearling and young stock. Hammett Orpington Farm, Box 146, Mansfield, Ohio. 9-1

SPECIAL SALE OF CHOICE S. C. WHITE ORPINGTON COCKERELS and pullets by pens or dozen. Prices reasonable. J. W. Shatford, Plymouth, Ind. 8-4

ROSE COMB WHITE ORPINGTONS, coming boom breed. E. O. Heaton, Scircleville, Ind. 1-12

BUFF ORPINGTONS! Eggs and chicks from carefully selected hens with good egg records. Even buff color. Baby chicks, 15 cents each; eggs, \$1.50 per sitting. Geo. H. Smith, College Mound, Mo. 1-12

PLYMOUTH ROCKS.

REGAL PARTRIDGE PLYMOUTH ROCKS. "The trap-nested pedigreed strain." Let us quote you on breeding stock. The Oakes Experimental Poultry Yards, Tipton, Indiana. 9-4

PIGEONS.

FOR SALE. Pigeons all colors, 35 varieties. Circular, 35 illustrations, 10 cents. Jos. Schroer, -1309 Benton St., St. Louis, Mo. 2-12

PRINTING.

PRINTING FOR POULTRYMEN. 125 note-heads and 125 envelopes, \$1.00, prepaid. Noteheads, envelopes, cards, tags, labels, 100 either, 50c; 250, 85c; 500, \$1.40; 1000, \$2.40, prepaid. Postcards, circulars, catalogues, letterheads. Finest cuts furnished. Stamp brings samples. Model Printing Company, Manchester, Iowa. 9-12

PRINTING. All the printing you need for \$1.00, postpaid. Fine cuts. Free sample. The Fanciers Press, Batavia, Ohio. 9-1

PRINTING NOTEHEADS, ENVELOPES, CARDS, TAGS, 100 of either, 40c, postpaid. Best work. Cuts used free. Get my price on anything you need. F. Raymond Benson, Dept. P. K., Elgin, Ill. 9-12

PRINTING OF QUALITY for progressive poultrymen everywhere. The kind that will "bring home the bacon;" turn inquiries into orders, in other words. If you want that kind, send stamp today for samples, prices and proof sheets of cuts to the original poultry printing specialist, S. Earle Richards, Sta. K, Monticello, Wis. 9-3

200 EACH, Noteheads, Envelopes, Cards, all \$1.75, or 1,000 each, \$7.00. Illustrated with your particular breed and A-1 quality samples free. Thomas C. Clark & Company, Michigan City, Indiana. 7-4

PRINTING FOR POULTRYMEN. Fine cuts used. Mention your breed. Samples free. W. A. Bode, Fair Haven, Pa. 12-12

RHODE ISLAND REDS.

RHODE ISLAND REDS. I will sell 25 hens, to make room for stock, \$1.00 each. Edward Wheeler, Troy, N. Y. 9-1

ROSE COMB REDS. WIN IN THE SHOW ROOM AND PAY ON THE FARM. C. B. Hanna, Box P. K., Epworth, Iowa.

I BREED THE ORIGINAL "Tuttle Strain" Rose Comb Rhode Island Reds. Stock for sale. Eggs for hatching and baby chicks for sale after March first. C. Wilson, Norwood Park, Ill. 2-12

WYANDOTES.

TRAP-NESTED WHITE WYANDOTES, (Fishes' Strain) Barded Rocks. Eggs, \$1.50 per 15. Stock for sale. Nelson I. Bender, Wakarusa, Ind. 2-12

SEVERAL BREDS.

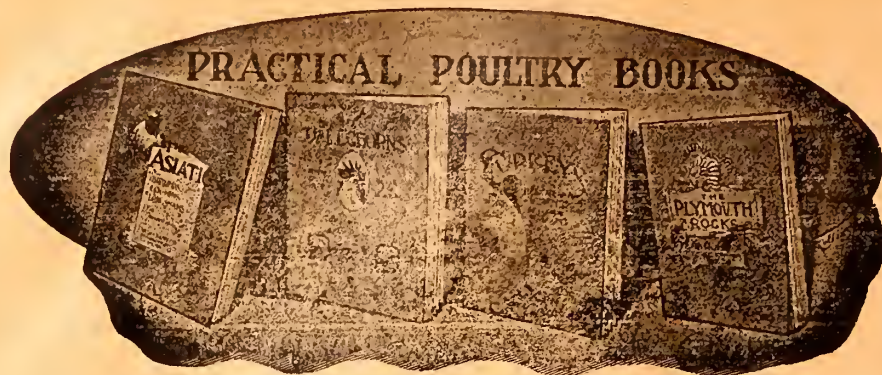
BARGAIN SALE OF BLACK ORPINGTONS, Mottled Anconas, Fawn and White Indian Runners, Mammoth White P-kin Drakes, to make room. Write for prices. Ruby Murwin, Garrettsville, Ohio. 9-4

CHOICE S. C. ANCONAS AND R. C. WHITE WYANDOTE cockerels for sale, \$2.50 each; two for \$4.00. Satisfaction guaranteed. Harry Dean Roberts, Lewisport, Kentucky. 8-3

MISCELLANEOUS.

EXCHANGE. Beautiful Florida Ferns, water lilies, Hyacinths, sea shell, and curios for thoroughbred poultry of any breed, including guineas and ducks. Write me what you have. Mrs. Birdie Dowell, Ritta, Florida. 6-5

SOME BARGAINS IN



FOR PROGRESSIVE POULTRYMEN

Your Success in Raising Poultry for the Market or the Fancy Depends Upon Your Knowledge of the Best Methods of Breeding, Mating, Care, etc. A Study of These Books Will Give You That Knowledge.

OWN A COMPLETE POULTRY LIBRARY

Artificial Incubating and Brooding

SOLVES all problems of artificial incubating and brooding. Tells how to obtain strong germed, fertile eggs, how to operate incubators and brooders, grow the greatest percentage of chickens, etc. 96 pages, 9x12, illustrated. Price \$.50

The Asiatics

BRAHMAS, Cochins and Langshans, contains information on mating, breeding, selecting, exhibiting and judging. This information is of value to every breeder of Asiatics who wishes to produce the best of birds. Color plates of Buff and Partridge Cochins by F. L. Sewell. 96 pages, 9x12, illustrated. Price \$.50

The Bantam Fowl

MR. T. F. McGREW, judge and breeder, tells how to house, feed and grow Bantams, how to treat diseases, how to select and fit for the show. 70 pages, 9x12, illustrated. Price \$.50

The Chick Book

GUIDE to success in rearing chicks. Experienced poultry raisers furnish information on all problems connected with the breeding, rearing, developing and fattening of chicks. Article and chart on line breeding. The day-old chick business, etc. 80 pages, 9x12, illustrated. Price \$.50

Egg Record and Account Book

AN easy method of keeping correct account of expenses and income; also record of all eggs laid, set or sold; chicks hatched and sold, etc. 32 pages, 6x10. Price \$.25

Reliable Poultry Remedies

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No. 7

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KEEPER

IN MAKING POULTRY PAY

VOL. XXX.

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No. 7.

EASIER POULTRY KEEPING.

Dr. N. W. Sarbo rn, Holden, Mass.

ARE we trying to make the keeping of hens too easy? Are we working for shorter hours and larger profits? We are excusable if we are looking for all these results. It is because there are labor saving methods that people have gone into chicken work the last ten years. Few folks would care to engage in poultry for a living, who had to use the feeds of twenty years ago; use the houses of twenty-five years back, or work for the former egg prices.

I wonder if we realize what changes have taken place since many of us built our first hen house, mated our first pen, raised our first flock of chicks. Let us get together, now, and put on paper some of the new things that have made poultry keeping attractive.

Feeds.

Years ago we could find little at the store except corn and oats. Wheat was seldom seen, buckwheat and sunflower seed were rare, and clover and alfalfa unheard of. The waste products, such as gluten meal and cotton seed meal, had not appeared. As a matter of fact we had to work hard to get

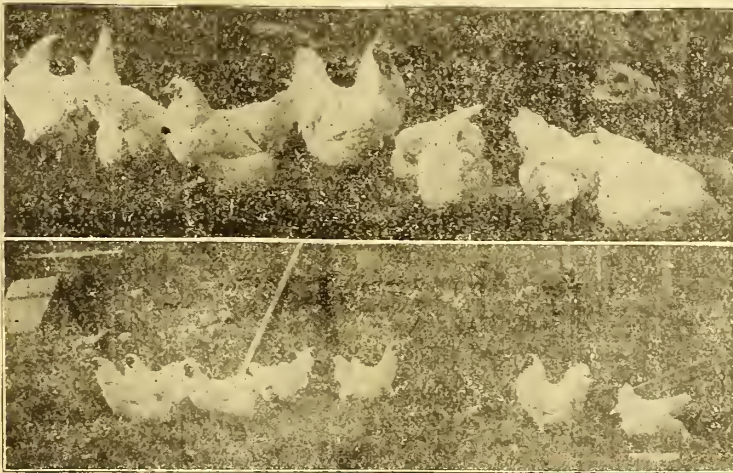
anything except corn and corn meal. In those early days we mixed the corn meal with boiled potatoes, adding a little bran if we had succeeded in buying any when the storeman had his yearly supply. Winter eggs were few, hens become too fat, and deaths were common in the flock in the middle days of spring.

Today we can buy well balanced scratch feeds, well balanced dry or wet mash, or get dozens of feeds of which to mix our morning and evening meals. The man who has the few hens in his back lot needs only to order his hundred pound bag of dry mash, fill the feed hopper once a week, and half the feeding is provided for. For a little more than the cost of the various ingredients a good scratch feed can be had, to be given in litter once a day. Between the dry mash and the ready mixed scratch feed, the fowls have their food about all provided for. Years ago we had bare yards and thought little of the need of green food. If the hens got any green food it was because of the absence of a slat in the hen fence, or the chance to dig under the bottom rail, or a carelessly

left open door. There was the garden nearby, with its waste products and the weeds that we tried to keep pulled, but it was not considered as having any bearing of the chicken yard. Did I ever, as a boy, think to give the waste pears, that were covering the ground, to the yarded hens? Whether I thought of it or not they got none. Today, the apples and pears are fed freely to hens and chicks of all ages. The yards are made the final dump of the garden waste, and often the hens have a chance to cultivate the garden when the season is nearly over. The lawn clippings are given, today, to poultry, where twenty years ago they were let lie on the ground.

Housing.

1913 finds houses that admit an abundance of air and light. 1880 was a time of too much light and sunshine, and too little air in the poultry buildings. It was a period of glass front houses, hot at noonday and cold at midnight. We were trying to get eggs in summer numbers by supplying heat to the house in winter, through the tight glass sash. A few poultrymen went so far as to install hot water heating to the long hen building, thinking that it would surely bring large numbers of eggs in mid-winter. Tight houses and steam heat never yet were a success. On the contrary many failures date to the putting into action of these fine sounding ideas. In the old days, when we made any change at all, it was to keep an even temperature in the houses by opening and shutting doors and windows. Try as we would we never could meet the sudden changes of cloud and sunshine, winter cold and summer heat. Often did I find the houses down to ten degrees above zero in the early January morning, and up to ninety degrees in the direct sunshine of the same mid-day. Colds and roup were common, few eggs were seen in winter, and the



Some Nice Looking White Rocks Owned by R. A. McDonald, New Concord, Ohio, Who Says in His Article on Advertising on Page 222 of This Issue, That Attractive Pictures Like These Help to Sell Stock.

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants it except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

stock did not have the sturdy look that is common today.

Fresh air housing has helped make poultry keeping easier. The wire front open spaces in the buildings give steady change of air, let out the dampness of breath and floor and allow the owner to go to his daily work at 7 a. m. and return at 6 p. m. The pullets dig in the litter, dust in the soil, get a full crop from the feed hopper, make daily trips to the nest, and are profitable in winter—in the fresh air house.

Seldom do we see, today, the nearly tight "A" coop that used to stunt the flock of summer chicks. Instead of this old fashioned coop, we see the three by six foot, wire front, roosting coop, with its board floor and two six foot roosts. No longer do the chicks come out in the morning with sweat laden feathers, closed nostrils, and swollen heads. The larger chicken coops invite attention to keep within bounds the plague of red mites. We are raising more chicks, better chicks, today than ever before. Not for one moment would we care to try out the old style houses and coops. They are gone, are nearly forgotten, and we are happy in the use of modern buildings.

Stock.

It is easier to breed good stock now than in the years that we often think we would like to forget. One of the fads of my early days was the breeding of "crosses." One of these was the crossing of White Leghorn males on Light Brahma females. The result was the getting of a larger cockerel than the Leghorn, and a smaller pullet than the Brahma. The cross was supposed to give great vitality, good broilers and roasters, and females with extra fine laying abilities. It may have given all these but I could never see the advantage to be gained by maintaining two breeds to always be able to make the pure cross. Too many folks were found that did not maintain the pure cross, but were using the cross-bred females to fill up the breeding pens. Instead of cross-bred they soon had a lot of mongrel fowls, of no special value and not to be valued for either utility or thoroughbred points. In the place of the cross-breds we find, today, thoroughbreds that fill every requirement. The white egg, the brown egg strain can be quickly found and bred. Do you want a fine line of broilers? You can find it in several of the breeds of the standard. Do you require a soft roaster that will suit the best club trade? The White Plymouth Rock is ready to fill your needs. It seems at times as though there is no call for new breeds or varieties, and I am sure that along utility lines we are fully supplied.

The varieties that we breed today are so well bred that we do not get the wide variety in shape and color that formerly was our luck. No longer do the Reds come "all colors of the rainbow," but can be depended on to give us a fairly uniform flock. Buff color is now nearer "all buff" than when I saw the first good flock with their white in wing and black in tail.

While the Columbian Wyandottes and Rocks remind us, now, of the crosses of long ago, they are swinging into line, giving handsome birds for yard or show.

Good breeders can supply us with matings that will give uniform shape and color, with the utility points that we demand. I remember the time when little could be promised from any mating. We took what we got and tried to hold the same mating for several years.

if you will notice results you will see that increased numbers will mean increased deaths. The portable hover is proving satisfactory in more ways than one. The early brooder was big, unwieldy, hard to get sufficiently ventilated. The modern brooder sends a steady stream of fresh air, warmed, over the heads of the chicks, keeping them comfortable and giving air that has not been breathed before. My first brooders kept the chicks at a right temperature, but the air they got was



First, Second and Third Prize Winners, Wisconsin State Fair. McClave, Judge. Dawson Bros., Franksville, Wis., Have 2000 Head of Fine Prize Winning Water Fowls for Sale.

Hatching.

It is so much easier to hatch today than "yesterday." No longer do we have to sit up with the incubators, meeting not only changes in temperature but also changes in barometer. The standard hatching machines, today, suit me much better than the hen. With them I get chicks that live, chicks that are sturdy, chicks that mature into business birds. The modern incubator takes care of temperature, or moisture, of fresh air. It needs some of our care but far less than the hen or the hatcher of my early attempts with poultry. I would not be understood as meaning that all modern incubators are perfect, but a little care in selection will show you a machine that in good hands will do better work than the average hen.

Brooding.

Less improvement has been made in brooding than in hatching. The average incubator is capable of better results than the average brooder. It is easier to find a good hatcher than a good brooder. It is seldom wise to take the recommendation of the maker as to number of chicks it will accommodate. Few brooders, whatever the size, will hold over fifty chicks. You can start with a larger number but

more or less mixed with the body waste of the exhalations of the lungs.

Selling the Product.

My grandmother used to exchange eggs for groceries and other truck of the village store. She took what the man allowed, and paid what he charged for the groceries. Seldom did she see any cash for eggs or poultry. Now my team takes my poultry products to store and home, getting cash every time. Usually we fix the price that is obtained. It is not now the question: "What will you give?" We fix our price and get it. The producer does not now so often seek the buyer. The buyer is out for good goods, competition is more active, and we get some of the advantage. The producer is not cutting prices as he did a few years ago. More and more the farmers and small poultrymen getting together in marketing and price fixing. The shortage in beef and mutton is helping the getting of better prices in poultry products. It looks as though eggs and dressed poultry would be in greater demand in the future than in the past. Though so many have gone into the keeping of poultry it has not hurt prices at all. Demand has increased faster than the supply.

Special products bring far higher prices today than a few years ago.

Think of selling, in 1880, one hundred cockerels, capons, at the door, in one lot, for two hundred dollars. It was never heard of. Today it is an every day occurrence all along the south shore of Massachusetts Bay. Even better prices are paid when the market is less fully supplied. These are wholesale prices, the consumer being willing to pay far greater prices for the big south shore roasters, when they came to his home or to his club.

Absolutely fresh eggs sell for sixty-five to eighty-five cents per dozen in the best markets of Boston and New York from Thanksgiving time to New Years. Nearly as high prices can be had at other months of the year. There is a place to sell the poorest poultry and staled eggs, but no one is eager to buy. The high class poultry products of 1913 sell for good prices—and the buyer is as glad to see you as you are to meet him. It is a pleasure to take to market the best that we have in eggs and poultry. There has been no time in my day when the relations of buyer and seller were more harmonious than right now, or the transactions more pleasant.

We need to bend our energies to producing a better grade of products. We know the value of goods and demand the full value of them. We should give full value for every dollar paid us—whether for fresh eggs or fresh dressed poultry. Our eggs should be just what we say they are: "Fresh." Our dressed poultry: "Fresh killed and sweet."

WET AND DRY MASH FEEDS PROVED SUCCESSFUL.

Prof. Frederic H. Stoneburn, discussing the merits of the two systems, of wet and dry mash feeding, in the columns of the Philadelphia North American, says:

Practical poultrymen are almost unanimous in their belief that best results from poultry feeding are secured when a portion of the ration consists of a mixture of ground grains and their by-products. For convenience such a mixture is called "mash," a term applied to it when the invariable custom was to feed it moist. When dry feeding methods were introduced the name stuck, but to prevent possible confusion a distinguishing word was added, and the term "dry mash" was thus added to the poultryman's vocabulary.

There are two very logical reasons why the fowls should receive a portion of their grain food in the ground form. The first is that heavier egg production may be induced, and the second that production costs are decreased. Add to this the fact that much table and farm waste may more conveniently be given the birds when combined with ground grains, and we clearly understand why this system of feeding is so widely used and generally satisfactory.

The advocates of the wet mash claim that when properly fed it will give better results than the dry mixture. That it affords the best medium for feeding many waste products. That the

birds like it better than any other feed, and advantage may be taken of this fact to positively regulate the amount of mash eaten. They object to the dry mash on the grounds that it cannot be used as a carrier of wet or juicy waste, that the birds do not seem to relish it, that it generally has a costive effect on them and that, as usually fed, there is considerable waste. In short, that the wet-mash ration is more efficient and, so far as actual cost of feed is concerned, is more economical.

Against this the dry-mash users assert that this feed is safer than a wet mash, since the latter is dangerous in the hands of inexperienced or unskilled feeders. That dry mash is actually cheaper to use because of the great saving of labor. That the birds are kept healthier, since they eat the food more slowly and so give the various

all the accompanying factors are considered. In the hands of the beginner or where feeding of the fowls must be done at odd times the dry-mash system is undoubtedly preferable. It has been widely adopted especially on farms where large flocks are carried and labor costs are an important consideration.

A few years ago wet mash was universally used and was generally fed in the morning. Gradually this was changed and the mash feed given at night. The latter plan possesses many important advantages. In the first place, the morning hours on the poultry plant are mighty busy ones. The feeding and watering of chicks and adults must be done, the incubators and brooders cared for, and many other regular duties crowded into a short space of time. Dry grain may be fed much quicker than wet mash, which

effects a time saving during the very busy part of the day. As a matter of fact, this scratch feed may be thrown into the litter at night, ready for the birds as soon as they leave the roosts and this part of the work removed entirely from the morning schedule.

There is another very good point in favor of feeding the wet mash at night. Since for convenience the whole daily supply of mash is given at one feed, this meal is naturally a big one. If fed in the morning the birds fill their crops full in a short time and there remains no incentive for them to take the exercise they require in order to keep in good condition. On the other hand, if the whole grain is thrown in deep litter early in the morning, the birds will spend a good portion of the day scratching for every

last kernel. When night comes they are given all the mash they will eat and go to roost with crops completely filled. This is most essential, particularly during that season of the year when the nights are long and for many hours there is no opportunity to replenish the food supply.

The cooking of wet mash is practiced somewhat, though not generally. The process does not seem to be of value so far as the digestibility of the ration is concerned; but the cooked mash is apparently more appetizing and it may be fed while still slightly warm, an advantage during extremely cold weather. The cooking is usually done by mixing the ground grains with boiling water and then tightly covering the mass, permitting it to swell and steam until wanted. In some cases, where large quantities of mash are mixed daily, live steam is introduced



digestive juices an opportunity to work upon it more effectively. That food should be constantly available to heavy laying hens, in order that there shall be no lack of material from which to manufacture eggs, and the dry mash is the only safe feed to supply in unlimited quantities.

There is much truth in most of the arguments presented above, enough to prove that either method is good, and each is better than the other according to conditions. The writer must confess that he has been unable to reach any final decision as to relative merits of the two feeding systems, and that in practice he has used both successfully at different times.

Where much table or farm waste is available and the work can be attended to by an experienced man, the wet mash will usually prove the better when

through a pipe. The material is fed before it gets cold, though it is never given while very hot.

In no case should wet mash be fed in a sloppy condition. It should be firm and crumbly, the various ingredients being stuck together, but free from excessive moisture.

When the birds are given a good grain mixture early in the morning, at the rate of about one quart for ten hens, they may safely be fed all the mash they will clean up at night in, say, a half hour. Any surplus should be removed from the troughs immediately after the meal is concluded. Not a particle should be left to sour or mold.

Dry mash is eaten a little at a time. The character of the mixture prevents the fowls from gorging it in large quantities. They simply can't eat it rapidly. For this reason the custom is to put the mixture in hoppers to which the fowls have access at all times, eating a little of the mash as they want or need it. In a very few instances we find poultrymen closing the hoppers a part of each day, but this practice is rare.

Since the mash in the dry form is not perishable, a large quantity may be placed in the hopper at one time, thus doing away with the necessity of daily feeding. On most farms large hoppers are installed and mash distributed about once a week. This is a tremendous advantage, as it saves a vast amount of labor, and labor is the big item in poultry farm expenses.

As already intimated, dry mash is a much safer feed than wet mash in the hands of a green man. There is no particular skill involved in merely keeping hoppers filled with the dry mixture, and this work may be safely intrusted to any one who will do as he is told. The same cannot be said of wet mash feeding. These two factors, convenience and safety, are probably the underlying reasons for the general adoption of dry mash feeding.

EXPERIENCE WITH ARTIFICIAL INCUBATING AND BROODING.

When we decided to try the poultry business we had never seen an incubator in operation. We believed, as we do now, that there is money in poultry and as we had done pretty well in hatching with hens, thought we could do even better with an incubator. We looked up the incubator advertisements in our poultry papers and sent for several catalogues and chose what we thought would suit our conditions, but as we had little money to start with, thought we would begin in a small way.

We sent to the factory for plans and fixtures to build our own incubator and in due time we had our machine in operation. Of course it was quite a curiosity and we were almost afraid to sleep for fear that something would go wrong. We brought off our first hatch in a living room and taking everything into consideration, we did very well. The next year we fixed up a cellar, according to plans furnished

by the factory and also purchased one new and one second hand incubator.

However the first incubator which we made ourselves beat the others, and we got 80 per cent hatches and 50 per cent hatches from the others, but they were sickly looking chicks. A number of our neighbors had incubators and they usually got about a 50 per cent hatch. We found by experience that our troubles were not over, so will tell a little about raising the chicks.

The third year we ran our machines we hatched nearly 1000 chicks, and lost only about 50 chicks under two weeks old. They did well until they were three to five months old, when we found we did not have room for them and before we could remedy this evil the canker and gapes got in among them and we lost a large number, but

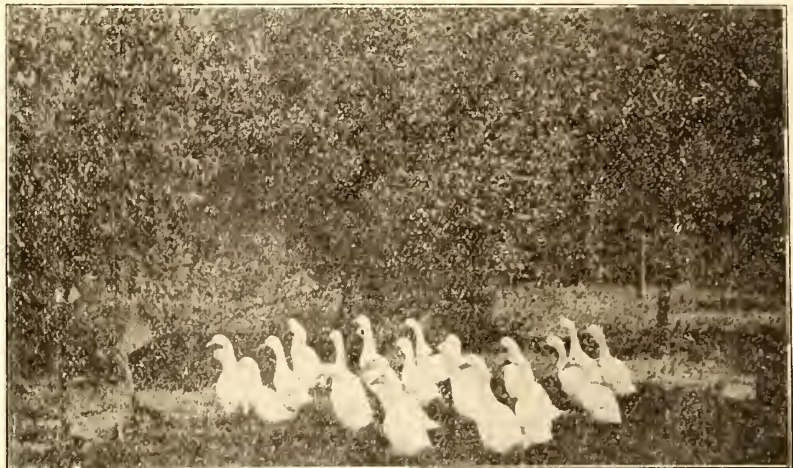
but we have succeeded well by this system.

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Wyoming.

R. I. RED CLUB MEETING.

The Rhode Island Red Club will hold its state meet in Saint Louis, Nov. 24th to 29th, inclusive, at 1015-17-19 Washington Ave., the headquarters of the St. Louis Poultry, Pigeon and Pet Stock Ass'n. We expect the largest display of Reds ever held in the West.

The association offers one hundred dollars in gold for an entry of four hundred birds, or twenty-five dollars per hundred; also six beautiful cups have attracted a great many of the specialty clubs who have advised that



Knollenberg Milling Co.,
Quincy, Ill.

Here is a picture of a few of my White Indian Runner Ducklings at eight weeks old, weight 3 to 3½ lbs. They have been fed strictly on your

after all, we did well with them as we had 200 nice hens left.

At hatching time, when the eggs began to pip, I would not allow anyone to open the door. I simply attended to the regulation and let it alone. I got my brooder ready and as soon as the hatch was over, took the egg trays out, allowing the chicks to stay in the incubator for about forty or fifty hours, gradually lowering the temperature to 95 or 90 degrees, according to the weather, when I transferred them to the brooder where the temperature was the same as the incubator.

Then I set a dish of fine charcoal with finely broken egg shells sprinkled on top of it, also a dish of pure, cool water where they could get it any time they wished. When sixty to sixty five hours old they were given their first meal, which was hard boiled egg, chopped finely, with Johnny cake baked for them. I fed first one and then the other, five times a day until they were about fifteen days old; also plenty of green stuff, chopped finely. Later they are fed chopped grain and whole wheat. This may not be the best way, nor the only way to succeed,

dry mash with a little beef scraps. I use nothing but your best feed and don't intend to use others as long as I can buy yours.

A. H. Muffly,
Hannibal, Mo.

they were endeavoring to hold their state meet in St. Louis.

Our entry list will be ready for mailing October 1st. Jas. J. Long, Secretary, 4115 Louisiana Ave., St. Louis, Mo.

Cool weather requires a supply of some meat food to get the layers in condition for fall and winter laying. Nothing on the market will take the place of green cut bone, and the hens will leave any other kind of food to get the bone. The E. C. Stearns Co., Box 7, Syracuse, N. Y., manufacture a complete line of cutters, ranging in price from \$6 up, and one of these cutters will pay for itself the first year, in increased egg yield. They have a booklet entitled, "How to Make Poultry Pay," which they will send to any one writing for a copy.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

GETTING HIGH PRICED EGGS.

By J. E. Willmarth, Amityville, N. Y.

MOST any old kind of a hen will lay during the spring months and thus eggs are cheap at that season. In the fall conditions are just the reverse. We all know this and many and various have been the methods employed to increase the egg production during the "high price" season. Beginners sometimes think the only thing necessary is to provide spring conditions and you will get spring egg production. This will help but we must remember that we are going against nature. Spring is the natural reproductive season, hence a large egg production at that time and unless special efforts are made, it will be about the only time of the year that we will get any considerable number of eggs.

First thing to provide is suitable stock, for you can't get "Blood from a stone," and you can't get eggs from a hen unless she is in laying condition. The best of feed and the best of care, even to the point of perfection, won't make a hen lay unless she is capable of egg production at that time. And you can't make a hen capable of egg production in a few days. It takes years to do this, but don't get discouraged for people have already been working on this for years, that is of improving egg producing stock by careful selection, so it is not really necessary for us to go back so very far, for we have the material at hand. It is now possible to get pullets bred from stock that were capable of a good egg production, providing they had proper care, and such pullets are capable of good egg production.

But being capable of producing eggs and doing so, are two very different things. A man may be capable of doing a good days work, but if he isn't well or has not the material to work with or if he is simply lazy, he is not going to accomplish much. A hen can be the same way. She may be capable of producing a lot of eggs during the fall, but unless everything is just right, she is not going to do so.

First, and most important, she must be in good health. O, you say, who would expect eggs from sick hens? But, by well, we mean in the best physical condition and to be in this condition she must first be hatched from an egg that was produced by stock in the best physical condition, that were capable of transmitting their egg producing capabilities to their offspring.

Then the egg must be properly incubated, so it will be a perfectly healthy chick when hatched. Then this chick must have proper care all during its period of growth, in order to maintain this state of good health. It must not be "pushed" so fast that its digestive organs will be disarranged and nothing must be allowed to check its growth. A steady, natural growth is the proper thing.

With such a pullet, the next thing to do is to provide material for her to

work with; that is proper food. We do not think any certain ration is as necessary as some try to make us believe. Plenty of good, wholesome food, fed in a manner to keep the pullet in the best of health, will be about as much as we can do. Wheat and corn in equal quantities and about half a quantity of oats, makes about as good a ration as we can get. Other grains may help out a little, but the chief use of these is to give a variety and make the ration more palatable. A dry mash before them all the time will insure against their going hungry, then by scattering the grain ration in litter, we make them work enough to keep up their health. Better too little grain than too much, as long as a good substantial dry mash is before them all the time. Fowls like grain best and if given all they want of this are liable to get too fat, but the dry mash they are not so fond of and will eat it for a change or when they get hungry, but are not liable to over-feed themselves on this. A moist mash is generally even more palatable to the fowls than the grain ration, and being ground is more easily digested to a certain extent, but a combination of ground and whole or cracked grain is necessary for best results, for an all mash ration will speedily upset the digestive organs, through not compelling them to assume their natural duties.

There is no doubt that a moist mash as part of the food, will produce a larger egg production for the time being, but care must be used not to over-do it or more harm than good will result. Moist mash feeding requires a certain experience to use it to best advantage and for the beginner the combination of dry mash, and grain in the litter will produce best results in the long run. We must also take into consideration the extra trouble of handling the moist mash.

We must be practical in our feeding. To get a large egg yield, but at an expense out of proportion to the results obtained, is not good business. We know of a party who fed a hen everything he thought she might possibly need to produce eggs, and she did produce an egg every day for a long period, but when it was found out that her keeper was also feeding her an egg a day, to make up any possible deficiency in the ration, the practical side of the performance took wings.

Given a pullet properly raised and of the right maturity and properly fed for egg production, we must further see that she is comfortable. Possibly a hen can not be willfully lazy, but if things are not just to her fancy, she will not produce as many eggs as she would were she perfectly contented. So proper quarters in every way should be provided. Perches should be so placed that she can be comfortable at night, and thus get proper rest, and she should be kept in a house that is not so close or over-

crowded that she has to struggle to get her breath nor so draughtly that she will take cold. The nests must also be comfortable and inviting. All these are necessary if we are to get the best possible yield that the pullet is capable of producing.

POULTRY FEEDING.

No one ration is best for all feeders, but some may be considered more economical than others—more easily obtained or more palatable to the fowls.

The ration may be considered in three separate parts, because it is usually fed in these parts, viz., the grain, the green feed, and the mash.

Green stuff is chiefly valuable as a medicinal food. It greatly aids digestion and keeps the fowls in a healthy state. Some green food must always be given if the best results are to be expected.

Concentrated foods should mainly be fed because of their richness in protein, which element is generally lacking to a greater or less extent in the common feeds raised on the farm.

About four gallons of water is used by 100 hens per day. This, coupled with the fact that a large percentage of a fowl's body is water, likewise the egg, shows the great necessity of supplying chickens with plenty of water.

Grit is absolutely necessary for the proper grinding and assimilation of the food eaten by chickens, especially all kinds of grains.

In order to have your chickens do their best it is of prime importance that you supply them with some kind of mineral matter, since mineral matter is needed for the formation of bone and egg shells. It is to supply this need that bone meal is added to most rations. About one pound of oyster shells contains sufficient lime for the shells of seven dozen eggs.

The following are a few sample rations for the feeding of fowls for egg production or growth. They have all been thoroughly tried out and have always given the best of results. The grain portion consists of 20 lbs. cracked corn and 20 lbs. wheat. The dry mash portion of 6 lbs. corn meal, 6 lbs. wheat middlings, 3 lbs. wheat bran, 5 lbs. beef scrap and 1 lb. of oil meal. This ration has a nutritive ratio of 1:4.8. Some kind of green food should be fed in connection with it.

A balanced ration for 100 hens, weighing about 400 pounds, is the following: 6 lbs. cracked corn and 6 lbs. wheat for the grain portion. For the dry mash, 2½ lbs. bran, ½ lb. alfalfa meal, 2½ lbs. corn meal, 1 lb. oil meal, 1½ lbs. shorts, ½ lb. beef scrap and 1 lb. coarse bone meal.

Here another good one: 2 lbs. of cracked corn, 2 lbs. wheat and 2 lbs. oats. For the dry mash, 3 lbs. bran, 2 lbs. shorts, 2½ lbs. corn meal, 1 lb. alfalfa meal, ½ lb. beef scrap and 1 lb. coarse corn meal.

It is advisable to always feed some green food in connection with these rations.—(Exchange.)

COLUMBIAN WYANDOTTES.

It is my object in writing this article to tell every reader of this poultry journal a few of the many merits of the Columbian Wyandottes, also of the good work of an able club, The National Columbian Wyandotte Club.

In the first place we are looking for the breed that will return to us the most profit, and profit comes from a great many sources.

I have bred and given a fair trial the most of the leading breeds besides a number of the non-standard breeds, I mean by a fair trial that I have bred them a year and a half or longer, but have proven to my entire satisfaction that the Columbian Wyandottes are the most profitable yet produced. My reasons for thinking so are as follows:

First. They are a general purpose fowl. By general purpose I mean they are the best of table fowls, with a large, plump carcass and always carry enough meat on their body so that a bird that is in the best laying condition is fit for the market and does not have to be crated for a week or so and stuffed on expensive feeds to produce the rich, juicy flavor that is relished by all. Their body is short and thick with a beautiful yellow skin that commands the highest market price in this country. Now suppose you went to the market for a chicken for the Sunday diner and there was a row of dressed birds hanging there, some with white or pale skins, some small and scrawny, others large and bony and the round plump golden yellow carcass of a Wyandotte, naturally you would take the last mentioned unless you had a grudge against your family.

Then there is egg production. The Wyandotte is universally pronounced the best winter layer and it is the winter eggs that brings the most profit. Through the hot days of July and August while you are on your vacation the Wyandottes are also taking theirs and resting up to keep the egg basket full during the fall and winter.

As mothers the hens are most ideal. They are not so big and clumsy as to break the eggs or trample the baby chicks, nor like the smaller breeds, nervous and unreliable. Still should you wish to break up a broody Wyandotte hen it is very easily done by shutting her up for a couple of days as they are not persistent sitters.

Their rich brown eggs are classed among the housewives the same as Jersey milk.

Second. The Wyandotte is one of the oldest breeds in America, the men that originated them saw the future of this great bird and put many years of hard work and thought into breeding them into the shape that would best suit the American people.

We see a great deal mentioned in the papers about a short bodied bird not being a good egg producer, but that is all bunk. Take for example the egg laying contests of the country and you will find the Wyandottes at the head of the list or nearly so.

They are one of the easiest fowls to

breed to shape we have. One reason for this is that the men behind them have been careful to see that the breeding birds comply with Standard requirements as nearly as possible.

There are eight Standard varieties, Silver, Golden, White, Buff, Black, Partridge, Silver Penciled and Columbian.

The Columbians were the latest to be admitted to the Standard. Mr. B. M. Briggs, Woonsocket, R. I., was the originator of them and in the year of the Columbian Exposition at Chicago in 1893, he made the first exhibit and named them in honor of the exposition.

They were originated by crossing the stately Light Brahma with the White Wyandottes and their offspring crossed with a Silver Wyandotte, this cross produced some fairly good Wyandotte shaped birds with the plumage markings of the Brahma.

Who can picture a more beautiful bird than one with a plump, round body with the plumage markings of the old and much admired Light Brahma and the clean yellow legs and close fitting comb of the Wyandotte?

This variety is true Wyandotte in every respect, and some claim them to be better egg producers, I for one have found this to be true, and for a breed that has been bred for so short a time, they breed exceptionally true to shape and feather markings. They are the easiest of any of the American breeds to breed to standard weight, (which is cock, 8½, cockerel, 7½, hen, 6½ and pullets, 5½ pounds). Owing to the fact that they are a cross of the largest breed of fowls yet produced, the Brahma blood also shows in the ruggedness of the baby chick. I have found them exceptionally hardy, even more so than any of the other varieties of Wyandottes.

The Brahma has always been considered a very slow maturing bird, but such is not the case with the Columbians, often times the pullets will commence laying when they are but twenty weeks of age, and the cockerels can be eaten for broilers. They can easily be made to weigh from two to two and a half pounds in ten weeks and not be all bone either. (for the Wyandottes are naturally small boned birds) but a plump ball of sweet, juicy meat.

For a bird of their size they consume the least feed of any of the breeds and for anyone contemplating the raising of poultry for pleasure or profit this should strongly appeal to them, for we all know that the only way to make money is to save it in every way possible.

Another advantage of great importance to the beginner is, that the Columbians do not have to be double mated to produce the best results.

Columbian Wyandottes are today being bred by the oldest and most successful poultryman in the country and these men predict that in the course of a few years they will be the most popular breed in America.

What has given the Columbians this popularity? First the merits of the breed. Second the National Columbian Wyandotte Club, and third the poultry

papers. I cannot understand why we do not see more articles written and published on our favorites. We have plenty of good writers that make a business of breeding them and I believe it is their duty to see that the papers have more Columbian news. There are hundreds of people starting into the poultry business every month and why not tell them through the papers the merits of our favorites, so that they can give them a chance.

Let me say to the beginner if you do not make a success with Columbian Wyandottes do not lay it to the breed but look for the trouble in your methods of caring for them, for as I have outlined above, there is no breed of fowls on earth that will yield a bigger profit or give the breeder more pleasure.

The National Columbian Wyandotte Club is responsible to a great extent for the immense popularity of this variety. It has and is doing more for the breed it represents than any other club I know of. The club offers every year hundreds of dollars worth of silver cups, ribbons, and cash prizes. The cups and cash prizes are offered at such shows as the executive committee see advisable and the ribbons at all shows where the secretary of the show publishes it and there are two or more members of the club competing.

There is a club catalogue published each year that is full of valuable information on the breed, such as breeding, feeding, mating, etc. Every one interested in Columbians should send to the secretary for a copy which will be sent free on request. The officers are all live wide-awake business men and some of the largest and most noted poultry breeders in the country whose word can be depended upon.

There are at the present time in the neighborhood of four hundred members and applications coming in fast. Better send in your application now (while you think of it) with one dollar for a years dues. You will never regret it and it will be worth many a dollar to you.

A word to the wise is sufficient. Breed Columbian Wyandottes and join the National Columbian Wyandotte club.

L. A. Lee,

Illinois.

Have you derived any benefit from the numerous suggestions and articles furnished by some of our other readers who have given you the benefit of their ideas through the columns of the Poultry Keeper? Possibly your success or failure furnishes some idea of value to other readers who may avoid loss by knowing of your experience. We shall be glad to print your experiences on practical lines if you will take the time to write them out. Simply get the matter up in your own way and we will properly edit the copy before printing it in our columns.

Have you any stock or eggs to sell? Our cheap rates shown in the classified ad. department will enable you to make the desired sales.

SUCCESS WITH ROSE COMB WHITE LEGHORNS.

As I have raised poultry more or less for twenty-five years, sometimes with success and sometimes with failure, and as others' experiences have helped me in Poultry Keeper, I thought mine of last spring would help someone else. As our editor has suggested hatching and brooding, I will give a little of my experience. About eight years ago I bought an incubator. The first two or three years I had good success. After that I could hatch them all right but I could not raise them. Two years ago I hatched about one thousand chicks and did not raise fifty of them. I read all I could on the subject and concluded I had a bad case of White Diarrhoea. I tried different remedies but every time it was worse, until I was really discouraged. To make it worse my husband said I had better sell all my chickens, he guessed I didn't know how to take care of chickens.

I said no. Others have made a success of it and I can. I will look for my money where I lost it. That's it. That's what the drunkard said when they asked him why he went to keeping a saloon. He lost his in the saloon and he was going there to look for it. I got sulphur candles and fumigated my incubator but I could not raise them then. I saw Zenoleum advertised in Poultry Keeper and sent for their book, Chick-Chat, and a 25 cent can of Zenoleum and went to work. I have two 225 egg incubators. One was lined with wood and the other with paper. I took the one with paper lining and tore it all out and put in new paper this spring. I shall line it with ceiling next spring. I then scrubbed them with hot soap suds and let them dry. Then I started them and when I was ready to put the eggs in I made a ten per cent solution of Zenoleum and sprayed the inside of the machine until every spot was wet. I even washed the thermometer with it. Then I put the eggs in and I tell you it smelled of tar pretty strongly, but I let it go. I thought I might as well kill them one way as another. The last week I kept it under the trays for moisture until the chicks began to drop down in the nursery. Then I took the saucers out so not to drown the chicks.

Another thing is ventilation. I don't believe most machines have ventilation enough, for at the last the chickens need more air. I kept the temperature up and wedged the door open on the top so there was as much as an inch crack along the top instead of lowering the blaze and the result was 139 smart chicks, and when I separated them and put the pullets in the colony house I had 129 left. Only ten were lost and three of them got killed. I repeated this every time with the same success and raised between five and six hundred chicks. I have over two hundred pullets in winter quarters now, they are just beginning to lay.

Of course I took good care of my chicks and kept them warm for the first week or two. You read so much

about leaving chicks out on the ground and in the sun but I find that I have to be very careful about letting mine out until they were about three weeks old as they chill so easily. We made some small coops and took our storm windows and put on the south side down next to the ground so when the sun shone, if it was windy or cold they could lie in the sun. We kept chaff on the ground in front of the brooder for them to scratch in. The coops were small, only a couple feet larger than the brooder, then we made yards of twelve inch boards in front of the coops and on nice days after the first week we would let them out in the yard a little while at a time, always watching to see if they commenced to huddle. If they did, they went inside in a hurry; when they were old enough to fly over the board we took it away and let them run. I had three coops just south of the house with 125 to 140 in each coop, until they were large enough to separate. They were all Rose Comb White Leghorns. Every time I went out doors they would all follow me. The people called them my snow storm. They certainly did look nice to me. I don't see many Rose Comb White Leghorns advertised. They are mostly Single Comb. I think for a cold climate the Rose Comb are the best. It takes lots of energy to raise chickens and my advice to a person who wants to raise chickens is, don't start unless you have lots of pluck. But there is money in it if you succeed. I will enclose a picture of a bunch of my White Leghorns.

Mrs. Viola Young,

Wisconsin.

A WRINKLE IN SPROUTING OATS

By accident, I discovered recently that the sprouting of oats in a vessel may be hastened by leaving them in the receptacle in which they are placed to be soaked, for four or five days, instead of turning them out into trays after twenty-four hours, as has been recommended in some of the poultry publications.

Other work prevented me from emptying the oats which were left in a galvanized pail having holes perforated in the bottom for drainage, for nearly a week. During that time they received no additional watering. What was my surprise when I went to turn the contents out upon the wire bottomed trays in which to move them to a stand where they would get the sunlight, to discover that the whole thing was a solid mass of roots, with green sprouts an inch long, covering the top.

In order to distribute the oats on the trays I had to tear them apart. They seemed to be a layer. The whole lump was composed of long, glistening stems which were hard to separate. In two days after being placed in the trays and sprinkled daily with luke warm water, there was a fine growth of the sprouts and when my daughter went through the yard with a panful of the succulent food, the hens ran from all directions to get at the feast.

If the oats are placed in a tray after only a day's soaking, it will take at

least a week to get a tiny growth. Under the new plan, every bit of the oats except the hull seems to be absorbed and converted into hen food. If any subscriber doubts this, it can be easily tested.

I have been feeding sprouted oats for two years and believe the idea a good thing for the poultryman in keeping fowls healthy in winter when green things are out of season and not to be had, and in keeping up the egg yield. When I first started sprouting oats I placed burlap on top of the trays and sometimes on the bottoms, but found that the top growth and root growth penetrated the burlap and made it difficult to get the oats out. Besides the burlap rotted after a while. Galvanized wire cloth, a little coarser than mosquito netting, makes good bottoms for the trays.

M. F. Reeve,

Pennsylvania.

POINTS ON VIGOR AND WINTER CARE OF LAYERS.

I breed S. C. Brown and S. C. White Leghorns, which I find the best layers. They lay nice, large white eggs. I have the same plan of house as the Berry's Golden Rule Poultry Farm. It is 6x32 feet and holds 7 hens. I hatch during April and May in order to get early layers. When I select my male bird I get one that is vigorous and strong in the points where his mates are weak. The male that possesses a strong constitution is the first off the roost in the morning, and the last to go to roost at night. He is ever scratching and calling to his mates, and has bright red comb. I prefer a male that crows loud, long and often. It is an indication of vigor and strong respiratory organs.

I have no patience with breeders who cannot breed white fowls free from brassiness. White fowls should be free of brassiness in their mature feathers, no matter what they are fed. I do not need to worry about feeding corn to my White Leghorns, because they are bred white.

During cold weather I provide a box-shaped cover made of canvas to keep out draughts. Those having open front houses should close them when the night feed is given during cold weather. Many do not close the houses until the birds have gone to roost and this is just the time they catch colds and roup.

My chickens are fed a mixture of wheat, barley and oats for morning feed at 8 o'clock. At 10 o'clock I feed a mash made of bran, middlings and corn meal, seasoned with a very little salt and pepper. For night feed I give corn and three times a week I get a rabbit and skin and hang it up in the hen house. Those having fresh milk to spare should give some of it to the hens as it is what will bring the red combs. It don't take much milk to bring good results. See that they have plenty of fresh water with the chill taken out during cold weather.

H. J. Schliep,

Michigan.

SELECTING AND CONDITIONING WINTER LAYERS.

Careful selection of the fowls that are apt to be kept for winter egg producing, and getting them into condition to produce a maximum yield of eggs, will more than repay one for the time and trouble taken. Not only is it advantageous from many points of view, but it is necessary if one expects a satisfactory yield of winter eggs. The principal reason for making early selections is to get uniform fowls of the right age at the right time, but it is also necessary that they be properly fed and cared for so that they will be brought to the laying point at the earliest possible date.

No pullet can be expected to mature at an early period if she is improperly fed and cared for. If the pullets are given free range they will gather bugs, worms and green food and get sufficient exercise to keep them healthy, but it is a serious mistake to think that because a young chicken picks up a great deal while roaming about the farm it does not need other food. Animal foods and succulent green food must be supplemented by some form of grain to produce satisfactory results.

It is surprising the quantity of food that young pullets will consume. It is almost impossible to overfeed them, for, unlike the hen in laying condition, they will not grow, either in size or ever, they are improperly fed and do not obtain a proper variety of food they will not grow, either in size or weight, and will be very slow in coming to the laying point.

On the farm where pellets have plenty of range, hopper feeding gives very satisfactory results; that is, certain food is put into a self-feeding hopper where it is always available. In this way the chicken can choose at various times the kind of food it prefers, and eat as much as it wants at any time of the day. This method of feeding saves a great deal of time—an important item when other farm work is pressing. If, however, there are several large heppers, but little attention now and then is needed to keep them thriving.

Experience in Feeding.

Various rations have been found satisfactory for these young fowls. Of course, these rations must be regulated in quantity and variety to suit local conditions, and changes may be necessary as the supply of natural foods on the range increases or diminishes. It is the writer's experience with White Plymouth Rocks that equal parts of wheat and cracked corn, thoroughly mixed together, makes an ideal ration for pullets that have free range. If the range is small or overcrowded at times when bugs and worms are not plentiful, it is advisable to supplement the corn and wheat with a dry mash composed of 2 lbs. of beef scraps, 2 lbs. of benemeal, 1 lb. of charcoal, 5 lbs. of corn meal and 5 lbs. of wheat bran well mixed and fed in heppers.

An abundant supply of fresh, clean water must always be available, and kept in a place where the sun cannot shine upon it. An impure water sup-

ply is a frequent source of disease. As the pullets approach the laying point a plentiful supply of oyster shells must be kept before them. Ordinarily fowls on a farm will be able to pick up sufficient grit, but when they are not able to get outside it is well to supply some sharp, clean grit.

As the weather changes in the fall it is poor policy to let the pullets roost outside. Frosts and chilling winds retard their development and cause a serious setback from which they are slow to recover. The habit of roosting outside can easily be broken up by chasing them into the coop just at dusk and shutting them in until morning. With this repeated for a few nights the majority of them will give no further trouble.

As cold weather approaches they must have plenty of nourishing food and must be pushed in every possible way so that they will begin laying before severe weather begins. Any pullet that does not begin laying before the first extremely cold weather will seldom lay many eggs during December and January. It is better to get the pullets in condition early in the season if we are working for a supply of eggs when top-notch prices are ruling.—(Exchange.)

A GOOD WHITEWASH.

Take one half bushel of unslaked lime, slake it with boiling water, cover it during the process to keep in the steam; strain the liquid through a fine sieve or strainer, and add to it a peck of salt, previously dissolved in warm water, three pounds of ground rice boiled in a thin paste and stirred in while hot, one-half pound of powdered Spanish whiting and one pound of clean glue, which has been previously dissolved by soaking in cold water and then hanging over a slow fire in a small pot hung within a larger one filled with water. Add five gallons of hot water to the mixture, stir it well and let it stand a few days, covered from the dirt. It should be applied right hot, for which purpose it can be kept in a kettle or portable furnace. It is said that a pint of this mixture will cover one square yard, if properly applied, and answers equally as well as oil paint for wood, brick or stone, and is much cheaper. Coloring matter may be added as desired. For cream color, add yellow ochre; pearl or lead, add lamp or ivory black; fawn, add proportionately four pounds umber to one pound Indian red and one pound common lampblack; common stone color, add proportionately four pounds raw umber to two pounds lampblack.

SHOWING MADE BY TWENTY-FOUR WHITE WYANDOTTES.

Editor, Poultry Keeper:

I notice quite a good many egg records published. If you have room for this one, should like to show what can be done on a city lot 30x50 feet. This is my first year's experience. I had twenty-four White Wyandotte pullets, five of them seven months old in October; fourteen six months and five,

five months old. Three commenced laying in October, about ten in November, nineteen in December and January and the five youngest started in February. During the month of March, had one pullet lost, strayed or stolen. Killed one in July.

I fed sprouted oats every morning, wheat at noon and cracked corn at night. I kept a dry mash before them all the time, composed of bran, shorts, and unbelted meal, also charcoal, crystal grit and oyster shells, with plenty of fresh water. I sowed rye and wheat in September for green feed for this fall.

Chickens and eggs used, sold and set during the year	\$117.24	
Estimated value, fifty chicks	33.25	
		\$150.49
Chicks cost	\$10.00	
Feed cost	60.00	
		70.00

Net profit above feed..... \$80.49

I regret that I did not trap-nest hens as I am satisfied that I have some extra good layers. I hope to be in the poultry business on a large scale some day.

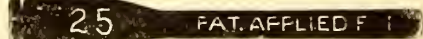
21 pullets, record for one year, average, 160 eggs.
19 pullets averaged 202 eggs.

		Eggs
3 pullets layed during	October....	40
10 "	Nov.	183
19 "	Dec.	331
19 "	Jan.	295
24 "	Feb.	371
23 "	March ..	472
23 "	April	490
23 "	May	469
23 "	June	377
22 "	July	323
22 "	August ..	300
22 "	Sept.	198
		3849

Illinois. George E. Riggs,

THE IMPROVED ALUMINUM CHAMPION LEG BAND. PRICES REDUCED.

The Champion Leg Band is the oldest and most popular band on the market. It is made in one piece, in two sizes, adjustable to fit any fowl.



This band always stays secure where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the board part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend the two legs over the loose end as shown in cut. Cut off surplus with scissors.



Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state that you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

A FEW CHANGES FOR THE 1915 STANDARD.

At the request of Secretary Campbell, the writer will try to give a synopsis, outlining, as briefly as possible, some of the changes to be made in the next Standard of Perfection. We are now working on this to get it in complete form, beginning with the Nomenclature, to issue in the pamphlet authorized at Atlantic City.

The new Standard will have a picture of male and female, showing all sections, many of which were omitted from the Nomenclature in the present Standard, such as wing-fronts, cape, etc.

In the "Glossary of Technical Terms" there are over forty new definitions added to conform to the text prepared by the revision committee and adopted at Atlantic City. In addition to this, there will be a large number of small illustrations to make these definitions plainer.

The Official Score Card that will appear in the next Standard will be printed the exact size of the card, which will be card-board, 3 1-4x6 1-2 inches, so that card will fit in regular size envelope.

The Instructions to Judges will be much more elaborate than ever before. One of the most important instructions that has been added is as follows:

Judges must familiarize themselves with the Scale of Points of each breed upon which they are to pass, so that they may intelligently award prizes. And it must be understood that no more and no less value can be placed on any section than is provided for in the Scale of Points. And it shall be further understood that this system must be applied, whether judged by score card or comparison. The minimum cut for any section shall be one-fourth point."

Another important one is in regard to discounting color in wings, which we give herewith:

"In discounting the color of wings, the section shall be divided into three separate parts, allowing two points for frents, wingbow and bar; two for primaries and primary-coverts; two for secondaries and secondary-coverts, and no greater value can be placed on any one of these parts." An illustration will be made of the wing, showing the divisions.

A new clause has been added in regard to private scoring.

In "Cutting for defects" there are quite a number of changes, and several new ones added.

"Symmetry" has been dropped from the Scale of Points in all breeds. The Scale of Points has been rearranged and made much more consistent. The points now allowed for "Symmetry" have been distributed to the best advantage.

In the American class there have been quite a number of important changes—in Banded Plymouth Rocks, Silver Penciled, Columbian and Partridge; and in Wyandottes, Silvers, Golden, Silver Penciled, Partridge and Columbian. In the Rhode Island Reds there were several changes, including

the color of ear-lobes and in shape of combs. Tail shape of female will read, "Medium length" in the new Standard, and the eye-color will be "Reddish-bay." The general surface color of the plumage is to be rich, brilliant red, and the less contrast there is between the wing-bows, back, hackle and breast, the better. This leaves out the accentuated wing-bows. There are also several other changes that we have not mentioned.

The Scale of Points on the Asiatics has been changed; also the color description in Light and Dark Brahmas and Partridge Cochins, and a few minor changes have been made in the other varieties. In Langshans there were several changes.

Mediterraneans will have a new Scale of Points. Also weights on Leghorns were added—Cocks, 5½ lbs.; cockerels, 4½ lbs., hens 4 lbs., pullets, 3 lbs. A number of changes have been made in the description of shape of Leghorns; also color in several of the varieties.

Ancoras have been given weight and a new description. The weights are, cocks, 5½ lbs., cockerels, 4½ lbs., hens, 4½ lbs., pullets, 3½ lbs.

In the English class there were several changes: A new Scale of Points; Cornish added to this class; a few changes in Dorkings and Orpingtons of the different varieties.

In the Polish a new Scale of Points was made and a number of changes; Hamburgs the same. Houdans were given a color description that should be beneficial to the breed. Several changes were made in Game and Game Bantams. There are also a number of changes in Ornamental and Polish Bantams.

Frizzles and Buff Turkeys were dropped from the Standard. There were several important changes made in the Turkey Standards—the Scale of Points was revised and so was the color description.

In Ducks and Geese the Scale of Points was divided into sections for Shape and Color.

A color description for the front of neck in the different varieties of cows will be placed in the 1914 Standard.

There were also a number of changes on several of the breeds not mentioned herein on account of lack of space.

A resolution was passed authorizing the revision committee to go over the Standard and improve upon the introductions to all breeds. This the committee did on a number of the breeds and on other breeds they did not. If the breeders of the different breeds and varieties will send to the revision committee any information along these lines, the same will be appreciated and it will assist materially in improving these introductions.

The revision committee was given the power to see to the work of arranging contracts for illustrations, and also given power to appoint a sub-committee from among themselves. This sub-committee consists of Reese V. Hicks, E. C. Branch, A. C. Smith, W. S. Russell and W. C. Pierce.

A large number of the illustrations in the present Standard will have to

be changed and in many cases new ones supplied, as they do not conform to the text.

The pamphlet to be issued by the American Poultry Association will be ready about October 15th. Anyone desiring a copy of this should send to Secretary Campbell \$2.25. With each copy of the pamphlet will be sent a receipt, which will entitle the holder to a cloth-bound copy of the 1915 Standard. This is done so that everyone can see the changes contemplated and to assist in the mating of their varieties.

W. C. Pierce,

Secy. Revision Committee.

(American Poultry Association Bulletin.)

The Taylor Instrument Companies, of Rochester, N. Y., have sent us notice of the death of their president, Mr. J. Merton Taylor, which occurred at Rochester, N. Y., on July 21st. He was the son of the late George Taylor, who founded the Taylor Instrument Companies, manufacturers of thermometers, barometers and scientific instruments, the business being very successful and one of Rochester's largest industries.

John S. Martin, Box 408, Port Dover, Ontario, made a great showing at the New York State Fair, on his famous "Regal Strain White Wyandottes," taking 28 prizes out of a possible thirty, including all the first and second prizes. This, with the winnings in previous years, and his big Boston winnings of last winter, emphasizes the superiority of the Regal White Wyandottes, over other strains of this variety.

PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

POULTRY KEEPER

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A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
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All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising Rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

OCTOBER, 1913

No. 7

One of the egg laying contests that begins on November first had every one of its one hundred pens engaged on August fifteenth. This shows that public interest is not dying out in the matter of egg records and egg work. Utility points are going to count more and more as the years go by. It is well that we can have some vouchered records to give us a better idea of what our hens can do along egg lines. We have already found out that some hens do lay over two hundred eggs in their first laying twelve months. That some hens do lay over two hundred eggs in their second twelve months of laying. It is now in line to find out something accurate as to third year laying. After all, does it pay to kill the females after they have finished their first year's laying, or keep them longer? We should know more than we do along this and similar lines.

This autumn we have found that the State Agricultural colleges are doing more along the line of practical exhibits at the state and county fairs. At one fair we found models of feed hoppers, chicken coops, sectional fences, as well as large photos of poultry buildings and formula of scratch feed and mash. A large tent gave room for the people to gather and listen to short lectures along farming and poultry lines. It is a good sign when the colleges go right out to the people and share with them the knowledge that can be made profitable. The colleges are doing more extension work among the boys and girls and bringing into the short winter and summer poultry courses hundreds of people who would know more of practical poultry lines.

It is a hopeful sign when buyers of fancy poultry insist that the pullets shall be layers of two ounce eggs. Underneath the fancy, is the utility value of the eggs laid and the dressed poultry to sell. Shape and size of body must be taken into account in the future, more than in the past and good egg laying will count as it never has before.

The getting of better prices for your eggs may be easier than the building up of a flock that will lay a dozen more eggs per year, per hen. Usually you can get the better price quicker than you can the larger number of eggs. Poultrymen need to consider the marketing of their products more than they do. Less time in getting eggs to the consumer will increase the quality of the eggs and ought to return more money to the poultryman. Eggs would be used more freely, if they were more sure to be sweet when broken in the kitchen. To send to market an egg that appears in the dining room with a week old chick in it hurts tremendously the appetite for "fresh eggs." The present methods take too much time to get the egg from the nest to the table. The producer and consumer must be brought closer together. In time, we think, parcel post will safely carry eggs and may help solve the problem of getting a cheap food quickly from the grower to the user.

The farm flock is best housed in a single building. The farmer cannot bother with small lots of birds and has no time to fuss with many matings. Hatching can best be done from a selected lot of a dozen hens put by themselves during three months of the year. The farm is no place to bother with numerous cock birds. Just one male for breeding, a dozen hens for laying the eggs for hatching, and a big flock of pullets to lay the eggs that pay the grocery bill of the year. We realize that some farmers make fancy poultry a profitable part of the farm income. We are not talking of these folks. Most farmers keep poultry as a side-issue and need to have the labor cut down to the limits. The single flock in a single simple house makes it right for him. We would have the farmer own thoroughbred hens, as we would thoroughbred cows and sheep, but we would not urge the going to heavy expense in doing it. Good stock can be had for a moderate cost, in fact good breeding pens of six fe-

males and a male need not cost over twenty dollars and this pen can be used for several season's breeding.

It was voted to drop Buff Turkeys from the Standard of Perfection, by the American Poultry Association at its annual meeting at Atlantic City, in August. This will take effect on the publication of the Standard in 1915. We think this will be a mistake, as a number of good fanciers are at work on this variety. Much improvement has been made the last five years and the white in wings and tails has largely been bred out. Buff color is very attractive in poultry as can be seen by the large numbers of Wyandottes, Plymouth Rocks and Leghorns at the big winter shows. At the last Madison Garden show there was a fine showing of Buff hen turkeys, as well as at the Palace show of a month earlier. There will be a chance at the annual meeting in 1914 to reconsider this action, which was taken without much notice to breeders of the Buff.

Frosty nights will not be rare before the end of the month, ice will form in the water dishes a few times and a few days will be cold and wintery. Many little things will need to be done to prepare for the November days. There are leaks in the roof of the hen house, glass to set in the windows and a final cleaning out of coops and buildings. On the farm we shall have lots of corn to husk. Do you know that corn husks make the best of scratching material? Try it this autumn, if you never have before, and report your experience to us. What is tougher than a corn husk? Did you ever, in your childhood, sleep on a husk mattress where a few of the cob ends of the ears were left on the husks? That was tough, too. Joking aside, corn husks are worth more to use as litter than as feed for cows. As you husk the corn put the husks in small piles, dry them thoroughly, and put into the houses a bushel at a time. Increase the quantity till the litter is three to six inches deep. Our word for it, you will be sorry when the corn litter is used up and you must begin on hay, straw, or wood shavings. The corn plant is the most useful one that the farmer, or poultryman, can raise. Use it for all the purposes that Poultry Keeper has ever advised it.

INDIAN RUNNER DUCKS AS LAYERS

I have been in the duck business for two years and can say that they will lay more eggs than any breed of hens that I ever kept and are easier to handle and their eggs are more fertile than hens. As to their keeping, they will not consume any more feed than a Leghorn hen. My ducks have lived well all summer and will molt in less time than a hen and get back to their job of shelling out a lot of good white eggs at greater value than hen eggs and sold in the market as strictly fresh eggs.

New York. W. F. Rose,

STARTING WITH A GOOD BREED.

I am a breeder of Buff Rocks and think they are fine all 'round fowls, as they are heavy fowls and make fine broilers when young and for egg production give just as good results as other varieties when given the proper feed and care. When I started in the poultry business years ago I had a number of varieties and none of them pure bred. I started in the spring, setting my incubator, which is 180 egg capacity, with eggs purchased from a farm flock at twenty cents per dozen. When the three weeks were up and all the chicks were out, I cleaned the coal oil hen, as we often called it, and reset it. I kept this up until I had secured four hatches. They were all what I called fair hatches at that time. When I quit hatching I had something like 300 chicks. Not having the least conception of the amount of feed required for this number of chickens and not knowing anything about the different diseases and their cures, you may know what the outcome was.

My first hatch did fairly well as it was cold weather and they had to be kept indoors, but I fed them what I have since learned was too much feed for young chicks. They soon had bowel trouble. Later hatches I put outdoors in poorly constructed brooders and they got chilled and died from bowel trouble. Many of them also died from crowding trying to keep warm. Those that lived did not mature right, for the want of enough feed, as I still thought there was danger from over-feeding. I have learned since that the most critical time in a

chicks life is from the time it is hatched until it has passed the age of six weeks. During that time they should be fed sparingly.

When they hatch, first of all keep them warm. Do not let the temperature of the incubator or brooder vary much. Gradually reduce the heat as the chicks get older. Feed them little but often, with plenty of grit and charcoal, then after they have passed the age of six weeks, give them all they can eat; plenty of grain, with mash before them all the time. I have found a good supply of charcoal, by mixing just enough dry mash with it to make them relish it, with sage tea to drink and not giving them access to any other feed or water.

In the fall I looked back on my summer's work with the knowledge that it was all in vain, with a big loss and no profits, but when I stopped to consider my experience, I realized that it was worth a great deal to me, so not allowing myself to become discouraged I disposed of what few young chicks I had left.

I then made up my mind that it took no more care and feed to raise pure bred poultry than to raise mixed breeds. It was then that I made up my mind to invest in some good stock and after pondering as to what breed it would be, I finally decided upon the Buff Rocks. I sent to a pure breed poultry farm and got a pen of birds. They arrived in early November and when I saw them it was then that I got the true poultry spirit, for they were certainly fine birds for the amount paid for them. Cold weather soon set in and having read a good deal of

keeping chickens housed during the winter months I decided to pen mine, not knowing that my poultry house was not the right kind. The birds soon took colds and I did not know what ailed them. From the symptoms I could notice, I went to my only guide, the Poultry Keeper, and soon found they had the roup. I commenced to doctor them, but first of all turned them outdoors and by constant and faithful attention. I cured them all without the loss of a single bird.

The following spring I began to hatch chicks from the pen I had purchased, taking great care to keep them from being chilled when young, and by careful feeding raised fifty pullets, fine, big, vigorous birds and about that many cockerels, that I disposed of for broilers at very good prices. I also adopted the open-front style of poultry house and think it is the best. I have the opening on the south side with all other sides carefully closed so as not to permit draughts. The house has a good dry floor, which is kept covered with litter. The birds are fed grain twice a day to keep them busy, with a well-balanced mash before them all the time. I feel that with the experience I have had, my next year's work in the poultry business should be very successful, but knowing that it takes years to learn the business thoroughly I feel encouraged, for there is nothing as sure as the poultry business and with the advancing prices on eggs and poultry, it offers better profits than any other business.

Mrs. C. Wilson,

Indiana.



Make Your Hens Lay

A FREE BOOK FOR YOU ON MAKING HENS LAY

Write today for our free poultry books and learn at once what it might take you, alone, years of costly experience to find out. You know how eager fowls are for bugs and worms. Our book tells why. Briefly, it's the animal food they want, and must have, in order to thrive best. Chicks, laying hens, cocks, all need it—to develop frame, muscle, feathers, to produce many eggs, to produce fertile eggs. To replace bugs and worms in winter, or, for yarded fowls, feed freshly cut raw bone, prepared with

MANN'S LATEST MODEL BONE CUTTER

Try One Free—No Money Down

This feed is four times richer in protein (the egg-making, body-building element), than corn is, and it is more easily digested and assimilated. Save money by cutting down your grain ration. Make money by getting more eggs when eggs are worth most and by having better eggs for hatching stronger chicks, earlier and heavier broilers.

Mann's Latest Model Bone Cutter cuts the bone (and all adhering meat and gristle) into a fine, soft mash that fowls of all ages relish and can put to immediate use in producing profit for you. It turns easily, cuts rapidly, never clogs, wastes nothing. We sell it on 10 Days' Free Trial, without money or deposit in advance—so you may be sure it is right. We even pay its freight back if you are not satisfied.

WRITE FOR FREE BOOKS TODAY. To read them is to know how to feed poultry for most profit.

F. W. Mann Company, Box 57, Milford, Mass.



White Orpingtons FOR SALE

Two females and one male, imported direct from England, twenty young raised from this English trio.

One male direct from Kellerstrass Farm, eighteen Kellerstrass hens, forty-six Kellerstrass Springs.

- One Humphrey Clover Cutter.
- One Humphrey Bone Cutter.
- One Mandy Lee Incubator, 100 egg size.
- One Close-to-Nature Brooder, 120 Chick.
- One Close-to-Nature Grain Sprouter.
- One Exhibition Coop.

All in good condition and can be bought for TWO HUNDRED DOLLARS. Reason for selling on the account of other business taking my time.

Roland McKean

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Dr. LeGear's Poultry Powder Makes Hens Lay.
Large packages 25c and 50c.
Mix it with their feed regularly and your poultry will remain free from disease.

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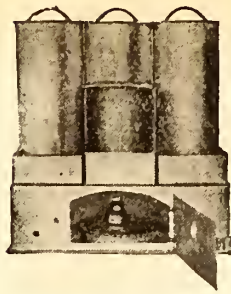
RHEUMATISM

A Home Cured Given by One Who Had It.

In the spring of 1893 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. After you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free. Don't delay. Write today.

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Syracuse, N. Y.



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To equip your poultry houses with NON-FREEZING Poultry drinking fountains, FEED HOPPERS and EXERCISERS, and all kinds of such articles. Have them on hand when you are ready to put your stock in winter quarters. This cut illustrates our No. 4 combination water and feeder. Keeps the water and feed warm. Will increase the egg yield 1-3 in freezing weather. Get our catalogue describing 60 different articles. We make everything a poultryman wants; it is free.

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THE ENGLISH STANDARD ON INDIAN RUNNERS.

Editor, Poultry Keeper:

I notice in your September number under the head of "Questions and Answers," a party asks for color of the head of the English Indian Runner Duck. The answer does not fully describe what is asked for, and is not correct in some respects.

The real pure-bred English Runner Duck is the same in America, or any other country as far as markings and standard are concerned. A copy of the English Standard on this duck can be procured from the Secretary of the English Indian Runner Duck Club of America, Mr. W. J. Patton, Glenview, Illinois, for the sum of 25c, which describes every section of the bird, with markings and color of the markings.

The Runners of England have been judged by this standard for a number of years. There are other standards in England, which do not describe the Runner Duck correctly. The head of the English Indian Runner Duck, also the tail, should be the same shade of fawn as the body color. The head and tail of the drake is darker than the duck, being more on a bronze-green, not a bright green. The shade of fawn varies as the season changes. When it gets its new feathers the Runner ducks quite dark in its fawn feathers; the penciling being quite distinct. As the season advances, the fawn feathers become lighter and bleached out, until at time of molt they are a sand color tinted with a yellow shade in the fawn markings.

You speak of American-English Indian Runner Ducks. We do not know what you mean by this name. There are ducks in America offered as English Penciled Runners that are nothing more than a lot of cross breeds, and are only fit for the table. These birds were bred from what is termed the Light Fawn and White Runners, which were made by a cross between the original English Runners and other varieties of ducks. From this combination the birds produced would run into various shades of colors, and poor shape and carriage, and a certain per cent would breed back to the English Penciled Runner. A number of breeders who had bred this combination were unscrupulous enough to sell these birds as pure-bred English Penciled Ducks, which has done a great injury to the pure-bred English Runner in more ways than one. These mixed breeds laid a percentage of green eggs, while the pure-bred English Runner laid a white egg, and plenty of them.

We do not refer to the new variety of Runners, which are the Fairy Fawn. These also lay off-colored eggs, but we refer to the pure-bred Runner which was introduced into England some 75 years ago, and is known as the Cumberland variety. Only a very few breeders have this variety in all its purity, which shows its pure blood in its upright carriage and long slender body.

Application was not made for admission of the English Runner Duck at the last meeting held by the revision committee, prior to the meeting of the A. P. A. at Atlantic City, N. J., in August, but an application will be filed in time so that it can be admitted at the next meeting of the A. P. A. and be ready for the 1915 Standard.

The latest report from the Australian egg laying contest gives the awards to the English Indian Runners over all varieties of fowl, for laying the greatest number of eggs. Our strain of Runners was originally started nearly 30 years ago from a duck which laid 300 eggs per year, and it is the pure bred birds which keep up the egg records. As these pure-bred English Runners are in the hands of very few breeders in America, buyers of this variety want to be sure with whom they are dealing before they place their orders, or they will get stung with the American mongrel penciled duck.

Charles Fraser,

New Jersey.

NATIONAL WHITE WYANDOTTE CLUB.

The National White Wyandotte Club, probably the largest specialty poultry club in the world, will offer a set of five handsome silk ribbons during the coming show season at all shows possible. These ribbons will be for competition by club members only, and will be placed for best cock, hen, cockerel, pullet and pen. Show secretaries desiring these ribbons placed at their shows are requested to make application for same at once to A. J. Gies, Secretary-Treasurer, Delmar, New York.

Every breeder of White Wyandottes should be a member of the National White Wyandotte Club. The Club issues a handsome Year Book which will be sent free to any White Wyandotte breeder upon application to the Secretary. One dollar pays the membership fee and first year's dues, and all those who join now will be credited with a paid up membership to October 1, 1914.

YEAR'S RECORD FOR A HOME FLOCK

The following is a record of twenty-eight hens. Twenty-three S. C. White Leghorns, late June, incubator hatched. The other five were one and two year olds, or different kinds.

	Laid Doz.	Egg	Sold Doz.	
Jan.	28	1	25	\$ 8.39
Feb.	29	3	30	11.40
March	46	5	35	8.95
April	53	6	48	10.84
May	51	6	49	10.56
June	46	2	40	9.51
July	38	5	27	7.50
August	29	11	25½	7.27
Sept.	20	11	16½	5.50
Oct.	6	9	3½	1.33
Nov.	7	..	6½	3.25
Dec.	8	3	6½	2.67

They were fed no ground bone or charcoal. All the meat they had was scraps from the table of a family or two. Their morning feed was a mash of ground corn and oats, with a little salt and a spoonful of poultry food. At noon they were given sprouted oats, and at night, corn, wheat and buckwheat and sometimes a few sunflower seeds. They were also given all the cabbage they would eat, with now and then a few beets. In the summer they were given lettuce, rape and lawn clippings, with all the fish worms they would eat, almost every day. Fresh water was given three times each day.

The house is one of Potter's make. The droppings board is cleaned every morning and air slacked line used on it. The board floor is kept covered with straw which is changed whenever needed and the floor sprinkled with lime.

The feed bill for the year was \$46.99, including the cost of four bales of straw, poultry food, oyster shells, etc.

Our home is a city lot 50x190 feet, about one-third of which is used for the poultry yard.

Leon Hopkins,

Pennsylvania.

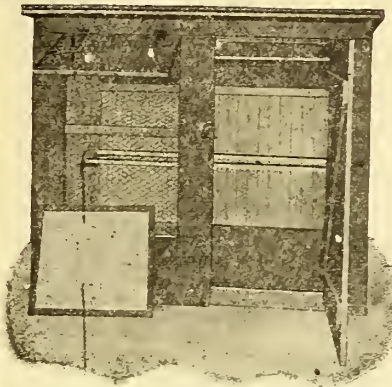
PLEASURE IN A GOOD FLOCK.

Editor, Poultry Keeper:

I wish to acknowledge receipt of the September number of the Poultry Keeper, and appreciate it above any I have coming to my home. I wish, through your valuable columns, to congratulate Dr. G. Merrill Hawkins, for the very beautiful and valuable article he wrote for the September issue. It is a shame that everybody cannot read it. I have just such a home and appreciate the truth of what the doctor says. I breed the Orpingtons and their beauty is simply exhilarating, when you look at them. My fruit trees, of many kinds, bore large crops and the beauty and pleasure can only be appreciated by those who have them. All kinds of truck and berries, also add to the pleasure spoken of by the doctor. I wish it were possible for everybody to enjoy the same.

Dr. A. Frederick Greenig,
Pennsylvania.

The Poultry House For You



This Essex-Model Year-'Round Poultry House is just the thing for a choice pen of breeders or layers. If you are just starting and have only a suburban lot, one or more of them will be more satisfactory, and cheaper, too, than a carpenter-built one.

**From Canada—North,
to Argentine—South**

It meets all conditions of all seasons—Spring, Summer, Fall and Winter—Everywhere and is recognized as the best

Year-'Round Colony Poultry House

This is the House recently ordered by Argentine Republic to equip the whole of their Government Poultry Farm. THE PRICE, THE SIZE, THE DESIGN are PRACTICAL FEATURES that caused that Government to order 100 Essex-Model Houses

In Competition with the Whole World

Size 5x6 feet; 6 feet high in front; 4½ feet at back; equipped with roosts and roost supports, floor and runners.

Prices \$17.00 to \$21.00. With or without floor and nests.

Essex-Model Incubators and Brooders

America's Largest Line—\$2.25 to \$48.00

Essex-Model Incubators are the only true Moisture-Conserving, Self-Ventilating machines made. The Essex-Model (Patented) Thermostat used gives a positive and accurate regulation of the heat.

Essex-Model Brooders and Hovers raise chicks with less labor and more successfully, because they are Practical, and Mother the Chick Better Than the Hen.

Essex-Model Mammoth Sectional Incubator

Made in all sizes 1100 eggs and upwards

If you intend installing a Mammoth machine, write us as to your requirements.

Essex-Model Supplies are Superior

Prepare for Cold Weather by buying now your Food Hoppers, Shell and Grit Boxes, Fountains and Feeders.

Get Essex-Model Remedies—Roup Cure, Disinfectant, Lice Spray, etc. Essex-Model Remedy Case of 10 Remedies (Price \$2.00 Postpaid) will enable you to prevent and cure Winter Diseases.

QUIC-MOLT makes Hens moult quickly and young stock feather fast. Used in the mash—5 lb. package—enough for 50 hens for one month—**\$1.30 Postpaid.**

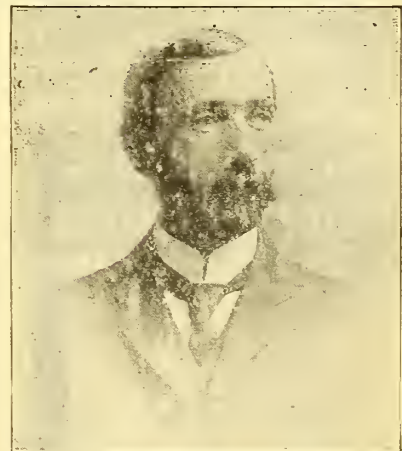
Our large free book entitled

"Making the Most from Poultry"

contains full information with illustrations of our Poultry House, Incubators, Brooders and Supplies; also tells you about Causes and Cure of Diseases of Poultry. This book is Free. Send for it today.

Robert Essex Incubator Co.

7 Henry St., Buffalo, N. Y.
87 Barclay St., New York City



ROBERT ESSEX

Win with Good Layers



There is no need to keep White Leghorns that are not good layers just because you want prize winners. FERRIS LEGHORN have been bred for eggs and exhibition more than

thirteen years. They have been trap-nested and only the best layers used for breeding for so many years that LAYING QUALITIES ARE BRED IN THE BONE.

Trap-nest records of 160 or more eggs a year are required from all our best exhibition birds. This is why the laying qualities of FERRIS LEGHORN are so widely known. Size, health, vigor are present in every bird—we raise no other kind.

Standard qualities are given extra attention. Hundreds of fine exhibition birds for sale. They have splendid shape in every section—good heads, long concave backs, low wide spread tails. Their plumage is perfectly white, their shanks are a deep yellow. They are the kind that are winning for our customers all over the United States in strongest competition.

FERRIS LEGHORN WIN.

Here are a few of the recent winnings that help establish the superior quality of Ferris Leghorns:

Iowa State Fair, August, 1913—Silver cup for best cockerel and numerous other prizes.

Maryland State Fair, Sept., 1913—1st and 2d cock, 1st and 2d hen, 1st pullet.

West Michigan State Fair, Sept., 1913—1st and 2d cock, 1st and 2d hen, 1st and 2d cockerel, 1st and 2d pullet, 1st pen.

West Virginia State Fair, Sept., 1913—1st and 2d cock, 1st cockerel.

We will exhibit at 20 or more of the leading fairs and shows this fall and winter. Watch our winnings and remember we can furnish equally good birds for your show.

Good breeding cocks and cockerels at \$5.00, \$7.00, and \$10.00. Good exhibition males at \$15.00 to \$30. Pullets and hens for breeding, \$2.50, \$3.50 and \$5.00; for exhibition, \$7.50 to \$15.

WE SHIP ON APPROVAL—MONEY BACK IF NOT SATISFIED. WE INSURE ALL STOCK FOR THIRTY DAYS—REPLACE ALL THAT DIE OR BECOME ILL.

You should have a copy of our 132 page catalogue—the most complete White Leghorn catalogue ever published. Gives prices and description of all grades of stock. It also gives a lot of information that may be of interest to you—how we feed and house our stock, how we breed for eggs, how we produce exhibition stock, etc. Write a postal today and let us prove to you that Ferris Leghorns will suit you. You will be surprised at the low prices we will quote on the stock you need.

George B. Ferris, Ferris Leghorn Farm, 909 North Union, Grand Rapids, Michigan.

Build Own Incubator Easy

My big Free Book of Plans and Instructions makes all simple as A B C. Shows how my patented Lamps, Regulators, Thermometers, Tanks, Egg Trays etc. save money and worry. Thousands enthusiastic. Write now for big Free Book. H. M. Sheer, Dent. 3 Quincy, Ill.

Dr. LeGear's Poultry Remedies Are Sold Everywhere

Roupy colds are prevalent at this season of the year. Dr. LeGear's Roup Remedy will cure and prevent Roup, Colds, etc. A sure preventive—an unailing cure.

Price 25c per can.

DR. L. D. LEGEAR MEDICINE CO.
709 HOWARD ST., ST. LOUIS, MO.

Regals Again Supreme

AT THE NEW YORK STATE FAIR, SEPTEMBER 8-13.

For the eighth time Martin's Regal White Wyandottes prove themselves invincible. In a splendid class they win under Judge Drevendstedt:

- Cocks, 1, 2, 3, 4, 5.
- Hens, 1, 2, 3, 4.
- Cockerels, 1, 2, 3, 4, 5.
- Pullets, 1, 2, 3, 4, 5.
- Pens, (old), 1, 2, 3, 4, 5.
- Pens, (young), 1, 2, 3, 4, 5.
- \$25 in gold for best display.

Judges and breeders agreed that never had such a string of White Wyandottes been shown by any other breeder. In a string of seventy birds only two were unplaced, showing the wonderful uniformity of type running through my flock.

In eight years showing at this fair my birds have won forty-two blue ribbons out of a possible forty-eight.

Why not make a start with the Regal Strain? No other strain combines exhibition and utility qualities to such a marked degree.

500 matured cockerels and pullets ready to go into the show room now. 1000 cocks and hens to select show birds and breeding stock from. Send four cents for the Regal White Wyandotte Book. Free illustrated catalogue and price list.

John S. Martin Box 403 Port Dover, Can.

ADVERTISING.

MANY persons who start in with thoroughbred poultry thinking they are going to get rich get discouraged and drop out in a short time. They have good stock; they succeed in raising a good number of birds, but they fail in securing the profits.

In order to secure the profits from this branch of the work it is necessary to advertise. In the first place, you must know that you have good stock, next you must select a good advertising medium.

At the start you will begin, perhaps, with a classified or small display advertisement. Be very careful in wording this advertisement so there will be something a "little different" about it that will attract the eye of the reader. If you have placed your advertisement properly in a good medium, you should begin to receive inquiries and it is up to you to impress upon your prospective customer that you have just what he or she wants. Tell of the good qualities of the birds. For instance, if you have a White Rock cockerel, describe him something like this: "Extra large, nice five point comb, nice gray eyes, yellow legs, a splendid shaped fellow and as white as snow. This bird is very vigorous and one that will give you excellent results as a breeder."

Of course, if the bird does not possess the qualifications do not describe him thus but just describe him as he is.

Be prompt in answering all inquiries. Use neat "business-like" stationery. If you have a typewriter, so much the better, though this is not necessary, but anyhow be neat in your correspondence. For who is going to buy birds or anything else from a man whose letter is carelessly written, perhaps with ink blots distributed over its surface, the paper carelessly folded perhaps to fit an envelope of the wrong size.

One of the most satisfactory ways of selling both to our customers and ourselves is by photograph. For instance, I had a pen of very fine White Plymouth Rock beauties. I took my camera into the yard, sat down and waited for the opportune moment and

I "snapped" them just right, the cockerel standing with head up nicely, with body in good position and the hens were shown to good advantage, showing their splendid shape. We had previously advertised them and very shortly began receiving inquiries. We enclosed a photo in one or two of our letters and one man wrote back he would take the pen as they looked fine in the picture, and he was not disappointed in the birds.

If you do not own a camera or kodak and do not care to invest in one, (though the expense is small compared with the results received) you can no doubt get some amateur in your neighborhood to do the work cheaply. You can have a number of views taken showing your best pens; the best cockerels and pullets; the growing stock, etc. You are then ready to enclose a card of whatever the party may be interested in, with you letter. A very nice way to finish them is on post cards as they are very convenient for mailing and of a nice size to go in an envelope. We have found it a very cheap and effective method of disposing of our surplus stock.

In the first place know that you have what the other fellow wants, then try to impress the fact on his mind. Be prompt in making your shipments in neat light coops. Give your customer the worth of his money every time or a little more and you can't help succeed. Once in a long time you may find a customer you or no one else could please, but don't let this discourage you as long as you are sure you have done your part. It is certainly a pleasure that the honest breeder experiences when a customer writes and tells him how pleased he is.

This is written in the hope that it may help some one to achieve the success with standard bred poultry, so much desired but not attained. Perhaps part of our success is due to the fact that we breed White Plymouth Rocks (for we think them the greatest of all purpose breeds) but anyhow with our methods of advertising we have never been able to supply the demand for good birds.

Ohio.

R. A. McDonald,

MAKING A LIVING WITH POULTRY.

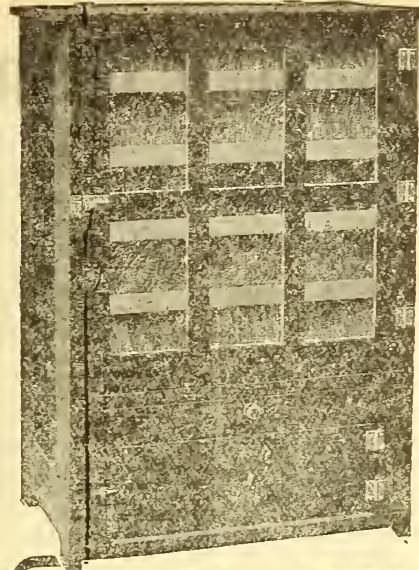
The first thing needed in starting to make a living with poultry, is some means of making a living until one gets experience and birds enough to make a living from the poultry. If one lives on a farm and has been raising poultry to some extent the way is very easy. The farm will furnish the living for the family and feed for the chickens.

If one must start from the bottom then there will be a place to get to keep the chickens on and if he has had no experience in poultry raising he had better find something to do to meet expenses for some two years at least. The expenses provided for, the next thing would be the kind of chickens to raise. I think one kind enough for a beginner. Every one must choose the breed he fancies most, provided it is intended to do the work he is going to follow. One wouldn't want to raise Leghorns for broilers, or Cochins for an egg farm.

If the aim is to get eggs the small breeds are the best, if one has a sunny location and warm quarters, but if the land has a northern slope and houses are not good and tight the big heavy feathered birds are best, such as Wyandottes, Orpingtons and Plymouth Rocks. They will lay almost as many eggs and really more in winter, and weigh more when they are sold, so they are as profitable in the end. There really don't need to be much capital to begin the poultry business, as one old hen and 15 eggs will make a start that will soon grow into a large plant if properly handled, but a few hundred dollars would come in handy, as one would best own a few acres of land at least.

Then the fowls must have shelter of some kind. The houses need not be expensive. Cull lumber covered with roofing paper makes a good house, or two pens made of poles or rails one inside the other and stuffed between with straw or trash of any kind makes a good house. Hens don't go on a strike because they haven't a beautiful abode. Keep them comfortable and busy and they will do their part. They must have fresh air and light to keep healthy. Any goods boxes with the top made rain proof makes a good coop for the hens and little chicks if one has nothing better.

If hens are expected to lay they must have plenty of feed but it don't necessarily have to be expensive. Corn broken in short lengths, letting the hens pick it from the cob with dry bran before them all the time and plenty of milk for them to drink, with water, grit and oyster shells, makes a ration the hens will lay very well on, but they would lay better on more variety if one has the cash to buy it, especially if the birds are penned. I am sure penned fowls, if properly fed and cared for, will lay more eggs in winter than free range hens. I am also sure eggs will be more fertile and hatch stronger chicks if the hens have free range and are not fed for high egg production. The above method of



The IDEAL Grain Sprouter

- is the best machine for sprouting grain ever made;
- will produce sprouts over two inches long in 24 hours;
- sprouts any kind of grain better, in less time and without fuss or muss;
- produces three to four bushels of feed from one bushel of grain;
- pays for itself in a single month by saving in feed bills, increasing egg yield, supplying food that makes chicks grow strong and vigorous.

The "Ideal" is made in several sizes—for a few hens up to hundreds. Can be used in summer (without lamp) as it has proper arrangements for moisture and ventilation to produce quick results and crisp feed.

J. W. MILLER COMPANY, Box 604 ROCKFORD, ILLINOIS

Increase Egg Yield This Winter, Save Money on Feed, Make Chicks Grow Rapidly, Strong

by installing an Ideal Grain Sprouter and feed your hens the green food that is absolutely necessary to insure prolific egg production.

Eggs are going higher in price every year, the demand is far exceeding the supply, and it looks like *good times* and *plenty of money* for the man who has one of our sprouters.

CONSTRUCTION

Made of best lumber—double walls, insulated with heavy deadening felt—inside lined with galvanized iron—frame of trays heavy galvanized iron—bottom of tray heavy wire netting—front of machine glass, which induces green sprouts. These sprouts require very small amount of artificial heat which is produced by the Ideal Safety Lamp, the fumes of which pass through ventilators.

Get Special Low Price Offer Today

Don't delay but write at once for special low price freight prepaid introductory offer, full particulars and description of this perfect grain sprouter. No poultry man should be without it. It is the *Biggest Money Maker for the Poultryman since the Incubator was Invented.*

Made by J. W. Miller Co., Manufacturers of Incubators, Brooders and Poultry Supplies, which is sufficient guarantee of its excellence.

feeding, with a good grade of wheat screenings, makes a splendid ration for free range breeders.

Below is a good egg ration, but don't make the mistake of trying to breed from hens after they have been forced to lay through the winter for they won't lay eggs of strong fertility and the chicks will be weak.

The mash is composed, by measure, of 3 parts wheat bran, 1 part wheat middlings, 1 part gluten meal, 2 parts alfalfa meal, 1½ parts beef scraps. Feed dry in hoppers. A small feed of this mash mixed crumbly with milk or warm water, fed about four in the evening, is very good. The hens relish it and I think they lay a little better if they have a moist mash in the evening.

The floor of the pen should be covered several inches deep with straw or dry litter of some kind. Shredded fodder is good, and grain fed in the litter twice a day to give them exercise. They should have green food of some kind, oyster shells and grit.

To have hens there must be chicks hatched and if many chicks are to be hatched a good incubator is necessary, but one could hatch enough chicks with hens to raise 200 pullets and 200 early pullets well raised and cared for would make a living for a small family. I think the work would be easier with a good incubator and some good brooders. Home-made brooders are usually better than some on the market. Lets


hear from home-made brooder users, perhaps we can all learn something.

The chicks should be kept comfortable and well fed but not stuffed, using a mixture of ground wheat, corn, pinhead or rolled oats, some cracked rice, charcoal, grit and beef scraps. If one has plenty of milk and cottage cheese the beef scraps may be omitted. This makes a good feed until the chicks are four or five weeks old, then use wheat, cracked corn and milk with free range and a hopper of dry bran. This soon makes a bunch of pullets that will do good work filling the egg basket if properly housed and fed. I have only touched on the subject of making a living with poultry, but it would take almost all the space in one Poultry Keeper to tell it all, so I will leave the rest for the other fellow to tell.


Mrs. Theo. Fields.

The Illinois members of the National Columbian Wyandotte Club will hold a show and meeting at the Illinois State Poultry Show, Springfield, Ill., January 5th to 11th. Very liberal prizes will be offered to get out a large string of Columbian Wyandottes at this show, which will be open to members of the club. Those wanting to join so as to be eligible to make entries may get further information through the state secretary, L. A. Jee, 439 Eberly Ave., Chicago, Ill.

KILL RATS & MICE
SCIENTIFICALLY
with **Pasteur Laboratories Rat Virus**
NOT A POISON
HARMLESS TO POULTRY, DOMESTIC ANIMALS & MAN
PASTEUR LABORATORIES OF AMERICA
NEW YORK 366 WILST. CHICAGO 4435 DEARBORN ST.
Room 866.



MADISON SQUARE WINNERS. Rose and S. Comb Brown and White Leghorns of the best strains bred. 241 240 and 244 egg stralae. Big eggs, big birds. Winners everywhere start with the best. **BARRED ROCKS, WHITE WYANDOTTES**, the very best.



W. W. KULP

Box 50, Pottstown, Pa.

Smith Sealed. Prices postpaid. 12, 30c; 25, 50c; 50, \$1.00; 100, \$1.50; 500, \$6.50; 1000, \$12.50.

LEG BANDS

Leader Adjustable. Prices postpaid 12, 15c; 25, 25c; 50, 40c; 100, 65c; 250, \$1.50; 500, \$2.75; 1000, \$4.25.

FREE SAMPLES 500, \$2.75; 1000, \$4.25.

Write postal or order now. Satisfaction guaranteed. Address **THE KEYES-DAVIS CO., Inc., Dept. 532** Battle Creek, Michigan



Ideal Aluminum Leg Band To Mark Chickens CHEAPEST AND BEST

12 for 15c; 25-50c; 50-25c; 100-60c; 175-\$1.00; 500-\$1.10; 500-\$2.50. Price list and sample 1c.

Frank Myers, Mfr., Box 44, Freeport, Ill.



\$2. for \$1.25

Success With Poultry\$1.00
Poultry Keeper50
Any other 50c Poultry Paper.. .50

All for\$1.25

This is one of the best offers ever made to poultry readers. It gives the best practical book on money-making poultry and two poultry papers at a greatly reduced rate.

Address,
Poultry Keeper Pub. Co.
QUINCY, ILLINOIS.

We have a special offer for "Poultry Keeper" for three years to any address in the United States, upon receipt of One Dollar, or we will send the paper for one year to three separate addresses. Either of these offers means one subscription free of charge. In sending in your own subscription, by making a little effort right in your own neighborhood, you can get two others to send in their subscriptions with you and get all three subscriptions for one dollar. This will be a material assistance to us and will be appreciated.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 10 for 60c.

Sanborn Business-Bred Layers

I have my farm so well stocked with egg bred Buff Wyandottes that I am going to offer P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$5; 100 eggs, \$12. Mention P. K. in ordering.
My three books, ordered with eggs, \$1 additional.
DR. N. W. SANBORN, R. F. D. 24, HOLDEN, MASS.

BARRED PLYMOUTH ROCKS.

I take great delight in reading The Poultry Keeper. It contains many interesting and instructive articles. We profit by the experience of others. I breed Barred Plymouth Rocks exclusively. We can all boom our favorite breed or variety, but it is a proven statement that no breed is bred and exhibited by so many people as Barred Plymouth Rocks. Other breeds come and go but the old Barred Rocks, with their everyday appearance, are here to stay.

No doubt some of you have read of F. W. Briggs' experiment. He experimented for three years with Barred Plymouth Rocks, Rhode Island Reds, Single Comb White Leghorns, and White Wyandottes, keeping careful record of each breed. In the end he was convinced that the Barred Rocks excelled the other breeds in every one of the qualities desirable.

The Rock is built for utility and built for business. It fills all the requirements of an egg machine and a meat producer. The flesh is also of highest quality and young chickens of this breed always command the highest prices. I write from experience, having sold a few hundred friers at good prices.

The Barred Rocks make good mothers and if necessary, can be moved from one house to another to sit and seldom give any trouble.

I use open front houses, sixteen by twenty-four feet, seven feet front and five feet in rear. Houses are built very tight, except front, where one-half inch mes wire, three foot wire, extends full length of house. Above the wire are four small windows, which admit light and add to appearance of house. In warm weather these can be removed.

With concrete foundation and concrete floor you can rest assured no weasel will feast there. The floor is covered several inches with straw and bidly must scratch for her feed. In severe weather I use muslin over wire but it is not necessary during a mild winter.

Possibly some will call me an old fogy or back number, when I say I have never used an incubator. Bidly does the work all right. Its hard to improve on nature.

Now I'm not condemning the incubators. They are all right, if you want them. I have at different times hired a neighbor lady to sit her incubator for me and always got excellent hatchings, but was never as successful raising them as the hen-hatched chicks. I use the fireless brooders like Philo recommends, with splendid success. They cost so little and can be used in cold weather if coops are properly made.

There is money in the poultry busi-

ness if we manage it right. There is also work. Don't get the impression you can make a success in the business without labor. Someone has got to hustle. Don't neglect the little things. My sales for 1912 from eggs and chickens was over five hundred dollars, counting neither cost of eggs or chickens that were used in the home, and we used lots of both.

I now have a flock of two hundred and twenty-five good, healthy, well barred hens and they are paying me in eggs for the attention I give them.

I sell lots of eggs for hatching purposes and treat my customers fairly. The eggs I sell won't hatch out Brown Leghorns as some pure Barred Rock eggs I bought did.

My advice is if you want to make your own spending money, raise poultry. We can easily sell both eggs and poultry for cash and 1912 has been a year of pretty fair prices; only hope 1913 may be better.

If parcel post is here to stay why can't we farmers' wives build up a good city trade and realize more profit? Let us take advantage of this as it has been proven eggs can go by mail if carefully packed.

I do all the work caring for the flock, except hauling the droppings away and hauling the straw for the floors. The droppings board are cleaned every morning. Keep bidly busy and she will fill the egg basket. The Barred Plymouth Rocks are the best general-purpose fowls in existence and they are here to stay.

Mrs. H. V. Elrod,

Indiana.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU!

\$60 PER HEN PER YEAR

SEND POST CARD TODAY for free 56 page free book, "The Why and How of The Miller System." Test our idea far enough to form an opinion. Show our guarantee to your lawyer. Miller System Company, 53 7th, Binghamton, N. Y.

TETHERING HENS WITH BROODS.

Have been keeping poultry in a small way for about two years (starting with eggs at that) and the time being so short, I have not much to write about my work with chickens. I admire those who are brave enough to tell of their mistakes and failures as well as successes. If beginners only read of the pleasant and profitable side of the business they would often feel discouraged.

I have a small flock of thoroughbred R. I. Reds. They are handsome and also profitable. I keep strict account of expenses and income and although I have not had time to get the business going properly, am ahead, so feel hopeful for the future. I enjoy being with the chickens and keep everything as clean as possible and look after the health and comfort of my birds in every way possible. I believe it pays.

The birds are kept in large, partly shaded yards in summer. I presume most people would laugh to see me even sweeping up and carrying away the droppings, and putting them where they will be a help instead of a menace.

For those who have only a few hens and cannot give them free range, I will tell my way as I have not seen any mention of it in the Poultry Keeper. When the chicks are about two weeks old, if the weather is suitable, I stake the mother hen out, using a strong tape sewed loosely around her

leg to form a band. A strong cord is slip-knotted in it. A ring three or four inches in diameter (mine are made of baling wire) is tied to the other end, which is slipped over a stake. She can easily be moved to fresh ground to feed and scratch. When I go to the garden to work, sometimes quite a bit away, I take my hen, stake and all, and with a little clucking call, I get the chicks to follow me. Sometimes I have to put the hen down and give her a pinch of chick feed. She soon calls up the loiterers, then I go on further with them. They soon learn what it means and go with me very readily. They do no harm to small plants and get lots of bugs and worms, and the hen placed where she can do no harm, is far better off than shut up in a hot, dirty coop, as most of them are. I turn the coops over so that the sun will shine in them and move them each day to clean ground. Of course I have to look after the hen as she is liable to get wound up and never go away for a long while and leave her staked out. The cord is untied at night and she is put in her coop.

An inquiry was made not long ago, as to what makes chickens shake their heads. When mine do it, in a short while the feathers begin to come out and if nothing was done for them they would be bald-headed. I take vaseline with a little kerosene and sulphur added, warm and rub well into the roots of the feathers. Suppose

it is the work of the depluming mite.

Will some one who has used chick leg bands of different colors, to mark certain hatches, or rather broods, please report if they are satisfactory?

Michigan. Mrs. Jennie Hunt,

SUCCESS WITH POULTRY.

The best book on poultry ever published, one which embraces every branch of the poultry business, is Success With Poultry. From the first chapter, "How to Get Started," to the different chapters on every phase of poultry for profit, this is a book that is of greater value than any other ever published.

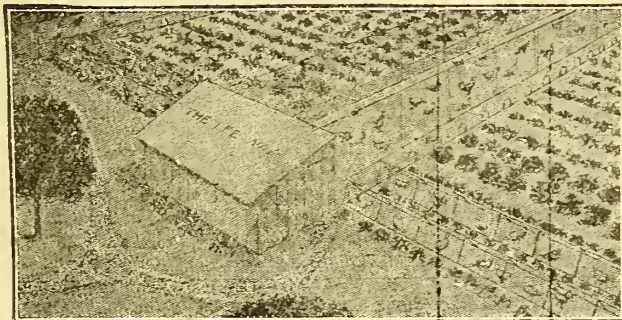
Do you want to know the methods in use in the big poultry plants of the country? Success With Poultry will tell you.

Do you want to get plans for building practical poultry houses? Success With Poultry contains them.

Do you want to learn about raising capons, foods and diseases of poultry and remedies? Success With Poultry tells this.

Success With Poultry contains 128 pages (9x12 inches in size) with numerous half-tones and etchings. Price is \$1 per copy. For price of book alone, we will furnish a full year's subscription to Poultry Keeper and send Success With Poultry postpaid. Offer is good for new subs or renewals. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

Here is THE LEE WAY



of growing chickens and garden on the same ground. The chickens fertilize, weed and cultivate the garden. The garden supplies green food, insects, dust baths and exercise for the chickens. It is simply a neat little arrangement whereby the chickens work between the rows of vegetables without harming the growing stuff.

Lee has just invented a new bottle filling machine for Germozone that fills 28 bottles at a time in six seconds; that is at the rate of 16,000 per hour. Also an automatic machine that will fill 10,000 cans of Lee's Lice Killer per day. That is the Lee way, to do things well with the least time, labor and

expense, and that is the same with all Lee products. They follow the easiest and shortest route to the best results.

Lee's Lice Killer is a great labor saver in poultry work. Before, one had to dust or dip, handle or grease, to get rid of lice and often burn the poultry house to get rid of mites. Now that is all changed. A few moments with a brush or handy Sprayer just before the fowls go to roost and it is done; you don't even touch the chickens. Four sizes: 35 cts., 60 cts., \$1.00, \$4.00. Lee Sprayer 50 cts.

Germozone cures quick or not at all. Germozone fits most cases of chicken disease and there is no long period of "Doctoring." One thorough application should cure the dreaded canker in one night; two or three applications suffice for roup, swelled head, chicken pox, frosted comb, skin disease, sour crop or bowel trouble and it is so easy to use. Then too, Germozone has many other uses about the home or farm as an antiseptic, germicide and fungicide. Large 12 oz. bottle 50 cts. Gallon bottle \$3.00.

There is one store in most every town where the Lee line is handled; at least there are 2,700 such towns in Nebraska, Kansas, Iowa, and Missouri, with 7,400 in other states. Any of our dealers will gladly give you full particulars and our free poultry books. *If you will write us, we will give you details by return post.*

Geo. H. Lee Company
Omaha, Nebraska

PRIZE OFFER

We are, this season, offering big cash prizes of \$100, \$50, etc., to followers of "the Lee way." If you contemplate any changes for next season, better get in line for one of these prizes. It means no extra effort. Arthur Meisinger of Peoria, Ill., won the \$100 prize last year. We give full particulars free.

AUTUMN HINTS

Be sure to take your birds into the winter free from lice and with the house clear of mites. They will lay better and come into the next breeding season better. Then, too, you will not have trouble in the spring with lice on the young stock. It needs only a few minutes, occasionally, with Lee's Lice Killer.

The first chilly fall weather is generally more productive than mid-winter of colds, roup, bowel trouble or canker, especially if damp. Roup, or canker, once well started, may run all winter. Guard against this by giving Germozone in the drinking water twice a week as a preventive. Watch for the first watery eye or dirty beak; the first wheezing or coughing; the first unhealthy droppings (healthy droppings are firm, solid, slate colored, tipped with white). Always use Germozone on first indication of trouble.

FALL hatching is a success if you let the Magic Egg Tester pick out the eggs you are going to use. If you buy now you get the longest time for trial. One Tester (with absolute guarantee), by mail \$2.00. Your money back after trial if desired. Ask for circular and testimonials. Magic Egg Tester Works, Dept. E, Buffalo, N. Y.

Demonstrated, proved and sold at Poultry Shows by large Poultry Supply Houses in America, Europe and Australia.

HOW TO MAKE EGGS !!!



Prescription No. 4 does the work. It makes hens lay 5 lbs. enough for 150 quarts of feed, for \$1, and your money back if not satisfied. 1 lb. 25c. Prevention and Cure of Sore Head and Roup. Prescription No. 1, 2, and 5. Any one 25c; all 50c. Money back if not satisfied. Nabob Remedy Co., Box R, Gambier, O.

BROWN POULTRY FENCE

Costs less than cheap netting. Lasts 6 times as long. Top wire 3/8" gauge, bottom wires 1 inch apart—all heavily double galvanized. Rust proof, stock strong, chick tight. Sold direct from factory, freight prepaid anywhere. Mail postal now for free books and sample to test. Address: THE BROWN FENCE & WIRE CO. Department 57 CLEVELAND, OHIO

Feed Pearl Grit

Serves a double purpose. It grinds the bird's food, thus aiding digestion and also furnishes shell and egg-making material. It makes Hens Lay. It furnishes strength and feather making material making hens to moult and lay at the same time. Send for our new valuable poultry booklets giving prices. The Ohio Marble Co., 13 S. Cleveland St., Piqua, O.

Save Work, Time, Money

By using our low down steel wheel wagon

Electric Hand Wagons

saves high lifting, lighten draft, don't rut roads. Spokee don't loosen—wheels don't dry out or rot. Write for free book on Wagons and Wheels. Electric Wheel Co., 45 Elm Street, Quincy, Ill.

Queen

You Save \$10 to \$12 on the high class Queen incubator. No better at any price. Hatching conditions right; gets most chicks, strongest, healthiest. Free Poultry Guide and Catalog gives 28 points of excellence. Quick deliveries to extreme East and West. Sold on money-back guarantee. Queen Inc. Co. Box 2, Lincoln, Neb. Prant Food Co., East'n Dist'n, Philadelphia, Pa.

45 Varieties Land and Water Fowls

Send for free illustrated catalog, which tells you much you should know. Stock and eggs at all times. S. A. HUMMEL, Box 50, Freeport, Illinois.

Plain truth is, you will have no lousy hens if you paint the inside of your henhouse with **AVENARIUS CARBOLINEUM** (Registered) once a year. It's guaranteed. Write for circulars and testimonials. Carbolineum Wood Preserving Co. Dept. 54, Milwaukee, Wis.

BONE CUTTER FREE

Every poultry-raiser needs a "Dandy" Green Bone Cutter. Cut green bone keeps fowls healthy, vigorous and productive. It is a wonderful food for increasing the egg supply and for pushing the growing chicks. The "Dandy" prepares the bone fresh every day—Just right for feeding to best advantage. It feeds the bone to cutters automatically and is the easiest running, fastest cutter made. Write for catalogue. CRATTON MFG. COMPANY, Box 43, Erie, Penna.

ON TRIAL FOR 15 DAYS

EXPERIENCE WITH BROWN AND WHITE LEGHORNS.

I have had about five years experience with chickens. I started in a small way, using hens to do my hatching the first year. I started with twenty-two Brown Leghorn hens and pullets. The first winter I did not get an egg until along in January. Some time in March I decided to get an incubator and brooder so sent for several catalogues. The Reliable Standard looked better to me than any of the others as it had the lamp underneath the incubator, with patent turning rack in the egg tray, so I ordered a 120 egg size incubator and a 100 chick brooder. I risked only eighty eggs the first time, although I had 120 eggs saved up. In due time 36 chicks hatched; only one being slightly crippled. I was rather discouraged as I wanted to hatch a chick for every egg. I placed the chicks in the brooder which was heated to 90 degrees before the chicks were put in it. I fed the chicks when about 30 hours old, which was too soon as it did not give the chicks time enough to absorb the yolks of the eggs. I raised only 15 chicks from this lot, which was the last for the incubator and brooder for that year. I had had no previous experience with artificial hatching and there was no one else in the neighborhood who had.

The following winter I ordered the Poultry Keeper, as I was not taking any poultry journals at that time. The Poultry Keeper has taught me many valuable things, among them being feeding for eggs; care of incubators and brooders; feeding chicks, etc. I immediately ordered some beef scraps to balance a dry mash for my pullets, thinking that I might get at least a few eggs during the late fall and winter. In about a month the eggs began to come in right style and I made a neat sum of money that winter. I have been using beef scraps, blood meal, bone meal and oyster shells ever since. We raise all the grain on the farm, including corn, wheat, oats, cow peas, and all the green feed, clover, turnips and rye.

We have a gasoline engine and mill to do our grinding which is very handy. We mix our own mashes and feed them dry in hoppers. We start our chicks off on cracked wheat, which, as Dr. Santorn teaches, seems to be the best feed for chicks. We feed just a little the first day, as they can't stand stuffing when only a few days old, then increase the feed as the chicks get older. A hopper of bran and beef scraps is placed before the chicks when about ten days old. I use ten parts of bran that has a little middlings in it, to one part beef scraps.

Yes, there is money in the chicken

business, but there is also lots of work, planning, studying, reading, etc. I have made money, but not as much as I expected to when I started in the business. I now have two incubators, of 360 egg capacity; two hovers, and four brooders of 200 chick capacity, but put only 75 chicks in a brooder at a time, as it never pays to crowd chickens, young or old. I have 300 laying birds at present, mostly pullets, and am breeding White Leghorns, as they are easier to breed true to color than S. C. Browns. I have two pens of White Leghorns from stock which has won prizes at Atlanta, Ga., and Charlotte, N. C. I believe that it pays to get the best when you buy.

Howard L. Rhyne, North Carolina.

LIKES THE WHITE WYANDOTTES

For many years we had been keeping different kinds of chickens, but got tired of changing every year so decided to keep only White Wyandottes, which, with their white plumage, yellow legs, red faces and small combs, look as pretty as a picture. They are always busy, scratching from morning until night and I am never without eggs or a tender chicken for the table the year 'round. I feed them mash in the morning, cabbage for green food and Chamberlain's Acorn Scratching grain for the evening feed. I had two pens last season and could not supply the orders I had for eggs.

There is nothing more beautiful than a flock of white chickens on a green lawn with old biddy running hither and thither trying to keep tab of her brood. It is amusing sometimes to sit down where you will not disturb them and watch them for a while. I once had a pet dog that liked to be with the chickens, as well as biddy. He would lie flat and crawl along the grass until he got to biddy and her brood. If she saw him she would fly on him and try to drive him away, but he did not seem to mind it much and she got tired and tried to call her chicks away, but they would not go. They seemed to know that he was their friend and no cats dared to molest them. I would put him in the house with the chickens at nights and they would be safe from cats or rats. Nothing pleased him better than when the chicks crawled all over him. He died among the chickens and was buried in their yard. I have greatly enjoyed going out among my chickens and walk very carefully when they crowd around me so that I will not step on them and hurt them as I do not want them to be afraid of me.

Mrs. J. Krone, Missouri.

MORE ABOUT THE TRUE TYPE OF INDIAN RUNNER DUCKS.

Editor, Poultry Keeper:

In one of your issues I noticed that J. W. Walton, stated that the true Indian Runner Duck lays a green egg. I am an old breeder and have also judged at some of our big shows. I have also been an exhibitor and have made a study of the Runners, following all English and American papers. I have followed Mr. Walton and I must say that he is the world's judge and I think the Australian judges appreciate Mr. Walton.

In reference to the color of the eggs I will say that the best type Indian Runners lay green eggs. My friend, Mr. King, of W. A. Australia, imported some Indian Runners from Messrs. Wilson & Son, Westmoreland, England. The duck took first prize at Leeds; first at Dairy and first at Liverpool. The drake took third at the Dairy show. The young stock raised from these birds, the best type lay green eggs and the fawn, short, flat ducks, lay white eggs. I enclose you a copy of Mr. J. W. Walton's letter which I have had in my scrap book for the past three or four years. I will leave it to you to judge. I have not the date of his letter.

W. O'Shunnussy,

West Australia.

(Copied from Feathered World, England.)

I think Mr. Proud is under a misapprehension as to what constitutes true fawn coloring, for I have never seen a drake with genuine fawn head markings. I have noticed several that might correctly be termed bronze as they showed little or any green shading. I have heard of several fawn-headed drakes, but have yet to see one. The head markings of the finest drakes I have even seen were bronze, or a dull bronze green. The rump and lower part of back is of similar color, to the head, but the tail is much lighter and more nearly approaches the color of the body. Mr. Proud further states that egg color is really no criterion. They may be green or they may be white. I venture to say that green eggs are a sure and certain indication of cross breeding, having experimented with several green egg strains reputed to be pure Indian Runners. I am satisfied that all birds laying green eggs have a very strong dash of blood other than Indian Runner in their veins and no matter how good looking a bird may be, if it lays green eggs, I would give it a wide berth.

(Signed)

J. W. Walton.

DRY MILK FEEDING.

Editor, Poultry Keeper:

In the March issue of your valuable paper you published an article by me on "Beef Scraps." Your devil did some misspelling and misplacing. However, in the main it was correct. What I wish to say now is that I have put my foot in it. For the last six days I am literally swamped with inquiries



Lice Prevent Hens Laying

Hens that are pestered with lice can't lay eggs as regularly as they should; they expend their energy pecking and clawing themselves to allay the itch. And don't forget this—lice breed terribly fast, and the longer they are left alone the harder it is to get rid of them.

DR. HESS INSTANT LOUSE KILLER

kills lice on poultry and farm stock. It kills them *instantly*—as soon as it gets to them—that's why it's called *Instant*. It also destroys bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes, etc. See the name "Instant" on the can—that's the louse killer formulated by Dr. Hess (M.D., D.V.S.). Sifting-top cans. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. If not at your dealer's, write

DR. HESS & CLARK, Ashland, Ohio

about formula, method, etc., of dry milk feeding and where to procure a supply. It is impossible for me to answer all inquiries. I had in one day 56 letters and most of them forgot to put in postage. I commenced to answer but had to give up.

Formula of dry milk feed as used by me is: Two parts of alfalfa meal, two parts of bran, one part of dry milk. Mix and place dry into hopper of good construction. Place before chickens and let them help themselves.

It is essential to give them clean (luke warm on cool days) water, replenished 2 or 3 times a day in clean vessels, otherwise you will fail. This mash makes them thirsty without acting as an irritant like the usual forcing feeds do. Without a plentiful supply of water you cannot get eggs.

Do not feed beef scraps. Do not feed bone, but give oyster shell and charcoal. Also feed, alternately, a good wheat, corn, oats Kaffir corn and buckwheat in clean straw litter as scratch feed.

The results will surprise you; no yellow bowels; no diseased birds, but a healthy singing lot, red combs, alert and on the job, laying eggs even in the coldest days, of the best flavor of more than average fertility. I have, for trial, brought one hatch of 10 in January, out of 11 eggs. The same average holds in February and March. The vitality of the chicks is splendid.

My hobby is Rhode Island Reds. Of course I have decent stock and properly built and properly kept chicken houses.

I place a pinch of lice powder under the tail of birds once a month. There is never a parasite on my stock. This is an absolute necessity.

I buy the dry milk from the French Kremling Co., No. 6 Bush Terminal, Brook-

lyn, N. Y. However you may obtain the dry milk from any decent baker supply house as this milk is now being used by the best bakers in high class bread and cakes.

This milk consists of all the solids of fresh sweet skim milk, evaporated by a method that does not destroy the enzyme nor coagulate the albumin. This is essential for its proper work.

Do not confuse dry milk with milk albumin. That will not do the same work as it is lacking in enzyme, minerals and antiscorbutic principle.

M. M. Rochelle,

New York.

FOR THE FRUIT GROWER.

The Fruit Grower and Farmer, of St. Joseph, Missouri, has charged over to a twice-a-month publication. The west is the section of the country that has made the rapid strides in fruit growing and the Fruit Grower & Farmer is the one paper in closest touch with this section. The former price of the Fruit Grower and Farmer was One Dollar per year and this price will not be changed under the new arrangement, giving twice the number of papers each year. Readers of the Poultry Keeper cannot make a mistake in subscribing for the Fruit Grower and Farmer to keep them posted on all phases of the fruit industry. Orders sent to us for Poultry Keeper and Fruit Grower and Farmer for one year, will be entered at a special clubbing price of \$1.25 for the two papers. This offer is good on renewals or new subscriptions. By ordering now the most interesting issues of the whole year will soon be at hand as the fall and winter issues are the big issues in each of these fields.

Success with Poultry

Is worth more than all other poultry books put together, if you want to learn how to

Make Money With Poultry

118 Pages, (9x12 inches Handsomely and Extensively Illustrated. Printed on Embossed Paper. Describes Different Breeds, tells how to Feed and Care for Old and Young. How to Run Incubators and Brooders.

Price \$1 per copy. By special arrangement we will send book postpaid and a year's subscription to the Poultry Keeper for \$1. Address

POULTRY KEEPER PUBLISHING CO., Quincy, Ill.

EXPERIMENTAL FEATURES OF THE THIRD INTERNATIONAL EGG LAYING CONTEST.

A brilliant outlook for the Third Annual International Egg Laying Contest which opens Nov. 1, next, at Storrs, Conn., under the auspices of the Connecticut Agricultural College. Several circumstances have combined to make for a bigger and better competition.

One of the most interesting and valuable features of this contest will be the entry, by the Storrs Agricultural Experimenta Station, of ten pens for experimental purposes. These pens will not, of course, compete for prizes, but will be used for testing different rations, different methods of feeding the same ration, and for other work of a similar character. The directors of the competition cannot, of course, conduct experiments with the birds of regular entrants in view of which fact they are pleased to have such an entry from the Experiment Station. Previous competitions at Storrs have been unable to have such attractive features, but can do so now by reason of the fact that the contest will be conducted under the exclusive management of the Connecticut Agricultural College and not in co-operation with other and outside institutions.

International interest in the third competition will be keener than ever. The Englishmen succeeded in securing only fourth place in the first event; but at this writing (Sept. 20) they will apparently win first honors in the second event which closes October 31st. The Englishmen are not, however, satisfied with this showing; they are coming back doubly fortified; the leader has entered Wyandottes as well as Leghorns in an effort to distance American breeders with their own breeds.

Raising the number of birds from five to ten for each entry has been gratifying to competitors generally since it enables them to get a trap-nest record of twice as large a flock at relatively half the cost per bird. Furthermore, pen records from flocks of ten are altogether much more reliable. Again, if any individual fails to produce (this has actually happened in three instances in the current competition), the pen record is not

nearly so adversely affected as when five birds constitute the competing pen.

Another interesting feature that deserves mention is the fact that specialty clubs, such as the White Laced Red Cornish Club, the American Buff Wyandotte Club, etc., have entered the race. The management realizes that this is a far sighted plan on the part of the specialty clubs to invite the public's attention to their respective breeds. It is, nevertheless, commendable procedure and the competition has accordingly welcomed them.

Connecticut Agricultural College, Storrs, Conn.

WHY EGGS DO NOT HATCH.

Editor, Poultry Keeper:

One of your writers in the September issue wants to know why her eggs don't hatch. The Buckeye Reds are very heavy. That is where the trouble is. Tell her to throw away the feed hoppers and feed them two or three times a day, what they will clean up. Eggs from fat chickens are not fertile.

Karl Schmidt.

Ohio.

SPECIAL CLUBBING OFFER.

By special arrangement with the publishers we can furnish any poultry paper at one-half price providing the order includes a year's subscription to Poultry Keeper at regular price. For instance, for 75c we can furnish a full year's subscription to Poultry Keeper and your choice of Reliable Poultry Journal, American Poultry Advocate, or any other 50c poultry paper. Make up a list of the papers you desire and let us quote you a reduced price on the lot. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

To any reader of Poultry Keeper sending us a list of twenty names, of people interested in poultry raising, no matter whether they keep one or a hundred hens, we will send free of charge a copy of our booklet number four on "Feeding for Eggs." This booklet contains much information on this all-important subject of service to those wanting winter eggs.

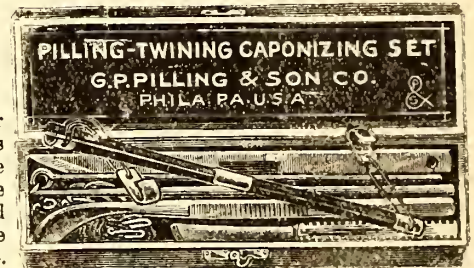
GET A GOOD BONE CUTTER.

The relation of the bone cutter to egg getting is very close. Bone is a necessity for the laying hen. It furnishes the materials she must have to produce eggs. She cannot lay without these materials, and she does not get them in sufficient quantity in her ordinary daily rations.

This is particularly true of penned-up hens. The materials must be supplied. And there is no place where these materials can be procured so cheaply and so easily as from the green bones that ordinarily go to waste at the meat market and in practically every kitchen. These bones ought to be turned into money by first turning them into eggs. You would use the bones for that purpose instead of letting them go to waste if you were equipped to prepare them for the hen's use.

That brings us to the bone cutter. Get it, have it always ready and use it daily. Get a good one while you are about it—one that will not break, one that will handle all kinds of bone, one that you will find pleasure in using every day, because it will not wear you out in turning it.

The Standard Bone Cutter manufactured at Milford, Mass., is such a machine. It does not clog or break, turns easily and has become famous as the machine which cuts bones across the grain as well as with the grain. It is made in 12 sizes, and it has been greatly improved this year. The machine gives such certain satisfaction that the manufacturer, the Standard Bone Cutter Co., does not hesitate to send it out on free trial. If you need such a machine, you cannot do better than write the manufacturer about it. When writing about the cutter simply address the Standard Bone Cutter Co., Box 57, Milford, Mass. Their booklet and full particulars will come on request, free.



PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

TURKEY RAISING.

The high price paid for turkeys around Thanksgiving or at any time during the year ought to induce more farmers to try to raise this noble bird.

As a rule it is conceded that turkeys are hard to raise and require so much attention during the year. It is true that in the spring, especially when we have a cold, wet one, it is very hard on the poults as they have to be confined so much which does not agree with them. I had an experience again last spring. I set about 9 common hens with turkey eggs and hatched 75 poults real early and the weather was so unfavorable they had to be confined for nearly a month most of the time, and to my surprise lice got in them, and so one after the other crossed the "Divide" until I had but a dozen left. I came to the conclusion never to use common hens again as mothers and not to set them so early. A month later another batch hatched, the weather being much better then, I raised a large per cent of those as I had them with the old turkeys. I kept them confined for five days, then let them go, and hunt their own food.

The third hatch came out the 4th of July. Insects being plentiful and warm sunshine, I did not house or feed them, and every one of them survived, and I made the most money out of them, paying no attention to them whatever. They stayed in a neighbor's woods and did not come home until no insects could be found and they were nice and fat at that time.

Of course I often made visits to them to see if everything was all right, which everyone should do.

I raise four varieties now, namely: Bronze, White Holland, Bourbon Red, and Black, two varieties on the home farm, the other two farmed out. I do not find much difference in the varieties. The Bourbon Red are more of a home turkey and I think people with limited range should try them.

Inbreeding should never be practiced to any extent in turkey raising. Breeders should not be over-fat and get as much exercise as possible. One male should be used for each eight to ten females. However, it is good advice to use two males and alternate them every other day; as a rule turkey eggs are very fertile.

When the hen turkey starts to lay the nights are usually cold so the eggs should be gathered each day and marked with the date.

They should be placed in a cellar or any other cool place. at a temperature of from 40 to 60 degrees. and turned every other day until they are used for hatching. It is best not to keep the eggs over three weeks.

When you take the eggs from the nest be sure to put china eggs or hen eggs in the nest, as the mother turkey is apt to hunt another nest.

About a month before my turkeys start to lay I place barrels in secluded places, covered with branches, etc. It is very seldom that they refuse such a nest and it saves so much time in hunting for them.

When the turkey offers to sit let

Two Big, Sure Money-Makers Pittsfield Barred and White Rocks

Buy your Breeders here

Right now we have an exceptionally fine lot of breeding birds of both Barred and White Rocks—all raised on fresh land. Getting the Pittsfield stock to the highest pitch of profitability has been our object for these many years—our pens were never better than they are right now.

Breeders—Barred and White Rocks. For shape, color, health, vigor and heavy laying the Pittsfield strains have positively no equal. You need these birds to strengthen and build up your flock and get the right blood. Our enormous facilities and careful system of grading enable us to give you birds at any desired price.

Exhibition Winners. Every year we sell birds that catch the judge's eye at the shows and are a source of profit to our customers. Perfect markings, perfect shape, healthy, vigorous birds.

Write now if you want bargain prices.

Pittsfield Poultry Farm Company



Also 8-Weeks-Old Chicks

By buying these 8-weeks-old chicks you save brooding troubles.

There are no losses through leg weakness, diarrhoea, rats, etc. The birds are well feathered, firmly on their feet, big framed, and, equally important, you can select the desired number of cockerels and pullets, whereas in buying day-old chicks you have to take the count as they come along.

The pullets of these 8-weeks-old chicks will be on the job early next spring to start off on a career of heavy egg production. Prices are low—the number, of course, is limited; so write at once for prices, so that you can book your order early and save disappointment.

Remember, We Guarantee Safe Delivery Anywhere. Write now for "Money-Making Poultry," a new, handsomely illustrated book chock-full of sound, practical, money-making advice on poultry. Tells everything a poultryman ought to know about poultry. Write today—it's free.

410 Main St., Pittsfield, Maine

POULTRY SHOW CALENDAR.

PLACE.	DATES.	JUDGES.	Secretary.
Augusta, Ga.	Nov. 7-14	Shellabarger, Coleman, Hemenway	Jno. J. Cohen, Jr.
Chicago, Ill.	Jan. 5-11	and Hayes.	Arthur E. Lemieux, 4539 Eberly Ave.
Elgin, Ill.	Jan. 5-10	G. H. Northrup	C. H. Leitner.
Greeley, Colo.	Jan. 6-9	D. A. Stoner	Sam Hallett, Hicks, Heimlich,
Kansas City, Mo. ...	Dec. 11-16	Hobbs, etc.	E. L. Noyes.
Laconia, N. H.	Dec. 9-12 .....	.....	P. R. Lane.
Madison, Wis.	Jan. 5-9	Hackett & Russell	J. G. Halpin, Wisconsin Poultry Assn.
Missouri State Show, Kansas City	Dec. 11-16 .....	.....	T. E. Quisenberry, Mtn. Grove, Mo.
Norfolk, Va.	Jan. 6-9	Nixon, Huyler and Griffin	Paul W. Kear.
Pauding, Ohio	Jan. 26-31	L. C. Taylor	C. P. Klingler, Russell, Hale, Hare
Quincy, Ill.	Nov. 26-30	and Johnston	A. D. Smith
Roanoke, Va.	Dec. 2-6 .....	.....	F. J. Gormican, Oke, Wells, Card,
Springfield, Mass. ..	Dec. 16-18	Atherton and Ives	W. E. Blodgett.
Terre Haute, Ind. ...	Dec. 31-Jan. 6	Theo. Hewes	M. Austin Potter, Schwab, Cornman
Washington, D. C. ..	Dec. 22-27	and Brown	P. Francis Sutor, 716 21st' N. W
Waukegan, Ill.	Jan. 5-11	Chas. McClave	L. A. Doolittle.

her remain quiet on the nest for a few days, then gently place about 8 eggs under her, dust her with a good insect powder which does not effect the eggs, and she will prove the best mother. After they are 36 hours old, remove to a nice warm place. Feed the poults very sparingly; at first of stale bread soaked in sweet milk, pressed dry, hard boiled eggs, chopped dandelions and onions. Cottage cheese is also very good if obtainable. Always guard against lice.

When about 5 or 8 days old, if the weather is favorable, allow the poults and mother freedom. The best place for such is a field where the grass is short. Pasture is very good. Woodland is also suitable. Keep them out of tall grass and grain field when there is a heavy dew or in rainy weather. The cold wet is very injurious to the poults. In July and August I pay no attention to this. This is meant for May and

June. Keep plenty of grit, charcoal and oyster shell where the poults have access to it at all times.

Many persons think the old turkeys ought to roost inside during winter. This is entirely wrong. They are much better off in the trees all the year round, and remain in a much better condition, unless on a cold sleety night or during a very bad blizzard at which time they appear to be more comfortable inside.

People who have not tried raising turkeys ought to make an attempt in raising this beautiful bird. It does not take much to get started, and it is certainly a pleasant and delightful occupation. I raise about 32 varieties or land and water fowls, but I shall always have plenty of time for my turkeys.

Monroe E. Maechtle,

Wisconsin.

Natural Hen Incubator ^{200 Egg Size} \$3.00 only



Let us send you our Catalog and prove to you that we have the incubator you cannot afford to be without. It assures you immediate success in the Poultry Business. Its cost is very small. It needs but little attention, and produces the greatest percentage of healthy, vigorous chicks. It is the only incubator without mistakes.

J. F. SIEMS Over 550,000 Sold Patentee

Mr. R. I. Whitmer, from Kans., writes:—"It is the grandest thing I ever saw." Another—"It's a labor-saving invention." Another—"Greatest success of the age." Another—"I hatched out 507 chicks from 540 untested eggs," etc. Thousands of voluntary testimonials. No freight to pay. *More agents needed. Send postal today for Catalog containing Special Introductory Offer.* Address

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CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use **PILLING CAPONIZING SETS**. Postpaid \$2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c, Gape Worm Extractor 25c, French Killing Knife 50c, Capon Book Free.*
G. P. Pilling & Son Co., Philadelphia, Pa.

Hens Need Green Bone
Greatest of all egg-making foods. Supply it fresh, get it low priced. Cut it at home with a **STANDARD Bone Cutter**
(Greatly improved this year)

The cutter that handles bone in all conditions and doesn't break down. The favorite everywhere. It always makes good. Its easy turning, strength and nice work in cutting bones across the grain please every user. 12 sizes for hand and power, costing from \$6.75 to \$195. Send for free book. **STANDARD BONE CUTTER CO., Milford, Mass.**

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"The Ideal"
Trap Nest
SHOWS WHICH HEN LAID THE EGG.
The world's leading trap-nesters use them. The "Ideal" is practical for you or I will refund your money. The cost is small. Mr. N. G. Dun, Van Buren, Ark., writes: "I am more than pleased." Have made the nests at **FIVE CENTS EACH. NO WATCHING! NO FREIGHT! PLANS, TRAPS, BANDS AND RECORD SHEETS.**
Write me today for prices and proof.
F. O. Wellcome
BOX C, YARMOUTH, MAINE.

Let Us Prove to You More Money With Poultry

THAT YOU CAN MAKE

Walter Hogan has had 50 YEARS EXPERIENCE in breeding for egg production, his book the "CALL OF THE HEN" now published, shows how he solved the problem of

THE 200-EGG HEN

In 5 years at Petaluma, he bred a flock of 1000 200-EGG HENS. His pen of pullets in the 1912 Missouri Contest won for the greatest weight of eggs, 131 pounds 2 ounces equal to 223 3-5 each No. 1 eggs at Petaluma. He told Mr. Quisenberry that they were 220 egg type. The book shows:
How to pick out the egg type, and breed them with certainty of success. How to tell approximately the number of eggs a hen will lay. Thousands making money by using this method; one State Hospital reports \$1500 INCREASED PROFIT in one year. Book contains 126 pages, 52 half tones, 15 charts. Send \$2.00 to the Sonoma County National Bank, Petaluma, Cal., and we mail you the book; keep it a week and if you do not want it, send it back and the Bank returns the money. (Please mention Poultry Keeper when writing.)

BARRED ROCKS.

It is one of the pleasures of life to me to write about the "Best Breed." Of course I mean the Barred Plymouth Rocks. For the last seventeen years I have bred them exclusively and have never in that time had the least desire to try anything else, for they have been a greater profit than any of our neighbor's flocks. We generally keep between two hundred and three hundred and in our severest winter weather we are sole headquarters for eggs for miles around. People do not hesitate about driving miles or placing orders with us for eggs for they know that our Barred Rocks are attending strictly to their occupation of laying.

Take it year in and year out and you can trust it to the peoples' judgment and you will see that the greatest demand for any one kind of poultry is for the Barred Rocks, and they have honestly earned their title, "The Best Breed."

Even their enemies have to admit that they are the hardest of all breeds. They will thrive and do better under any old treatment than any other breed, and with intelligent care and humane treatment will respond a thousand fold both in increased size and in their output of eggs.

While some other breed may lay more eggs in a given number of days in the spring, when any thing that wears feathers is laying, yet this breed cannot be justly criticized in this respect for take any of the great laying contests that have been held in recent years and just see where Mrs. Plymouth Rocks comes in. It is not the hen that lays a great number of eggs for a month or two and then stands around the balance of the time meditating about it and trying to get up courage to try again, that brings popularity to her breed and golden shekles to her owners, but the one that keeps steadily at it through winter's snow and summer's heat. And such we have found in this breed.

There can be no better mother. She is known the whole world around as the best mother and as for her ability to hatch out a whole nestful of downy

beauties there cannot be enough said. Yet she is not at first inclination hard to "break up" from sitting, but once give her a nest of eggs and you can trust her with far better results than you can trust your favorite incubator, and if something unavoidable should happen and you do not get to feed her for several days you will find the eggs warm to the right degree. Where is the incubator to compete with her?

There is a symmetry and style, a coloring and curves about a Barred Rock that cannot help please the most critical. Take a look for one minute at a perfectly developed Barred Rock and note the magnificent strength here displayed.

There is nothing fanciful about them. The well defined ringlets in sober colors form a background against which the clear eyes and bright comb show to such a pleasing advantage and their bright yellow strong legs and beautiful trim feet cannot help but excite admiration.

There is another way too look at their beauty, for what can be more tempting to the palate than a plate of delicious fried Rocks and this too appeals amazingly to most people.

They are so hardy and mature so quickly and are so docile and quiet that it is a pleasure to raise them for this purpose alone, if we were so situated as to make it impracticable to keep them for their eggs and for the show room.

West Virginia. F. E. Payne,

The American Buff Plymouth Rock Club is making a campaign to enlist all breeders of this variety into furthering the popularity of this breed. In addition to the yearly catalogue this club publishes the Buff Rock Quarterly and by offering special ribbon and cup prizes at many of the leading shows, has succeeded in getting large entries of the Buffs so that the public may be better posted on the looks and good qualities of these birds. Breeders who are not now members of the club may obtain farther information by writing the secretary, Thomas B. Elliott, R. R. 29, Box 163, St. Louis, Missouri.

GETTING A RIGHT START WITH POULTRY.

Poultry keeping is like any other line of business in that success or failure depends much on how one gets started. Beginners frequently get discouraged at the first obstacle met with and give up the business without giving it a fair trial.

There are many obstacles to be met in poultry keeping for there are so many little details to look after and if one becomes careless in these he will surely reap the results. The first thing to consider is the selection of the breed one wishes to keep and as it is pretty generally accepted that one is as good as another, much depends on ones locality, and as the demand for a certain breed in some sections is much more pronounced than others, one should always bear this in mind, especially if in the fancy bird business.

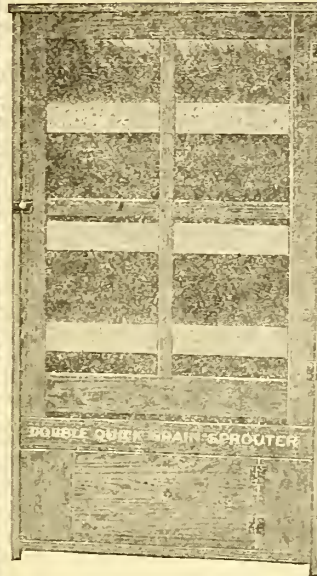
Then, too, much depends on what branch is to be his particular trade; whether he is breeding for market or for fancy, and a combination of both of these pays the best generally. The American breeds, such as the Plymouth Rocks, Wyandottes, and Rhode Island Reds, are all good breeds, and the Orpingtons of the English class have also become very popular in recent years.

After selecting the breed then one must decide how he wants to start, with stock, eggs or baby chicks. All three ways are good. However if one can afford to pay a good price the purchasing of a trio of birds has the advantage in that one gets a good start the first year and saves much time in perfecting his strain. However amateurs frequently make the mistake of buying thoroughbred fowls without having any previous experience with poultry and I believe there are many people who would have much better success if they would first keep mongrels for a year or so until they had learned something of the care of chickens, for even with mongrels considerable profit can be made by marketing the birds early before they eat their heads off.

After selecting a location with good drainage, a good laying or roosting house should be built with both a glass and muslin front, which should face the south. The glass is to let in the sun light and the muslin for ventilation. Ventilation is a very important point to consider as on this alone depends the vigor of your flock, or at least whether your fowls are to remain healthy, for a tightly closed house at night will cause dampness and nothing lowers the vitality of the flock more and this in turn results in disease. However the writer has found that with a strong, cold south wind blowing in this climate, at least, it is a good plan to have burlap curtains to draw down over the muslin openings at night only. These are not lowered however unless the thermometer is below zero. No curtains should be hung in front of the roosts as this makes the roosting place too warm and when the fowls fly down into a colder apartment in the morning colds and roup will result.

A scratching shed with a deep litter of straw is almost a necessity when

DOUBLE QUICK GRAIN SPROUTER



Shows Oat Sprouts 8 Inches High
of 2 inches daily. Made in six sizes from a few hens to 1000. Send for complete Double Quick information.

CLOSE-TO-NATURE CO. - 20 Front Street - COLFAX, IOWA

THE PERPETUAL POULTRY SILO

This is the fourth season that readers have seen in the poultry papers the following very familiar line:—

SPROUTED OATS — WINTER EGGS

and several thousand poultry keepers have immensely increased their egg yield by the use of the well known Double Quick Grain Sprouter—the original—the first—the oldest sprouter and made in the Largest Grain Sprouter Factory in the World. We have supplied many of the large and well known poultry plants in the United States, some having ordered as many as three to five sprouter after testing out their value.

Later—April 27—I am enclosing my check for two more of your No. 5 Double Quick Sprouters. The one I bought some weeks since is doing good work.—C. H. Latham, Beauty and Utility Barred Rocks, Lancaster, Mass.

October 7, 1912—On September 16th I ordered your No. 5 Double Quick Sprouter sent to Maud L. Kaler, Columbia City, Ind., and this one is proving so satisfactory that she wants another of the same size and therefore you will find draft in payment of this second sprouter.—Milo R. Meredith, Indianapolis, Ind.

September 14, 1912—I ordered and received from you last fall one of your 5-tray grain sprouters. This works very satisfactorily. I want one for 1,500 hens. Will you kindly advise me by return mail if you make a larger size and the price of same. Later—September 23—I enclose you my check for which please ship me rush one of your No. 6 Grain Sprouters.—E. A. Palmer, Providence, R. I.

Soon pays for itself. Makes two to four bushels of feed from one of grain. Sprouts in 24 hours and forces growths of 2 inches daily. Made in six sizes from a few hens to 1000. Send for complete Double Quick information.

the ground is covered with snow, for fowls should not be let out in the snow under any circumstances. Plenty of grit should be provided at all times and fresh water given often.

As a laying food in winter I have found the following to be good: Cracked corn in litter in the morning, to induce exercise; a mash composed of wheat bran and middlings, equal parts, in which has been added linseed meal and beef scraps, and green food such as green cut bone, alfalfa meal or cabbage. Bones burned to a charcoal state and fed with the mash are also good. Sour milk is also good. Sweet milk may be given but as a rule the fowls prefer the sour to the sweet. At noon a feed of whole wheat is thrown in the litter and at night a feed of whole corn is given and also oats, which have been allowed to soak in warm water several hours before feeding, to soften up the hulls.

In setting eggs for hatching a good plan is to wipe off the shells with alcohol or one of the cresol preparations in order to kill any germs of White Diarrhoea which may be on the eggs. Where large flocks are raised the incubator is a necessity, but if one raises but a few hundred chicks yearly and has plenty of hens to sit one can get along well without an incubator, provided he has the proper appliances to house biddy and her brood. The writer believes in a good brooder house or colony coop in which to house chicks in bad weather. Colony houses are also convenient for growing stock after they are six weeks old.

Perfect cleanliness is necessary at all times as vermin and disease will make havoc if this rule is not observed. A good remedy for mites is com-

mon kerosene liberally applied to roosts and crevices and this followed in a day or so with a good spraying of the coop with one of the standard cresol preparations. Lice on the fowls may be killed by catching the fowl and looking her over carefully and applying a little melted lard direct to each louse, this is also excellent for the large head lice on chicks. TLEs is more efficient than the lice powders but they may be used if desired.

In spite of all there will be times when the courage of every poultryman will be tested but don't give up. Keep at it and you will succeed in mastering the obstacles.

Often disease will break out and this will test your courage sorely, especially if long neglected.

First separate all sick birds and disinfect with some good disinfectant. Zenoleum is excellent for this purpose and is also good for mites in brooders. If the fowls are very sick better kill them and save trouble and expense, but there are a number of simple remedies for the different diseases which are worth trying.

For roup, try the following: Inject kerosene and melted lard in throat and roof of the mouth, then make salve of 2 oz. vaseline and equal parts turpentine and kerosene, and ½ teaspoonful borax. Bathe the head and eyes with this three times a day. For liver trouble and diarrhoea give ginger and cayenne pepper and powdered chalk and follow with castor oil. Mercury bichloride, one one-thousandth grain to one quart water is also good.

C. S. M.,

Nebraska.

SQUIBS.

Do not expect ninety per cent hatch-
 es from eggs from hens that were forced
 for winter eggs. Also do not expect
 to raise ninety per cent of the
 chicks from such eggs. Do not waste
 any time with weaklings, and in this
 way neglect the other chicks that are
 strong, for you will lose more than
 you will gain.

The best three requisites for a man
 mastering the chicken business are
 grit, gumption and a good wife. Many
 a wife has brought success where the
 husband would have given up and quit.

Do not squander more money than
 you can earn for unnecessary fixtures.

By all means let your wife have the
 pin money she makes from her flock,
 even if it is quite a sum. If she is
 smart enough to make it she will spend
 it wisely. Do not be afraid to dig
 down in your pocket and give her a
 few dollars if necessary. It will mean
 more as a token of love than as a
 gift and besides it means a bright future
 with eggs and broilers direct from
 her flock and you will take nearly as
 much pride in it as she does.

If you are on a farm, by all means
 let your wife raise turkeys. A good
 trio can be bought for \$15. Turkey
 eggs may be set under chicken hens
 and in this way quite a flock can be
 raised.

Are any of your children interested
 in poultry? If they are, by all means
 encourage them and let them see what
 they can do with a flock of their own.
 They may surprise you, even if you
 are wise. They are very quick to
 grasp new ideas and besides it keeps
 them out of mischief and they learn
 a lot that they would not otherwise
 know.

Remember if you can make mongrels
 pay you can make pure bred stock pay
 better. If you doubt it, try them side
 by side. If you do not want to invest
 in pure blood stock, by all means use
 pure bred males with your best females.
 You will be surprised in the
 egg yield and in the improvement of
 the looks of the flock.

Do not scare and chase the hens
 every time you get near them and do
 not by any means permit the hired
 man or dog to scare them. If there is
 any one who comes to your place who
 cannot treat stock and poultry kindly,
 better make him stay away.

Perhaps you can make more by dress-
 ing your fowls than by shipping them
 alive. Find out and do not fail to
 give your wife or daughter the extra
 money for dressing them.

Goslings grow very quickly and soon
 gather most of their feed from the
 fields, but do not skimp them on feed
 as the fall approaches as the grass is
 then getting old and tough and is not
 relished as during the summer. See to
 it that they have plenty of food to
 fatten them without any waste.

Do not hatch more chickens than you
 have facilities to raise. You gain nothing
 by it and it may be the means of
 your losing what you might otherwise

make and cause you to give up when
 you might have won.

Success cannot be attained the first
 year. It takes three years to gain the
 necessary knowledge, and five before
 you are sure of permanent success.

If you have pure bred stock and
 like your birds, remember that there
 are others who would like to buy of
 you. Advertise your birds and eggs
 and begin to work toward even better
 stock by taking your birds to the local
 shows and exchanging ideas with others.
 Treat every patron squarely.

By all means encourage others by
 giving them any information they may
 need for there is no danger of the poultry
 business being overdone. Try to
 unite all the poultry lovers in your
 vicinity into a local association. You
 will all get better acquainted and take
 more pride in your flocks. Take along
 the young people. It may lead to their
 starting a flock and in time the whole
 neighborhood will become interested.
 It may tend to help cut the high cost
 of living. If you feed wet mash, do
 not leave your feed dishes out in the
 yard to become sour. Clean them out
 and hang in the sun to dry. There is
 nothing like the sun to purify any-
 thing. Keep all rubbish cleaned up
 and have your yards present an orderly
 appearance. Then if you have any cus-
 tomers visit you, you will not be
 ashamed to show them around.

Do not forget to utilize the waste
 apples. They are relished by both
 young and old stock. Don't just throw
 them in the runs, but chop some up
 each day. Save all the cull cabbages
 and feed to the thrifty pullets; also
 all the small potatoes. Why leave
 them in the field to rot? They make
 good winter food for your flock and
 are easy to store and help to cut the
 expense for feed.

Harry T. Bates,

Vermont

FILLING THE EGG BASKET DURING WINTER MONTHS.

Eggs don't happen, and the sooner
 our shiftless poultry keepers find it out
 the quicker will their empty egg bas-
 kets commence to fill up during the
 winter months. The egg is a manu-
 factured product, and there are three
 essentials to winter egg production.
 These essentials are good hens, congenial
 surroundings, and suitable food. More
 depends upon the way the hens
 have been bred and selected than upon
 the breed. Well matured pullets
 and young hens are usually the best
 layers, and it rarely pays to keep a
 hen after the second season.

The surroundings must be congenial.
 This means a roomy house with plenty
 of fresh air, but no draughts, abun-
 dance of sunlight, clean nests and roost-
 ing places, and a good place to wall-
 low in the dirt. Unless hens are
 "happy" no amount of scientific
 breeding or feeding will induce them
 to lay during the winter months. Put
 yourself in the place of the hen and
 decide whether or not the surroundings
 are such the hen feels at home.

Suitable food must be supplied. A
 factory cannot make a plow or a pair
 of shoes unless it is provided with
 proper materials with which to work.
 Neither can a hen produce an egg un-
 less she is given the materials that
 compose fresh eggs. Besides, she must
 have materials to maintain the body.
 Her ration must be one of "grains,
 greens, grubs, and grits." A variety
 of grains, clover or alfalfa hay and
 vegetables for greens, waste meat for
 grubs, and sharp sand or commercial
 grit and plenty of clean fresh water.
 Feed all grain in a deep litter of straw,
 hay or wood shavings, so that the hen
 will be compelled to exercise in se-
 curing her food. No exercise—no eggs.
 —(Exchange.)

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 a few minutes, time.

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 ing their papers without expense to
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 willing to do the same?

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 secure three names under this liberal
 offer. A dollar will reach us if sent in
 a letter.

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HATCHING AND BROODING CHICKS.

When I wrote before, it was about my White Wyandottes, which are my favorites, but they are by no means the only kind I breed, as I breed Barred Rocks, Pit Games and Golden Sebright and Game Bantams.

I have tried several makes of incubators and brooders but with poor success and last year I decided to make the old hens do the work. I must say that I am more than pleased with their work. I bought all the sitting hens I could get at a dollar apiece, through March, April and May and with what I set of my own, had all the sitters I could use. I purchased some cheese boxes, which I find just the right size, and cut a piece of sod to cover the bottom and let it extend up the sides, putting in enough straw to make the nests nice and soft. The hens were placed on the nests with a few china eggs for a few days and then given the regular eggs, generally in the evening. I have never had any trouble in getting them to sit, three or four at the same time, then if I had any poor hatches I could give the chicks to one or two hens and reset the others. I do not think it does a hen any harm to sit six weeks, if she is properly cared for and kept free from lice. Of course I would not do this in hot weather. I reset a good many last season and never had one to leave the nest or show any bad effects.

I always dust the hens well with insect powder when first sitting them, also once or twice during the hatch, but let me give my readers a word of advice. Never grease a sitting hen to kill lice. You will not only kill the lice but will kill the germ in every egg. I lost about fifty that way, two years ago, by greasing the hens with lard and coal oil. The only safe thing to use is insect powder, and you can supply as much as you please, only do not use it after the eighteenth day of incubation, as it will get in the chicks' eyes and cause trouble. As soon as the hens and broods are ready to move to their coops I grease the hens with lard and the chicks will get enough on them to prevent lice. I move them to the coops just as soon as the chicks are all dried off, and do not feed them for forty-eight hours, but feed the old hens all they will eat of shelled corn. Corn is heating and the grains are so large that the chicks cannot eat them. After the chicks are forty-eight hours old I start feeding commercial chick feed, by giving a very little at a time and feeding five or six times a day, giving them all they will clean up at night, but being careful not to leave any lying on the ground over night as it will sour and sour food means bowel trouble. I also give them all the skimmed milk they will drink, together with plenty of fresh water.

My coops are my own get-up, and I think they are good enough for anybody. They are 30 inches wide, 36 inches deep, 24 inches high at rear and 30 inches in front. They are made of half inch material. The front is made

with two slides. One at the top is covered with muslin and the one at the bottom with glass. The inside of the top opening is covered with one inch mesh wire to keep out rats, etc., and the muslin slide can be kept open or closed according to weather conditions. The roof is separate, and is made of one half inch material covered with a good roofing paper and fastened to the coops, preferably with hooks and eyes, one at the front and one at the rear. The sides and ends are also made separate and fastened together with hooks and eyes. The floor is made about two inches larger than the coop proper so that the coop sits on top of the floor, allowing it to be lifted off and cleaned. The coop may be taken to pieces and stored away in a small space when not in use.

I build small runways the length of the coops and about ten feet long, covered over the sides, top and one end with one inch mesh wire netting and keep the chicks confined in this way until they are four to six weeks old. The coops are moved to fresh ground every few days. When the chicks are four to six weeks old I raise one corner of the yard and put a stone under it so that the chicks can get out, but the hens are never allowed out of the runways.

By following this system I have had excellent results and have raised 85 per cent of all the chicks hatched this year and I have the strongest and nicest lot of chicks I have ever had.

I would like to see some articles from breeders of Pit Games. I never see anything in the Poultry Keeper about Pit Games, but if the editor will allow me space I will write an article later on, giving my experience with raising and housing Pit Games.

Jacob Spittler,

Ohio.

We have had considerable demand in the past for egg record blanks. The subject of trap-nesting is so important and the matter of weeding out unprofitable birds, so well understood now, that we have issued some egg record blanks, which we will offer as a premium in connection with a year's subscription to Poultry Keeper at fifty cents a year, we to send, postpaid, twelve egg record cards, without additional charge. This offer is good on new subscriptions, or on renewals.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, if desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote you promptly.

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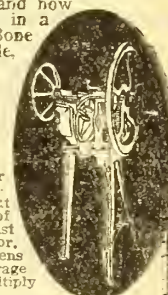
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HUMPHREY, Glass Street Factory, Jubel, Ill.



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CARE OF INDIAN RUNNER DUCKS

Indian Runner Duck eggs are usually more fertile than the eggs of the larger breeds of ducks. They are best hatched under hens, although I have had good results from incubator hatches. If hatched under hens, they should be well sprinkled with water each day for the last ten days. If hatched in an incubator they should be dipped in luke warm water the last ten days, till the first egg pips. Ducks can be helped out of their shells with greater success than chicks. With the right temperature they will pip on the twenty-sixth day, but will not be out of the shells for twenty-four hours. They are usually all out on the twenty-eighth day, but I leave the eggs a day longer. Ducks are very slow coming out of their shells and sometimes get very dry and need help sometimes if hatched in an incubator.

Young ducks should not be fed for 48 hours. They should be raised in brooders as they do better than if raised with hens or old ducks. Have the brooder heated to about 90 degrees, and the bottom covered with sand, then see that they all have a good drink. Do not leave the water with them in the brooder except when they are eating as they will slop it all over and get themselves wet and perhaps chilled before they dry off. If my young ducks get wet from rain or any cause, I place them in a warm, dry brooder till dry. If they are left in a rainstorm they will sometimes drown. They should be kept dry as much as possible till feathered out.

Oat meal cooked fresh every day is the best feed for about two weeks. I place an inch board in the brooder, put the oat meal on the board and sprinkle a small amount of sand on it and take the board out after the ducks have eaten all they want. They should be fed about five times a day, or about every three hours until they are about ten days old. As they get older, the time between feeds can be increased. After they are a week or ten days old they should be given beef scraps in a shallow dish. This one food ducks must have to do well. Do not try to raise them without it. Do not feed them sour feed of any kind as it will kill the ducks. After they are about two weeks old they should have plenty of green food. I have found lettuce and cut clover to be fine, but prefer the lettuce. Ducks cannot be raised successfully on chick feed or a plain food of any kind of grain alone.

Ducks both young and old must have plenty of drinking water, deep enough to cover their nostrils when eating, as their nostrils become clogged sometimes and this is their way of cleaning them, by dipping under the water. They also drink a great deal of water while eating and just after eating. Indian Runner Ducks do not need water to swim in, but should have plenty to drink.

After the ducks are about a month to six weeks old I find that about two parts wheat bran, two parts coarse corn meal (not too coarse) and one part

middlings and a small amount of beef scraps, makes a good ration. This should be mixed with water until it makes a thick paste. If plenty of sweet milk is to be had, mix it with milk and the beef scraps may be left out. Do not give milk to ducks to drink; mix it with their feed. A good way to get corn meal is to take shelled corn to some one who makes a business of grinding hog feed and the meal can be had a great deal cheaper than by buying it outright.

Along in the fall a fine place for ducks is in the corn field. Keep plenty of water out for them and they will need little other feed.

The old saying that "Chickens always come home to roost," holds good with Indian Runner Ducks. You will always find them in the same spot at night. This spot may be any where you wish, by raising and keeping them just where you expect them to be at night. They should have a good dry shed in winter, with plenty of straw kept on the floor and changed often.

There is a great and growing demand for Indian Runner Duck eggs for hatching. They are wonderful layers and fine table fowls. The Fawn and White Indian Runner Duck is becoming more and more popular every year. People starting with Indian Runners should be very careful where they get their eggs. I have seen some very fair looking green heads, hatched from what were called Indian Runner eggs. Real good stock is hard to find. I had the experience once of being deceived with eggs from bad stock, but am glad to say I have found good stock at last.

Orie Elrod,

Iowa.

EXTERMINATING ROUP.

The first experience I had with roup among my chickens, struck me about the second year in my efforts to raise poultry, and it was the first case of the kind that had ever been on the place. Of course I was not poultry-wise and did not know what the disease was and did not know what to do to get rid of it. It was brought into my flock when I bought a bird from a northern poultryman, the bird having reached me during a very cold snap Christmas time, and having taken cold in transit. I had eight or ten pretty sick birds, before I finally got the disease under control, but finally they got well, and when they got good and well I put them on the market and have never, so far, had any more of the trouble. I gave the birds quinine in capsules, just about the size that a six or eight year old child could take. I also used a wash for the head of peroxide of hydrogen, and also used this for the throat. I gave some poultry powders in their food, some red pepper and used a little turpentine to swab their throats. They all got well, but they were a sorry looking lot while they were sick.

Mrs. M. E. H.,

Tennessee.

FOUR RULES ON TURKEY CULTURE.

1. Always use as breeding turkeys hens over one year old, because they are strong, healthy and vigorous and of good, medium size. In no instance select the smaller ones. Do not strive to have them unnaturally large.

2. The male may be a yearling or older. Do not imagine that the large, over-grown males are the best. Strength, health and vigor, with well-proportioned, medium size are the main points of excellence.

3. Avoid close breeding. New blood is of vital importance to turkey breeding. Better send a thousand miles for a new male than to risk the chance of inbreeding. Secure the male early so as to be assured of his health and vigor prior to the breeding season.

4. The best rule for mating is to have four or five females to one male. Some say twelve and I have heard of fine hatches with a two year old tom mated to twenty hens, but this is unusual. When they are yarded and eight to ten females kept, it is better to have two toms and keep one shut up while the other is with the hens, changing them at least twice a week. When they run at large on the farm they will naturally divide into flocks. Under such conditions, one male to not more than six females is best.

Growing the Poults.

The most difficult part of turkey raising is to properly care for the poults; to know what to do and when to do it. All that one can learn from others or from reading will not be of equal value to one year's actual experience in caring for them. The kind of a coop to use is an open coop made of slats or lath which may be placed over the mother just prior to the hatching of her eggs, as this will prevent her from wandering away with the young poults when they are hatched. It may be covered on top with tarred paper as a protection against the rain and sun. Such open coops are frequently used in turkey growing and those who use them could not be induced to change. They should be large enough to provide plenty of space for the mother turkey. Quite often a box, too small for the hen to turn around or stand up in, is used for a coop for the hen and her poults. This annoys her and she becomes restless and tramps about, killing her young and is blamed for taking bad or indifferent care of her offspring, when very likely had she had room to move around she would have made a model mother for the poults. In a suitable coop they can stay in for a day or so, if it happens to be stormy or bad weather. Disinfect the coop every two or three days and keep a sharp lookout for lice. Keep the quarters dry and healthy. Get a load of sand and spread it about the coop. Also take a garden rake and rake it over every day. After the poults are three weeks old turn them out on free range, if possible, as turkeys do much better on free range, than if confined. While they are very young special attention

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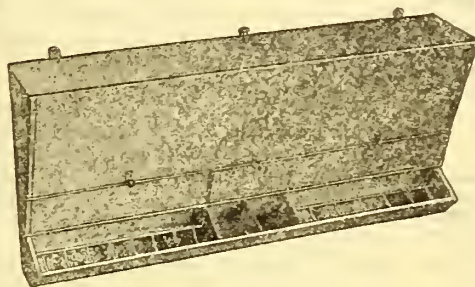
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must be given to protecting them from the direct rays of the sun. Such exposure completely wilts them. At times they will reel as if suffering from sun stroke, and will move about with slow steps, dragging one foot behind the other while giving forth a feeble peep, which sounds like the warning of their approaching end. The blood sucking parasite has much the same effect upon them and when under the influence of both there is slim chance of the poults surviving.

George Lowrie, Jr.,

Minnesota.

RHODE ISLAND REDS AS ALL PURPOSE BIRDS.

I began with mongrels and had good success the first year. The second year they failed to pay so I thought I would get put bred stock and decided to try the R. I. Reds. Not knowing very much about pure bred birds, I was badly cheated as I purchased some eggs from a breeder who claimed he had pure bred stuff, and I guess he did, for I certainly got some "stuff." They were all colors and some were feather legged. After reading up on the Reds I learned more about them and the

next time I bought some eggs that hatched some fine birds. The birds were so good that I made two entries at our fall show and took two blue ribbons and the sweepstakes. The birds were April hatched and by the first of November the pullets were laying, and laid well all during the cold weather. The cold weather does not seem to effect the egg yield in the least. Last winter I tried the open front house and believe it to be the best kind to build. I am well pleased with the Reds, especially as they have held their own so well in the egg laying contests.

I had one R. I. Red pullet to go broody and set her on fifteen eggs and in due time she came off with fifteen chicks. I put them in a pen by themselves with fourteen more little ones, making in all twenty-nine. In about four weeks the pullet started to lay again, still caring for her young ones and laying almost every day, which I think is a pretty good record for a pullet in her first year.

The R. I. Reds are gentle when broody and make good mothers, besides being fine layers, so that they are hard to beat as all 'round birds.

Oklahoma.

J. F. Crabb,

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The best favor you can do Poultry Keeper is to tell your poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special club offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.

AUGUST REPORT OF NATIONAL EGG CONTEST.

THE splendid record which the hens have made for the first seven and a half months of the National Egg Laying Contest at Mtn. Grove has been greatly affected during July and August by the unusually hot weather. The extreme heat simply played havoc with the hens. To keep them in a trap nest even long enough to lay, the hens would suffer intensely from the heat and several of them died from the effects of same, even when given the best of care and even though they were released every hour from the trap-nest. On hottest days they were released oftener than this, but still many of them came off the nests in such a condition that it took several hours for them to recover. In many states the farmers have suffered great loss from the heat and drouth. Such high temperatures are unusual in this section. The extra good record which the hens made the first half of the contest has been ruined by the high temperature of July and August, and we doubt if the average will be as high this year as last.

The total number of eggs laid this month was 7,691, which makes the grand total of 37,764 for nine and a half months. A pen of R. C. White Leghorns, No. 10, from Maryville, Mo., won the silver cup for August with 171 eggs. The English pen of S. C. White Leghorns still leads the contest by 271 eggs. The leading hen is a Buff Wyandotte, No. 860, which has laid 220 eggs to date. Two other hens are only four eggs behind her. Many of the varieties are changing places each month, and as the contest does not close until November 15th, there will yet be many changes. Some hens which made good records last year are doing practically nothing this year, and many which did not do well last year are doing extra well this year. The most consistent layers in the entire contest have been the Silver Wyandottes. They have held second place for many months and this variety also averaged 160 eggs per hen last year.

The ten highest pens to date are as follows:

- Pen No. Eggs
- 2 S. C. White Leghorns, Eng. .. 1830
- 19 Silver Wyandottes, Iowa 1559
- 11 Black Minorcas, Iowa 1543
- 1 Anconas, Missouri 1541
- 26 Buff Wyandottes, Missouri 1534
- 8 S. C. W. Leghorns, Calif. 1515
- 20 White Wyandottes, Arkansas .. 1495
- 57 Black Langshans, Missouri 1482
- 30 Buff Wyandottes, Vermont..... 1475
- 10 R. C. White Leghorns, Mo. 1471

The ten leading pens for August are as follows:

- Pen No. Eggs
- 10 R. C. White Leghorns, Mo. 171
- 5 Black Minorcas, Missouri 166
- 18 S. C. Buff Leghorns, Missouri .. 163
- 8 S. C. White Leghorns, Calif. 160
- 11 Black Minorcas, Iowa 157
- 1 Anconas, Missouri 156
- 26 Buff Wyandottes, Missouri 147
- 17 Black Minorcas, New York 144

2 S. C. White Leghorns, England.. 144
19 Silver Wyandottes, Iowa 141
The hens laying 200 eggs or over are as follows:

- Hen No. Eggs
- 860 Buff Wyandotte, Vermont 230
- 600 Bun Wyandotte, Mo. 226
- 62 S. C. White Leghorn, Eng. 226
- 61 S. C. White Leghorn, Eng. 221
- 66 S. C. White Leghorn, Eng. 215
- 55 R. C. White Leghorn, Mo. 212
- 77 Ancona, Missouri 211
- 735 Black Langshans, Mo. 209
- 72 Ancona, Missouri 206
- 67 S. C. White Leghorn, Eng. 206
- 2054 Black Orpington, Canada 201

The Next Contest.

The pens have practically all been filled for sometime. We can accommodate one more pen each of Buff Leghorns, Brown Leghorns, R. C. White Leghorns, Campines, and Partridge Wyandottes. We will have pens from all parts of Missouri, the United States, Vancouver Island, Canada, and England, and we are importing three pens from the New Zealand and Australian contestants who have been making such wonderful records in the contests of those countries. We expect to see if their birds will make as good or better records here as our own American birds. The records of the hens from these several countries will be watched with unusual interest. We believe the American hens, which have been properly bred, will be able to hold their own with the hens from any country. The last few years many breeders have been paying closer attention to selection and breeding for egg production and we expect to see the American hen and the Missouri hen hold their own. The hens which win in the next contest will certainly be the world's champion layers.

The Feeding Test, Pen No. 69.

This pen has laid 254 eggs less than the leading pen in the feeding test which is fed according to the Maine Experiment Station method. Pen No. 69 is fed a very simple ration and is known as the Farmers Method. Most Missouri farmers have all these feeds or can easily secure them. This method is as follows:

Equal parts bran, shorts, and corn meal in hopper.
In winter months feed 2-3 corn and 1-3 wheat in litter.
In summer months feed 1-3 corn and 2-3 wheat.
Grit and shell.
Green food.
Give buttermilk instead of water, twice each week.

As this pen has laid 21 dozen eggs less in nine and one-half months than the leading pen in the feeding contest, it seems that we would not be justified in contenting ourselves with so simple a ration, and it also indicates that it might pay to proportion and compound it differently.

Twenty Thousand Hear Poultry Gospel

During the past two weeks there have been held, under the auspices of the Missouri Poultry Experiment Station, a series of nine poultry field meet-

ings, each in a different section of the state. A total of fully twenty thousand people attended these meetings, making them by far the largest and most successful series of poultry meetings ever held in America.

Each day's program consisted of a band concert and a big picnic dinner at noon in some grove or park. In the same grove or park there were illustrated lectures and demonstrations in the afternoon, also an exhibit of pure bred poultry and eggs. Prizes were offered for the best pen of the various breeds, hatched in 1913, also for the best dozen brown eggs and the best dozen white eggs. The evening program was usually held in some moving picture theatre, where two reels of very fine moving pictures were used to illustrate a lecture on "The Care and Management of the Farm Flock."

A sample day's program is as follows:

Lecture, "Selecting Pure Bred Poultry for Breeding or Exhibition Purposes"—Judge E. C. Smith. (Illustrated with specimens of the various breeds on exhibition.)

Lecture, "The Farmer's Fool-Proof Poultry House"—Ralph H. Searle, Vice Director Missouri Poultry Experiment Station. (Illustrated with charts showing the principles of poultry house construction, and details of the house which is giving best results at the Missouri Poultry Experiment Station.)

Lecture, "Improving the Farm Egg"—Prof. F. S. Jacoby, Bureau of Chemistry, U. S. Dept. of Agriculture (Illustrated with eggs, big and little, clean and dirty, fresh and stale, fertile and infertile.)

Lecture, "Artificial Incubation and Brooding"—Reese V. Hicks, Ex-President, American Poultry Association.

Lecture, "The Future of the Pure Bred Poultry Business"—G. D. McClaskey, Business Manager Poultry Culture, Topeka, Kan.

Lecture, "Common Poultry Diseases, Their Prevention and Cure"—C. T. Patterson, Pathologist, Missouri Poultry Experiment Station.

Lecture, "What's a Capon and Why?"—Geo. Benoy, Cedarville, Kan., "The Capon King." During this lecture from six to a dozen cockerels were caponized.)

Lecture, (Evening), "Care and Management of the Farm Flock," T. E. Quisenberry, Director Missouri Poultry Experiment Station. (Illustrated with two reels of moving pictures.)

The afternoon lectures were all brief and to the point—"an hour and a half lecture boiled into twenty minutes," as one speaker aptly put it. One of the noticeable features of all the meetings was the marked attention given by the audiences, many of the people who could not get seats patiently standing throughout the entire afternoon sessions of two or three hours.

The meetings were held at the following towns: Pacific, Centralia, Marceline, Orrick, Nevada, Neosho, West Plains, Mtn. Grove and Greenville. At each place they were held under the joint auspices of the Missouri State Poultry Experiment Station, the local

Commercial Club, and the loyal poultry association.

Undertaken as an experiment, these meetings have proven so successful and have created so much poultry enthusiasm in each community in which they have been held, that they will become a regular feature of the poultry work in Missouri each summer. (If in Missouri, why not in other states?)

T. E. Quisenberry, Director,
Station Poultry Experiment Station,
Mountain Grove, Mo.

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. (cost ten cents per word for all four months), is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

AN ALL-AROUND NEWSPAPER.

It is generally conceded that The Chicago Record-Herald is the great family newspaper of the Central West. What has given it this favored position in the home? The explanation will be found, not in any single feature, but in the all-around excellence of all its departments, so that it appeals alike to men and women, young and old, gay and serious—the whole family.

The superior news gathering facilities and high-class literary features of The Record-Herald have been the main factors in its wonderful success. Besides the full service of the Associated Press, it receives the foreign cable service of the New York World and Herald. It has its own leased wires to New York and Washington—also correspondents in all large cities. It has its special correspondents in every town of the Central West, who report all important news by telegraph. Complete and reliable market reports and financial news can always be found in its columns, with all other news of the business world. Its sporting department also is of the best.

But man and woman cannot live by news alone. The true distinction of The Chicago Record-Herald comes with what it gives over and above the news—in such features as S. E. Kiser's daily column of humor, George Fitch's witty essays, the daily stories and pictures of "Jones's Daily Magazine," the breezy articles by Mme. Sarah Bernhardt and the admirable art talks entitled "Learn One Thing Every Day." This newspaper's criticisms of the drama, music and books are unsurpassed by any in the country. Choicest of all these extra features is the Sunday Magazine of The Record-Herald, a real magazine, full of good stories and pictures by the best living authors and artists—a feast of entertainment for the whole family. The Chicago Record-Herald has earned its pre-eminence by solid all-around excellence.

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FRANK H. DAVEY, Superintendent.

SLID TO REMOVE TRASH.

Editor, Poultry Keeper:

Finding it very inconvenient to open a window in each apartment of my hen house every time it was cleaned, I constructed a sled with a box on it that I find very handy and expeditious. It was made as follows:

Take a box twelve inches deep and about the same width, 2½ or 3 feet long. On each side of the bottom of this box nail a strip of pine 1½ inches by 3 or 4 inches, with one end rounded off like a sled runner. These strips can be fastened by nailing down through the bottom of the box. If the ends of the box are made of one inch lumber the sides and bottom can be made of lighter material. Now bore a hole about 2 inches from the top of the box for a rope, making a loop in the rope for the hand and the sled is complete.

Into this box I shovel everything I wish to remove from the hen house, droppings, litter, etc. Being narrow, it can be dragged about from one compartment to another, and out to the manure pile or the garden! When there is snow on the ground the sled may be pulled about quite easily.

W. M. W.,

New York.

We desire to extend our readers the opportunity of giving their experience at poultry work and shall be glad to publish these letters. The letters can be gotten up in your own way and we will edit them properly before printing them in Poultry Keeper. Doubtless you have been interested in reading the letters which have been sent us by other subscribers, and they in turn will be interested in reading your letters.

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And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

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CARE OF ADULT FOWLS FEEDING FOR EGGS

A HEN CATECHISM

FEEDING YOUNG CHICKENS

CARE OF GROWING STOCK

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PEKIN DUCKS FOR PROFIT

5000 DUCKS WITH STAND-

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The publisher's price of "Success With Poultry" is \$1. We will send it postpaid and Poultry Keeper one full year for price of book alone, \$1. If already a subscriber, we will extend your subscription one year and send the book to any address you furnish. If taken alone the price of "Success With Poultry" is \$1. Address,

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Poultry do best in an open winter country. It is artificial to house birds 4 to 5 months in the year.

In the open air, with ample green feeds the year around, they lay better, grow faster and are more vigorous.

The Southeast is a natural poultry region. A growing season of 200 to 300 days annually (varying with locality) allows for a wide range of green foods the year round and reduces the cost of maintenance to a minimum.

If you intend starting in the poultry business and have but limited means, no section can offer you more certain success than the Southeast.

Land at \$15 an Acre up

prices varying with improvements and location, can be purchased in many sections near to good local markets. A Northern Florida poultryman sells his eggs the year around to a local hotel for 40 cents per dozen. Thus profitable home markets are assured. Small fruit growing in connection with the poultry business makes a profitable combination.

Send at once for the "Southern Field" magazine, lists of farms for sale and other information you may desire.

M. V. RICHARDS, Land and Industrial Agent
Southern Railway Washington, D. C.

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TO KILL LICE AND MITES.

Almost every month we read in our journals about "How to get rid of lice and mites." If those who are constantly asking for this information will follow my example no one will have cause to ask again. Like many other people, when I first started keeping chickens I used whitewash, kerosene, crude carbolic, lice powders, etc., but in spite of all my care my coop became lousy. On coming out of it I would be covered with lice and mites. After a short period of this I became so disgusted that I was looking for some one to sell out to, when one day my husband, who is in the ship building business, showed me a circular from the Carbolineum Wood Preserving Co.

In his business they use this company's goods for dipping all their piles and marine railways and all lumber that may come in contact with the ground or the water, and in the ten years they have used it they never have had any lumber destroyed by underground insects. Mr. Melville said, "Let us try it for the coop, it may kill the lice." I at once wrote to the Carbolineum Co. and asked for information. I found them to be very courteous, sending me full directions, etc. I painted that coop, using the stuff hot. This is now two years ago. Would I sell out? No indeed, I would not. My coop is clean. My feathered family are all clean and happy; there are no bare heads, no scratching and digging chickens to be seen in my flock, caused by vermin, and what has done it? Why Avenarius Carbolineum. It has proven itself a life saver, a labor saver to me and a comfort to my flock. As proof of which they give me a full egg supply always.

To any one who will go into my coop, stay in it for one-hour hour, rub his hands all the length of my perches, lift them out of their nests and will get any mites or chicken lice on him I will give a dollar bill. I defy the most critical to find any vermin in a poultry house that is cleaned daily and painted with Carbolineum.

I have a small hand spray in which I keep a small quantity of the liquid and once a month I spray the floors, droppings boards, perches and all eaners, cracks and crevices as a disinfectant.

A few days before setting a hen I paint the bottom of the nest box I intend to set her in and I have never had a hen leave the nest, and not one of my little chicks had lice this year. All brooders are painted with Carbolineum a few days before putting chicks in and I do not know what it is to find lice or mites. Any of my chickens can be picked up and handled with no fear of getting any vermin from them.

As I am always willing and glad to profit by other people's experience, I trust this will be helpful to many of your readers who are wasting money, time, labor and patience on worthless preparations so-called insect destroyers.

Mrs. C. E. Melville,
New York.

ROUP.

Roup is a common disease among farm poultry and the next few months usually are the months when it is most general in the northern states.

Roup is a disease affecting the lining membrane of the beak, extending, however, to the whole head and throat, through the tear duct of the eye and finally affecting the entire constitution and ultimately relieving the diseased individual by death if nothing has been done to overcome the trouble.

It is considered by good authorities that roup is a communicative affection while others contend that the disease is not transmitted from fowl to fowl but if it is once corrected it means the conditions were such that it was propagated and the weakest of the flock became afflicted first, and naturally all the rest in turn.

Symptoms of roup are sniffling, wheezing; a watery discharge will be noticed emitting from the eyes and nostrils and breathing will be difficult. In later stages the watery discharge becomes sticky, which may cause frequent sneezing. Later the eyes become matted shut and swell out to a very large size, the swelled parts become filled with a very foul smelling cheese-like pus. The mouth and throat also become affected in the same way. This condition of the mouth is frequently spoken of as canker. When an afflicted fowl is discovered it should be removed from the main flock and given special treatment.

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EGGS

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HOW TO FEED WHAT TO

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Have demonstrated their quality as show birds by winning in the keenest of competition. Great large, massive, low, deep bodied birds; birds exquisite in color, stout in bone, raised on free range insures strong fertility and vitality. Will produce youngsters that will live and grow, having great stamina and vigor. Same blood as those winning at New York, Chicago and Boston, and other leading shows in America and England.

ROYAL BLUE ORPINGTONS added to our yard, best obtainable English blood. Eggs in season. Stock at all times. Great Mammoth Bronze Turkeys for sale November and December. Let us know your wants.

McKee's Orpington Yards

GARVEY MCKEE, Proprietor

Breeders and Importers.

Box P. K.

Watertown, Tenn., R. 1.

Roup affects turkeys and chickens but in our experience have never discovered it in any other domestic fowl. It is claimed by some that in the worst stages of roup if the poultryman works with the diseased fowls he may in time contract some sort of a throat disease but we personally can not vouch for this.

The best remedy for roup is a preventative and it can be prevented in most cases by not allowing drafts, exposure to cold and wet, sunless and filthy quarters.

Treatment should be given during the earlier stages, of course observing the above named conditions. The following drugs have been found helpful: One ounce of permanganate of potash in three pints of water; use one pint of this stock solution in every three pints of drinking water. This will disinfect the mouth and throat. Open the large swellings and remove the pus and inject in the cavities one of these solutions: Two per cent solution of creolin; two per cent solution of carbolic acid; peroxide of hydrogen, and water, equal parts.

We knew a farmer who said his cure for roup was coal-oil and strong salt water and he administered it by dripping the fowls' head in the solution. This is surely severe treatment. Do not resort to any such strong, almost inhuman, solutions.

A treatment we have used with a degree of success in roup was to heat small pieces of iron red hot and place them on a fire shovel and take them to the hen house and hold under the fowls and pour carbolic acid on the irons. Dense, white fumes are given off which are inhaled by the birds and loosen up the mucus in the throat and cause them to cough and sneeze out portions of the viscid fluid and this alleviates the suffering very materially. In fact, with this treatment alone we have cured many mild cases. Our only objection to the treatment is that it is somewhat tedious to administer to a large flock.

When a fowl is recovering give it pure, clean water and wholesome food.

The open front poultry house helps to eliminate roup. Supply the preventative above mentioned and the trouble will be largely overcome.—(Exchange.)

MARKET PRICES.

Many people are so situated as to command a good price, a paying price on eggs sold on their local markets, but many of us have to take any old price that is set on the value of our own particular market. Some get fifty, never less than thirty to forty, while in some markets (mine in particular) the price was never known to go above thirty cents, and that for one or two weeks around Thanksgiving time only. When we live on farms, this fifteen to twenty cent price will only partially pay for feed, leaving out the consideration of labor and time expended to bring this feed to our poultry. We who do not keep enough stock to give us a quantity of eggs to justify us in shipping to a better market, have to content ourselves with whatever price our market affords, and thus we let the middle man get the profit we ought to have. There are many who are situated in this plight; hens nine cents; frys twelve.

Mrs. M. E. H.,

Tennessee.

QUINCY, ILL., SHOW.

The Seventh Annual Exhibition of the Quincy Poultry Association will be held, Nov. 26-30, with W. S. Russell, J. C. Johnston, D. E. Hale and F. C. Hare as judges. We will have between 75 and 100 silver cups. Gold leg bands for champion male and female in each class and we will pay premiums as soon as judges put up the ribbons. Every visiting exhibitor will be banqueted at Quincy's best hotel during show, and as Quincy is a good sales city, exhibitors will do well to put Quincy on their list. Catalogue is out and will be mailed to all who write for it.

A. D. Smith, Secretary-Treasurer, Quincy, Illinois.

GETTING FERTILE EGGS.

Editor, Poultry Keeper:

To your September number of the Poultry Keeper I noticed an article headed, "Trouble with infertile hatching eggs," and signed E. S. S., and as I have been breeding the Rhode Island Reds for the last eight years I feel that I may be able to give a little information that would help.

Your note to that article practically covers everything that could be said. I have never had any trouble about infertile eggs, frequently getting reports of fourteen hatching out of the fifteen eggs, and have had two or three to report fifteen hatching. I have a fifty egg incubator; filled it twice and tested out three infertile on the first trip and seven infertile on the second filing. I am a great believer in introducing new blood every year, as I think beyond a doubt it keeps the birds stronger and more healthy. I usually buy a new cockerel, that is introduce the blood through the male line. On two occasions I have bought new pullets. My motto is new blood every year, and cold steel the best cure for all ills, and let me say that very seldom do I have a sick bird.

I never give my male birds more than ten females and always in separate pens as two male birds in one pen will never produce many fertile eggs, as too much time is spent in fighting instead of mating.

Clean houses, clean food, fresh water and plenty of exercise will keep the birds healthy and healthy birds will produce fertile eggs. It is not necessary for the male birds to run with the females except during breeding season and then they should be penned off with their own bunch of hens. I think the best mating is cockerel to hens and not to pullets, as the hens will lay a much larger and more mature egg and the chick that hatches from a hen egg is larger and more vigorous than the chick that hatches from a pullet egg.

C. Franklin Strange,

Barzlaud.

ONE WOMAN'S POULTRY WORK.

Boughten eggs at fifteen cents per dozen, with borrowed hens for hatching, was the beginning of our poultry work thirteen years ago. Twenty-seven pullets and eleven dollars worth of cockerels was the season's output. New Englanders are good neighbors, consequently my eggs were thoroughly bred White Wyandottes.

Today we have a one hundred hen egg plant, called the best paying branch of the farming. Eggs are the principal product, with chickens and bowls in their seasons. The direct to customer market is ten miles away.

The hen houses, five in number, are shed roofed, facing the south, slightly east. They have two windows in the front with a door between. The capacity of each is twenty layers. The nests, six in number, are under a droppings board at the east end. There is also a droppings board in the west

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It gives valuable information about 55 PLANET JR. labor saving implements. Write postal for it to-day! S. L. ALLEN & CO., Box 1203P, PHILADELPHIA

end. The hens have free range in a plum and peach orchard to the south of the houses, and a mowing lot at the north of the houses. The hens are killed at the close of the second laying season, at eighteen months of age, and replaced with home grown pullets.

A 200 egg Cyphers incubator is operated in the house cellar. We consider 125 chicks a good hatch. At 48 hours of age the chicks are given a commercial feed and warm water. Twenty-five chicks are given to a broody hen, which has been sitting long enough to mother the little ones; sometimes long enough to hatch, first dusting the hen thoroughly for lice. The hen and her brood are put into a chaff littered soap box, covered and kept there as long as they can be kept quiet. After the chicks are a week old, weather permitting, they are put, each lot with its hen, in a wire covered run made after the plan of a ranch advertised system. These downy balls are as much trouble for two weeks as an invalid.

We count a dollar profit each year for each adult bird. One year it was \$1.35. Even this small margin is not gained on easy street. The houses must be whitewashed, fumigated, cleaned and raked out, droppings boards cleaned, nests renewed and feed and water given every day, rain or shine, wet or dry, hot or cold. Sometimes the ground is covered with slush or snow, but the work must be done all the same. I have carried a shovel to get through it all with a pail of feed in the other hand. It is rather a slow process in extreme weather, and

three sets of clothes have been required in one day by the caretaker.

Here are some of the drawbacks:

First, thieves. Of these, hawks are the worst, caused the used of covered runs which have to be moved daily.

Second, human skunks. One Friday morning fifteen of my very best birds were missing. The police were notified and the following Monday the birds were in our possession. Tuesday the two men who sold my birds were in the police court. This was the second theft of the year, leaving no profit for that year.

No disease has ever invaded my plant. I have raised chicks every year but one since I began the poultry business. The plums this season were a thing of beauty, until they were all sold. The peaches also brought a golden harvest. I have tried to show that there is a reward for labor with poultry, but one cannot make a living with less than 500 birds. Never ending faithfulness counts. I kill and dress my birds. Duty work? Yes. The hens never complain of their food, but if they are neglected they show it in the egg yield. More than once I have been four miles for grain, to be soaked in a downpour of rain.

Go into the business if you will. Do not expect to get rich. Few do. Rome was not made in a day. Classic music is not given the first lesson. Be content to go slowly, step by step. Work at it first as a side issue before making it the whole business.

G. B. H.,

New Hampshire.

A BEFUDDLED BEGINNER.

We will introduce the subject of this sketch to the readers Poultry Keeper as Jack, and preface the history of his first year's experience by saying that he had a red head and was considered an easy mark—the fool of the family. However he was trustful, confident and confident.

Jack's knowledge was limited. He had read in the poultry column of the county paper about the money to be made in the poultry business, the big profits from a few hens on a city lot, etc. Also that the United States was not producing the poultry products consumed by its inhabitants. This looked to him like a chance to better his condition, and he decided to take the one hundred dollars he had in the bank and embark in the poultry business. Here is where he got started.

He remembered the oft repeated advice: "Go slowly, get a knowledge of the business before making a start."

The first thing he does he subscribes for Poultry Keeper, which is one of the few sensible things he does this first year. He is not yet befuddled. He next takes Dr. Sanborn's advice and buys from a reliable breeder a small breeding pen of fowls, (in consideration for, and in sympathy with his head, he selects Rhode Island Reds), and gets just what he pays for and no more; but, while he does not say so he is not satisfied. He wanted a pen of the breeder's exhibition birds at utility prices. Befuddle No. 1.

Not being easily discouraged (?) he pens his purchase and gives them extra good care and in spite of dissatisfaction these bred-to-day utility birds begin, in due time, to lay eggs. There comes the necessity of hatching the eggs, and he thinks he must have an incubator. Befuddle No. 2.

In this emergency he seeks "Poultry Keeper," the only friend he could trust. He finds the advertisements of 31 incubator manufacturers and sent to each of them for a free catalogue. In due time the catalogues came, and he put in the next week weeks from after supper to late bed time each evening studying incubators and brooders, and the time from going to bed to daylight breathing through hot air and rolling about in hot-water tanks, unable to decide what make incubator to buy, as 21 manufacturers each claimed his machine was the best in the world, and the other 10 made the same claim, adding that they had the largest factory in the world. Befuddle No. 3.

In course of a few days letters began to come in every mail; letters with special 15 day offers, introduction offers, special-to-you offers, and so on. This kept up until the poor fellow was no longer responsible for his actions. Complete befuddle.

Finally he shuts both eyes and made a snatch at the bunch of catalogues ordered, a machine from the first one that came to hand, sat down and wrote to the others that he had made his selection and bought from another firm, and that ended the matter.

After a few days rest and quiet he

PURINA CHICKEN CHOWDER
wont make your hens lay, they must be roosters.
 Col. Purina

Purina Chicken Chowder is a dry mash which contains just the ingredients to insure an abundance of eggs right through the Winter. Dry Purina Chicken Chowder should be kept before hens all of the time. The more Chicken Chowder Biddy eats the more eggs she will lay. Hens should also have Purina Scratch Feed, two or three times a day, in a litter.

Col. Purina guarantees More eggs or money back

to any poultry raiser who uses Purina Chicken Chowder according to directions and fails to get more eggs.

Purina Poultry Feeds are for sale by the leading dealers. Your dealer will order them for you, if he doesn't already carry them in stock.

Poultry Book Free



For your dealer's name I will send you this 48-page Poultry Book, containing plans of houses, breeding and feeding charts, space for daily egg records, cures of diseases, care for baby chicks, etc. It also contains information about Col. Purina's half price galvanized iron Chick Drinking Fountain (2 for 25c) and his galvanized iron Automatic Chicken Chowder Feeder (50c). Write today.

Col. Purina, Purina Mills, 802 S. Eighth St., St. Louis, Mo.



began to take an interest in what was going on around him, and by the time his machine arrived he was ready to get busy again. He carefully read the instructions, set up the machine, got it to the right temperature, set the regulator, filled the tray with eggs, and went on about his business, and after 21 days took out a 32 per cent hatch.

But his troubles were not all over yet. Of course the whole neighborhood knew about his going into the "Chicken business," and predictions were rife. "He'll fail." "Soon get enough." "He'll not stick to it," and many other remarks were heard on all sides, and if he happened to go down to the "Corner grocery" he was met with "Hell, Jack, heard you have gone into the poultry business. Got any chickens and eggs to sell?" Then everybody laughed. Even those of his own household spoke lightly of the undertaking, and significantly tapped their forehead whenever Jack's venture was mentioned and take it all in all he had a hard time.

In conclusion: Jack was made of good stuff, and plodded along, made a few mistakes but never the same one twice, and when fall came he rounded up about 200 fine pullets and put them in good comfortable winter quarters, sold his surplus at good prices and is regularly supplying the corner grocery with nice fresh eggs.

Kentucky.

J. R. Parker,

YEAR'S RECORD FOR 24 LAYERS.

Owing to ill health and discontentment in the city, my husband and I decided to purchase a small place in a rural community which we found two and one-half miles from Glen Falls, our former place. As the trolley passes our place we have easy access to and from the city. Wishing to have some light work out in the open I decided to keep a few chickens which I have found to be both profitable and pleasant.

I give an egg record for one year from twenty-four pullets, ten mongrels, 7 Barred Rocks and 7 B. Leghorns, of which the mongrels did the best for the first year. Eggs laid, 4,217, of 351 dozen. Average per head, 175. Sold for an average of 32½c per dozen or \$114.07. Expense of grain, shell, grit, scraps and charcoal, \$40.80, leaving \$73.27 or \$3.05 per head profit.

Mrs. E. J. Hunt,

New York.

Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind, or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 15th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

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If fed H-P Egg Scratch and H-P Egg Mash. These High Protein Foods are Clean, Sound, Wholesome and rich in sweet, nutritious Egg-Making materials. They are balanced specially for Egg production, and will keep your laying hens healthy and profitable. Send postal for catalog and freight prepaid prices to,

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MARKETING SQUABS.

Squab raising, which for a few years was a fad and then suffered a decline, is steadily increasing in popularity as a business. Farmers and small poultry raisers find the squab a profitable side line when they happen to be situated near a town of considerable size that will afford them a local market. Isolated farmers have hitherto found difficulty in securing a paying market for their stock in limited numbers. The advent of the parcel post has solved this difficulty for many. All they need do is to write or call in person upon some of the big hotels, or summer resort keepers, hospitals, or private sanitariums and secure their orders, and then at stated intervals ship dressed birds in quantities as agreed upon. In many cases one or more isolated producers have banded together to ship co-operatively to the advantage of both producer and consumer.

The bulk of the squab raising has not been done by farmers up to this time. Small squab breeders in the outskirts of the large cities have furnished most of the young birds on the markets. Just now, however, farmers are turning their attention to this business in greatly increasing numbers. Poultrymen who are raising chickens and other fowls exclusively are taking to squabs as a side line. They are so inexpensive to start with and bring returns so quickly that they look like an attractive proposition to the farmer and poultryman alike. Especially are they liked by the young boy or his sister as a portion of the poultry industry which they can carry on for themselves separate from the family poultry business.

No elaborate equipment is needed for pigeons. A corner in some barn loft, the gable of a shed, or the attic over the woodshed or corn crib may be partitioned off and used as a pigeon loft. Holes should be cut in the wall of the building, and underneath them a lighting board arranged for the convenience of the breeding birds. Inside the attic or loft, common store boxes should be nailed up over the holes to serve as nests and rearing places for the young. A loose board or drop door arranged to open into the shed aids the attendant in caring for the nests and cleaning them, also in removing young birds that are ready for market. The old birds attend to the feeding of the young until they are six weeks of age when they are ready to sell, direct from the nests.

Pigeons eat almost any sort of food that chickens thrive upon. On farms they pick up their own food from hog

lots, cattle yards and fields. Only in very bad, stormy weather is it necessary to feed grain to the pigeons, and this may be done in the loft if they can enter at will.

The best breeds of pigeons to raise are squabs from the Homers crossed with one of the larger breeds. Runts being the heaviest breed, closely followed by the Maltese, Mondaines, and Carneaux. They pair off two by two for life, so it is necessary to have a pair for each nest. The largest breeds may be depended upon to furnish squabs that weigh two pounds apiece before they leave the nest. They are not so prolific as the Homers, for which reason we recommend the cross. The popular squab is the sort that weighs from 11 to 12 pounds to the dozen, and the cross may be depended upon to do about that, while the straight Homers will average only about eight pounds to the dozen. The cross breeds will produce two squabs about every eight to ten weeks, or nearly a dozen young a year. They bring \$4.75 a dozen on the city markets, for the sort that weigh 11 pounds to the dozen.

The birds sit and hatch in two weeks. The squabs need six weeks to get ready for market, but the old birds often have a second two eggs ready to brood before the squabs are ready to leave the nest. One can not count on this, however. There is a larger demand for squabs during the winter than summer months, unless one is near a summer hotel or sanitarium. White squabs bring better prices than dark ones, and the dressed squabs sell more readily than live ones, while with the old birds, live ones sell better. Old pigeons can be bought on the market for 25 cents apiece. It does not cost much to build up a flock of breeders at the price. It pays to buy good reliable stock and to select the best each year until you have a first class flock. A dozen good, dependable breeders are better than a hundred unselected birds.

When you find a pair that are prolific and good providers for the young, that bring fine, big squabs, save several pairs from their progeny to replace the inferior birds of your cote. In this way you can easily build up a dependable flock. It pays better, generally speaking, to rear five pairs a year of 11-pounds-to-the-dozen squabs than to rear six or seven pairs of the seven or eight-pound sort.

A good way to select your breeders is to select all males from the progeny of one extra good pair and the females from another good pair. If you can get two pairs that offset each other in particularly good points, so

much the better. In this way you are sure to avoid inbreeding, for you know that a sister can not mate with a brother as might happen in any other method of mating. As a male never mates with any but his own consort you can be absolutely sure of your blood lines.

All squabs should be dry picked, clean, and untorn. They should then be graded carefully according to size, the different sizes being packed, one dozen by themselves, in separate packages. Where there are a large number of squabs in a shipment, several dozen of a given size may be packed in the same package. They should be well iced in summer.—(Exchange.)

THE BARRED ROCKS MAKE THE LIVING.

Since 1905 I have been working with chickens, having started in a very small way along with small fruits. On June 23rd our main crop of black raspberries was just about purple, and our expectations were to make the first picking of 200 quarts the following Monday. Saturday afternoon the sky darkened until it was black and we trembled with fear. About three o'clock the storm broke and the hail, rain and wind stripped the vines bare, laid the corn, tomatoes and all our crops low. Our ten acre lot was bare indeed. On Monday, my husband, instead of driving to town with a load of fruit, went out to work with a sorry heart and feeble hand. I turned to the chickens. Some of them had stood in ice water up to their knees. I forgot just how many I raised that season, but I toiled patiently on, increasing the flock every year, losing about a third of what I hatched, which grieved me very much.

I tried three different makes of incubators but with poor success. At last I turned to the hens in fear and trembling, as I had never set a hen. I was agreeably surprised to find how gentle and quiet they were and how much they could teach me about raising chicks. Again I was surprised to find how fast I could hatch, for I soon had more little chicks than I knew what to do with. I had learned to test eggs, so could double up sittings. Then again I found I could reset good sitters, often keeping them sitting for nine weeks, which saved me a great deal of work fixing up more new nests. My plan is to keep hens clean with sulphur and air slacked lime in the nests. About four o'clock I drive all the other chickens out of the pen and close the wire door, then lift the sitters off, so they can eat, drink and dust to their hearts content. I go through our four pens or houses, often having 50 or more hens sitting at a time. This takes about twenty minutes, when I start again on the first, to see that each hen goes back on and is shut in. A card is posted on each nest, showing the date the hen is set. I try to set as many as possible at a time, and give the chicks to half the hens and reset the rest, with as many new ones as are ready. By this means I can

Hens Can't Lay and Moults

But Dr. Hess Poultry Pan-a-ce-a will positively tone up your hens, and so strengthen them that they will be better able to force out the old quills, grow new feathers and get them back laying again long before the winter sets in and egg prices are high.

So sure am I that it will do these things, that I have authorized your dealer to supply you with enough Pan-a-ce-a for your whole flock and if it does not do as I claim, return the empty packages and get your money back. Costs only one cent a day for 30 fowl. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West.

GILBERT HESS,
Doctor of
Veterinary Science
Doctor of
Medicine

DR. HESS & CLARK
Ashland
Ohio

Dr. Hess Poultry PAN-A-CE-A

Shortens Moulting Period
Makes Hens Lay

make business as fast as I can attend to it.

I take three poultry journals and enjoy reading them, but have not yet found out how to keep the little ones from dying. However, with all our loss I have been able to persuade my husband that we have work enough for us both. Our flock has increased to about three hundred layers, 200 chicks having been sold. We raise all the feed we can on our small farm, but have to buy a great deal. Altogether we find the work is about all we can accomplish at this time of our lives. We look with pride and gratitude on the flock of Barred Rocks that makes it possible for us to live and work at home together.

Mrs. T. S. Quick, New Jersey.

WHY I BREED ROSE COMB BLACK MINORCAS.

"The bow cannot possibly always stand bent, nor can human nature or human frailty subsist without some lawful recreation." My recreation consists in breeding a few Rose Comb Black Minorcas. And why do I prefer this particular breed to all others? Let me answer this question without making the impression upon anyone that it is my purpose to belittle the qualities of any variety of chickens.

Ever since I made poultry keeping a hobby I have had considerable experience with the various breeds. My experience with the class of birds I keep now is this:

First, the Minorca is a thoroughly excellent general-purpose fowl. Now that incubators and brooders are so successfully operated and so generally used, hatching and rearing chicks with hens will soon be a thing of the past. In this respect the Minorca hen makes

herself of special value, because she absolutely refuses to waste precious time at sitting; she is the most persistent non-sitter there is. Under all circumstances and in all climates she is strictly on the job of shelling out the large white eggs for which the Minorcas are so universally known and appreciated, and for which reason they are fast coming to the front. It is conceded by all that Minorcas lay the the largest white egg of any known breed.

Second, the weight of the Minorcas is another valuable characteristic. Their bodies are large; hens weighing from 6½ to 8 lbs., and cocks from 8 to 10 lbs. The good weight of the Minorcas is conducive to splendid winter laying, and finally, when their days as an egg-machine are past they bring a snug sum in the market. And as to the flesh of the Minorcas, I can say with a watering mouth, it is exceedingly tender, juicy and of a delicious flavor, making a savory and appetizing roast.

Third, Minorcas are small eaters, but nevertheless hardy, easily raised, mature quickly, and hence begin to lay early. They do well both when confined and when given free range. They are easy to care for, above all, tame, gentle and very domestic in their ways and habits.

Fourth, and last, the Minorcas are second to none when it comes to beauty. The rich, glossy, greenish-lack plumage; the bright red combs and wattles; the dark-hazel eyes, and the snow white ear-lobes, all go to make up a most beautiful bird. Thus to sum up my words and form them into one short sentence, it is for their combined utility and beauty "Why I breed Rose Comb Black Minorcas."

Rev. Paul E. Wagner,

Missouri.

HOW ONE MAN MAKES WINTER LAYERS PAY.

Experienced poultrymen, as a rule, have no difficulty in getting a good supply of eggs throughout the winter months, when the high prices prevail. It is the amateur who usually experiences disappointment in not getting a full egg basket. As there is a new crop of beginners each season, and as no more perplexing problem confronts them than the getting of winter eggs, I will outline my method of feeding and housing my winter layers.

There are some who still argue that winter is an unnatural season for egg production and that we need expect very few, if any, eggs during cold weather, however well the hens are provided for. This, of course, has been disproven long ago. A hen, if fully matured and in good health, will when given proper rations, produce eggs in winter, and in abundance.

The laying hen must be happy and contented and she must be kept busy. Idle hens contract bad habits, such as egg eating, feather pulling, etc. Therefore do not let them sit around because of the lack of something to make them active. Keep the floor well littered so they can scratch all day, if necessary. Have this litter from eight to twelve inches deep, covering the entire floor. Light, coarse straw is, in my opinion, one of the best materials for litter. Straw is not broken up so quickly as leaves and can therefore be worked over better by the hens. Fork the straw over often to allow the fine dirt to sift through. This makes it nice and light again. Whenever litter becomes damp and replaced with fresh.

Keeping Quarters Clean and Healthful.

Cleanliness plays an important part in the getting of winter eggs. Cleanliness promotes health, and as healthy stock is absolutely necessary if the best of results are to be obtained it will at once be seen that cleanliness is no small consideration in housing hens. I see no reason why the poultry house should be the damp, foul-smelling, disease-breeding place that it often is. If the ventilation is right and the house is cleaned often no foul odor will be noticed as soon as the door is opened. Clean the droppings platforms at least once a week. To facilitate cleaning by preventing the droppings from adhering to the platform, spread sawdust over the platform immediately after cleaning. Air-slaked lime may also be used, but it is advisable to first dust the boards with the lime and then cover with sawdust or earth, as it is my belief that fowls are liable to contract sore feet by walking on lime-covered surfaces. Spray the droppings board occasionally to destroy vermin that may be hiding in the cracks. Coal oil is very good for this purpose and crude carbolic acid may be added to make it more effective.

Keep the hens free from lice. A lousy hen is not a laying hen. Provide dust boxes in each pen so they may dust themselves at will. The boxes should be well filled with road dust

and placed in the sunniest part of the house. This is nature's way of holding vermin in check and it also helps the hen to keep her plumage clean. The nest boxes are also harboring places for lice and mites. Remove the nesting material and spray kerosene into every crack and crevice. A hand spray is excellent for this purpose. Do not allow soiled nesting material to remain in the nest for any length of time. Eggs are sometimes broken and the contents run out on the straw, and often the nest is fouled by the hen. In such cases remove the material and replace with fresh; otherwise the flavor of the egg may be affected.

Various Forms of Green Food Used.

Green feed should be provided every day throughout the winter. It is advisable to give this after each feeding. No doubt many have noticed that at such times fowls will forage for green feed. Take the hint and follow nature in providing green food. Alfalfa and sprouted oats are two of the best varieties of green food I know of and can be provided at any time, winter or summer. Alfalfa can best be fed when in the mowed state, as it will readily mix with the mash. It will remain green indefinitely. Sprouted oats are relished by the hens and help wonderfully. They can be sprouted in most any cellar, as there is usually sufficient warmth to start germination. Provide a half dozen small boxes, the size depending upon the number of fowls kept and the amount intended to be fed. Fill a bucket partly full of oats and let them soak for 24 hours. Then place them in one of the boxes, spreading out until they are about two inches deep and sprinkle them night and morning with warm water. In the bottoms of the boxes should be bored small holes to let the water drain out. At intervals of five or six days start oats in other boxes. As soon as one becomes empty fill it as before and in this way a constant supply of green feed is made available. The oats, roots and all, should be fed when from four to six inches high. Caution must be exercised to prevent them becoming moldy, which

sometimes occurs when allowed to sprout too long, this, of course, making them unfit for feeding. A block of the oats about six inches square is enough for every twelve fowls.

Vegetables can usually be stored to last the hens all winter. Mangels, small potatoes, carrots, etc., are usually relished and are a great help in keeping the hens in good health. I usually grind the small potatoes in a food chopper and feed them with the mash every other day. The mangels are either split in two and thrown into the pens for the hens to pick at, or are ground up and fed with the mash each day. Carrots, turnips, etc., are fed raw or cooked, but not so often as the other vegetables.

A Satisfactory Mash—Whole Grain.

A mash that has produced excellent results for me is composed of the following in the proportions given: Bran, 100 lbs.; middlings, 50 lbs.; coarse corn meal, 50 lbs.; ground oats, 50 lbs.; alfalfa meal, 30 lbs.; gluten feed, 50 lbs.; linseed meal, 30 lbs.; beef scraps, 50 lbs.; salt, 3 lbs. The ingredients must be thoroughly mixed. This mash is fed at noon. Taking one quart for every 10 hens. I pour on boiling water and allow the mixture to steam all morning on the back of the stove in a tightly covered kettle. It is fed just warm and moist not hot or sloppy.

Of the whole grains, I prefer wheat, oats and corn. After dark a small amount of wheat is scattered in the litter to induce the hens to exercise immediately after leaving their roosts in the morning. About eight o'clock in the morning more wheat is scattered in the litter, and about 11 o'clock whole oats is given. Not enough wheat and oats are fed to satisfy the hens, but just enough to keep them busy. At 1:00 p. m. the mash is fed, while the last feed at night consists of whole corn. I prefer corn at night because it lasts longer than other grains, and as it is heating it tends to keep the fowls warm. The corn is fed about an hour before dusk to give them ample time to pick it up, as a good bit of it is hidden in the litter and must be worked for.—(Exchange.)

Acme Incubator Lamp Wick

MINERAL
FIBRE WICKS
DO NOT
BURN OR
CHAR



MINERAL
FIBRE WICKS
DO NOT
BURN OR
CHAR

Practically Indestructible. Keep lamps well filled with oil and wicks need trimming, running uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and aid keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two, 15-16 inch wide; or Number three, 11-9 inches wide. Price, ten cents each. Special rate made on large lots. Fit any lamp. Address,

Poultry Keeper Publishing Company, Quincy, Illinois

REMEDY FOR LIMBERNECK.

Limberneck is caused by the poultry eating maggots from putrid meat or a dead carcass.

Old bones are sometimes thrown into the poultry yard. A dead rat or some small wild animal may spread the disease among a whole flock.

Limberneck is not contagious, as most people think, but when it gets into a flock of fowls it looks as if it were, because folks are careless in not destroying the dead carcasses, and other birds become victims to the maggots and so on and on; and I have known a whole flock of valuable fowls to be wiped out in this manner.

The first symptoms of limberneck are as follows: The birds have great difficulty in picking up their food, making several efforts to peck at it, yet they can not reach it; their eyes become weak and watery, the mouth and throat slimy, the legs weak. Finally they can not stand up; their neck gets limber and in a short while they die, if something is not done to relieve them. I have seen healthy laying hens come off their nest and die in a short time.

By experimenting with this disease I have found a sure remedy—it never fails to cure. I will gladly pass it along to all poultry raisers. When the first symptoms of limberneck are noticed, take one tablespoonful of Venetian red (or red brick paint) and one tablespoonful of Epsom salts; mix it with one point of corn-meal; stir it in water to make a dough and let each bird have all it will eat. If the bird is past eating, mop the slime out of its throat and make a liquid of equal parts of Venetian red and Epsom salts and pour it down the bird's throat, holding its head high, and gently rubbing down its throat.

If you can get as much as a tablespoonful down the bird it is almost sure to recover.

I have been using this remedy for limberneck for the past ten years, and have never lost a single fowl if I find them alive.

I have also cured geese and turkeys by this same treatment, when the case seemed to be almost hopeless.—(Exchange.)

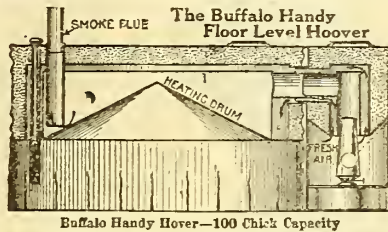
SIX YEARS EXPERIENCE WITH POULTRY.

Editor, Poultry Keeper:

I have been tempted many times to answer some of your correspondents giving my hard luck stories encountered during the first five years in trying to make money with chickens. The only excuse I can give is the lack of time for it would take about a week. To those who have the fever and love the work, I would say to keep at it until you succeed. Do not become discouraged for there is so much to be learned each day in the greatest school you have ever entered—experience. I have a great love for the work, and am not in it for my health. Am always ready to assist others where I can, but not in reducing the prices on eggs and poultry like our good club

I Save 50% for All Poultry Men and I Am Busy Night and Day Filling Orders

Here is a Hoover that is a marvel. It is sanitary—perfectly ventilated by our new Buffalo method—heats easily—uses little oil and the flame can be seen without stooping. You must send your order quick. This Hoover has set poultry raisers wild and we will very soon be over sold. Descriptive booklet on request.



Buffalo Handy Hoover \$8 Buffalo Home Hoover \$7



My Real Incubator Bargains—Note My Low Prices
 Offer No. 0—50 to 60 Egg Size, Ship. Wt. 65 lbs. \$10.50
 Offer No. 1—110 to 120 Egg Size, Ship. Wt. 90 lbs. 14.50
 Offer No. 2—220 to 240 Egg Size, Ship. Wt. 130 lbs. 19.00
 Offer No. 3—340 to 360 Egg Size, Ship. Wt. 160 lbs. 24.00

CHAS. A. CYPHERS, President Buffalo Incubator Co., 467 Dewitt St., Buffalo, N.Y.

women in Chicago. If they had to do the work connected with producing fresh eggs during the fall and winter and pay for the feeding and other expenses, I promise you they would not sell eggs for less than 35 cents at any time. Of course I will admit that there are eggs and eggs, and there is a vast difference between them. It takes an up-to-date person who understands the value of fresh, wholesome eggs by healthy, well fed hens, and such eggs ought to bring a good price. A farmer's flock of hens and their eggs can never be compared with a poultry plant where animal husbandry is understood, therefore I would suggest right here for all readers to send to the American Poultry Association and secure the lecture given in Denver, Colorado, Aug. 9, 1911, by H. M. Lamon on Animal Husbandry. From it you will see what it means to have a fine, healthy flock of hens that shell out the eggs for table use, but be sure to keep all male birds out of your flocks. Commence culling in May and keep the hens and pullets separate. Feed them lightly then for eggs are too cheap then anyhow. In June feed them plenty of heating food like corn so they will become broody. Allow them to sit for six weeks, being careful to use plenty of lice powder to keep them free of lice. Feed them well, for strength only, no animal food. Afterwards give them freedom with chicks for a month, then commence feeding animal food so they will commence laying in September and you can keep them laying for four months. Nature has provided them with capacity to lay just so many eggs, if you will feed them properly. By late fall your pullets should be laying without forcing, which is the best and safest way.

Mrs. S. S. Hirsch,

Illinois.

We would like to get a number of suitable short articles of about five hundred words each to use in our coming issues. If you are not now a subscriber or if you are now on our list, and will send us a suitable article on any subject relating to poultry, we will enter or extend your subscription for one year. Hatching and brooding will soon be in order and articles on these subjects will be especial timely. When sending in your article, clip this memo, and send with it, so that your subscription may be properly entered.

RATIONS FOR LAYING HENS.

Summer mixture—60 pounds wheat; 60 pounds corn; 30 pounds oats.

Winter mixture—60 pounds wheat; 60 pounds corn; 30 pounds oats; 30 pounds buckwheat.

Winter and summer hopper mixture—60 pounds corn meal; 60 pounds wheat middlings; 30 pounds wheat bran; 10 pounds alfalfa meal; 10 pounds oil meal; 50 pounds beef scrap; 1 pound salt.

The fattening ration—100 pounds corn meal; 100 pounds buckwheat middlings; 100 pounds wheat flour; 30 pounds beef scrap; one pound charcoal.

RATIONS FOR YOUNG CHICKS.

Mixture No. 1—8 pounds rolled oats; 8 pounds crumbs or cracker waste; 2 pounds sifted beef scrap (best grade); 1 pound bone meal.

Mixture No. 2—3 pounds cracked wheat; 2 pounds finely cracked corn; 2 pounds pinhead oatmeal.

Mixture No. 3—3 pounds wheat bran; 3 pounds corn meal; 3 pounds wheat middlings; 3 pounds beef scrap (best grade); 1 pound bone meal.

Mixture No. 4—3 pounds wheat; 3 pounds cracked corn.

COMBINATION ROOSTING AND SCRATCHING COOP.

Editor, Poultry Keeper:

I have a coop that I think is of a plan that would be useful to some of your readers. I had White Wyandottes for a number of years and find them to be good layers and good general purpose fowls.

Robt. Wilkinson,

Maryland.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Order your papers all together and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; \$1 for three; \$1.50 for four; \$1.75 for five; \$2 for six. The clubbing list on another page will show what some of these papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.

THE MISSOURI STATE SHOW GOES TO KANSAS CITY.

To Be Held in Convention Hall in Con-
nection With the Kansas City
Poultry Show, Dec. 11-16th,
1913.

The fact that the building in which it had been arranged to hold the Missouri State Show at Chillicothe will not be completed in time, has rendered it necessary to change the location of the show. Every friend of the Missouri State Show will be glad to learn that satisfactory arrangements have been made for holding the twenty-second annual exhibition at Convention Hall in connection with the Kansas City Poultry Show, those of the Missouri State, namely December 11-16th, 1913. This arrangement practically insures one of the largest and best shows ever staged in Convention Hall, and that is saying a whole lot, for it will be recalled that the last time the Missouri State Show was held in Kansas City over five thousand birds were on exhibition. The prizes are the most liberal ever offered at any Missouri State Show. In addition, there are hundreds of dollars in cash specials, together with medals, cups and trophies too numerous to mention.

The staff of judges will include the entire number previously engaged to officiate at both shows. This will enable the judging to be handled promptly, and the ribbons to be hung very early. The personnel of the judges guarantees a square deal to every exhibitor. They are Rhodes, Heimlich, Branch, Thompson, Emry, Southard, Hobbs, Southmayd, E. W. Rankin, Woods and Wible.

In connection with the show will be held the first real convention ever held in America by a state poultry association. There will be forenoon, afternoon and evening sessions every day during the show, and every session will be packed so full of good things that no poultry raiser in Missouri or neighboring states can afford to miss it. Poultrymen, judges, educators and investigators of national repute will discuss problems of vital importance to every poultry raiser. Many of the lectures will be illustrated with lantern slides, and some of them with moving pictures from the Missouri State Poultry Experiment Station at Mountain Grove. There will also be entertainment features galore, including a theater party, a banquet, etc.

All in all, it will be the greatest week in the history of Missouri's greatest industry. Don't miss it. For further particulars and premium list, address either T. E. Quisenberry, Mountain Grove, Mo., or E. L. Noyes, Manhattan Bldg., Kansas City, Mo.

HOW TO GET RID OF MITES.

Editor, Poultry Keeper:

I wish to say that I find something in every number of the Poultry Keeper that is beneficial to me and I am very much pleased with the books for the reason that they are confined to poultry keeping only. And best of



SPECIAL SALE

2,000 Choice Birds

- White Wyandottes
- S. C. Black Minorcas
- S. C. White Leghorns
- S. C. Brown Leghorns
- S. C. R. Island Reds
- R. C. R. Island Reds

- White Plymouth Rocks
- Barred Plymouth Rocks
- Buff Plymouth Rocks
- S. C. Buff Orpingtons
- S. C. White Orpingtons
- S. C. Black Orpingtons

Examine Birds Before You Pay for Them

So sure are we of pleasing you with the high quality of our stock, we are perfectly willing to send any shipment to you C. O. D. subject to your inspection before you pay for them. Our records show by this method that fully 99 per cent of our shipments are accepted. We challenge any breeder to show as good a record. We sell birds on their merits and we will sell to you if you give us a chance. Our Special Sale Circular tells about the 2000 birds we offer for sale and includes Cocks, Cockerels, Hens, Pullets, Pens, Trios and Single Birds, just as you wish them. We can furnish Exhibition birds for any show or utility birds as low as \$1.25 each. Send today for a copy of our Sale Circular giving you reduced prices on every bird we offer. **GOSHEN POULTRY FARMS, R. F. D. No. 3, GOSHEN, INDIANA.**

GABEL'S CRYSTAL WHITE ORPINGTONS. THE HAWKEYE STRAIN. THE QUALITY KIND. Kellerstrass and Imported from the Famous Lindner Stud Winners of 1, 2, 3, 4, 5, 6 at the late Madison Garden Square Show. If in need of a good exhibition or breeding bird write us your wants. We guarantee to please or refund your money. Address, **GABEL MFG. CO., No. 104 PEARL ST., HAWKEYE, IA.**

all they are free from politics. The article in the January number of the year 1912, Page 462, on Artificial Incubation, I consider one of the best and most scientific articles I ever read on this subject. From one of its ads I found an incubator that runs automatically that will hatch any egg that is hatchable. And now I am forcibly struck with the idea of room brooding with oil burning brooder stoves. Am building a brooder house with two rooms each, 12 feet square and shall send for stove at once.

I was reading today an article written by a lady describing her way of keeping mites out of her hen house. What seems queer to me is how hot water and kerosene will do so much for one person and not for another. I have tried the same for years to no effect. Perhaps hot water will kill where it reaches them but I verily believe they will live and thrive in kerosene. Two years ago they got into my houses so badly I could not go near them without being litterly covered I had applied the hot water and kerosene every 2 or 3 days all summer besides using the best lice powder I could get.

Being thoroughly disgusted I thought I would try something else. I was advised to try a solution prepared by Geo. H. Lee Co., Omaha, Neb. This was a happy thought. In less than 10 days from the time I commenced spraying with this solution I could not find a live mite and now I can handle any hen or chicken on the place day or night and never get a mite on me. It is a good disinfectant also. There is another solution called Carbolineum, that I understand is equally as good as Lee's, but this I know is good and hereafter I hope never to be without it while I have any poultry. I spray it into my small hovers before putting any chicks in them and once a week after that as long as they are kept there. Care should be used to let the hovers thoroughly air out for about

an hour at least before putting in the chicks as the fumes are quite strong and would not be good for them.

W. M. W.,

New York.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year if sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

"Success With Poultry" is worth more than all other Poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount (\$1.00) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

If you are interested in advertising send for a copy of our rate card which shows our charges for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our "classified ad." department in the back part of each issue furnishes an easy way to get started at a low cost.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting someone else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

THEN SELL.

There are really no reasons why one in the poultry business should not make all the money possible. If you are making money with mixed breeds under ordinary conditions, why not raise the pure bred and be in a position to sell fowls and eggs for breeding purposes? No demand, do you say? Well, dear reader, there is a demand and a great demand, too. A nice flock of thoroughbred fowls commands admiration. They will, to a great extent, advertise themselves. Give them a little better treatment and get one hundred and fifty to two hundred eggs per year per hen, instead of sixty to one hundred from the scrub under very common conditions.

Some say that by careful breeding and selection that they can raise the scrub's egg record. Yes, you can raise the scrub's egg record, but while you are at it why not expend your time and energies toward reaching the highest profitable returns? The pure-breds are not only the most profitable in a direct way, but they make your place or premises look better, and give the owner a prestige that is comfortable and really profitable in the long run. To ask the owner of a scrub flock of poultry why he does not have some particular kind, nine times out of ten he will say that common chicks are more healthy. I have known these claims to be made right in the midst of the scrubs dying off. Such claims are prejudice, pure and simple. Take the common kind, or the pure-breds, and pen them up in unnatural, close quarters, and the effect is the same in either instance. Turn them loose and give them good treatment, and both will respond very quickly.

While the first trap-nests were a craze, and the excitement soon abated, there were enough logical poultry fanciers who held on the trap-nests to start and maintain an improvement in egg yield. This improvement is entirely with pure-breds. Surely the trap-nests serve a useful purpose.

Another reason for the pure-breds is the evenness of market fowls and eggs. A coop all the same color is more attractive and will bring a better price and the same may be said of eggs. In starting out I intended to write about getting the top market price. As a starter in the right direction, pure-bred poultry is the first requisite. Any poultry raiser that has one or more cases of eggs in a week can get from twenty to forty per cent more for them by looking up private markets, some hotel, groceryman, eating house, or diners on trains. Put the eggs up in cartons holding one dozen each. Put them up fresh and clean, and stamp them with a rubber stamp. A trade can be worked up with any city groceryman that caters to the high class trade, or it can be done direct with the concerns mentioned. I know about these things, for I am acquainted with a large number that are doing it. Hundreds of breeders are making a nice thing out of this business, and there is still plenty of room left for more.

Sell Good Eggs Always.

There is nothing that we eat that

Grain Sprouters at Bargain Prices

Here's your chance to get the famous Reliance Grain Sprouter at the lowest price ever quoted on efficient, dependable machines. No one can meet our low price because while other machines are manufactured in small lots, we build the Reliance by thousands and in building them by thousands we can afford to sell way below the standard price. The Reliance comes in many sizes—to feed a few hens up to hundreds. Write for literature and bargain prices.

Reliance Grain Sprouter

Double Walls
Heavy Insulation
Galvanized
Iron Linings
and
Trays

Get Ready for Winter

and begin now by giving your hens sprouted grains from Reliance Grain Sprouters.

Reliance Sprouted Grains will be the means of increasing Egg Yield Over 50%, Keep Hens Laying All Winter, Aid Growth.

Promote Health of Fowl and Cut Your Feed Bill in Half.

The Reliance will produce 3 to 4 bushels of sprouts from 1 bushel of grain and do it quicker with less care and attention than others. Ask for facts. Write us at once.



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goes on the market in such a haphazard filthy condition as the poultry and egg product. Consider it for yourself. Watch the groceryman or average egg buyer fill a case of eggs for market. No matter how old or besmeared the case, just so long as it will hold the eggs and nail together, it will do. No attention is paid to the dirt or feathers sticking to the shells.

The most careless methods are followed in marketing fowls. Take a walk in the market places of any city and get a lesson. Right there we find fowls of all ages, sizes and color in the same coop. I might say, without over-drawing, that the coops are a mixture of fowls, feathers and corruption. At the average market place it is a relief to find a coop evenly balanced up in size and color.

In these days of co-operative creameries, grain elevators and other things helpful to the producers it is queer that the most important and largest industry of all is much neglected. Every town or poultry raising community could advance the popularity of poultry and eggs as a food, and make money while doing it.

Let me say here that after a groceryman has handled a few cases of eggs put up as I have suggested, the matter of price becomes secondary to keeping that kind of stock. The cleaner and more attractive appearance gives his store a prestige, instead of making an avowal to fastidious customers. There is nothing more handsome than a stock of clean, even-sized eggs put up in attractive cartons; there is repulsiveness in a filthy stock of eggs.—(Exchange.)

EGG PRODUCERS' OPPORTUNITIES

The housewives' crusade in December against high priced cold storage eggs



sold as "strictly fresh" should result in permanent good. Both city consumers and poultrymen should benefit. For while the consumers may be enabled to buy stored eggs for just what they are, and at lower prices the farmers may readily develop markets for eggs that they can guarantee to be new laid. These markets, especially during late autumn and early winter, have never been over-supplied. There has always been a good demand and it is highly probable that such a condition will continue even should the supply of new laid eggs be considerably increased.

The storage side of the egg market should concern the farmer only in a minor way. If the agitation conducted by housewives' leagues and other organizations in various parts of the country continues and meets with tolerable success the margin of profit in storing should become less and less attractive to speculators, and the opportunities for developing new laid egg markets become more and more favorable to poultrymen. The basis upon which these statements rest is that the whole business—that of the speculator and also that of the poultryman—be conducted upon honesty. Plenty of people who now pay "fresh" prices for stored eggs at equitable prices even if the number of consumers who want fresh eggs doubles or quadruples.

Another factor that should have a marked influence in improving the farmers' chances of finding good markets for new laid eggs is the parcel post now in experimental operation. Doubtless it will not be long before enterprising

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manufacturers will follow the lead of German manufacturers and place upon the market boxes suitable for carrying even so fragile things as eggs safely through the mail. When these are obtainable and when the parcel post service gets in good working order farmers in even out-of-the-way places, but with first-class eggs to sell, can easily work up trade with special customers in nearby or even in distant towns and cities. The outlook for such developments has never been better.—(Exchange.)

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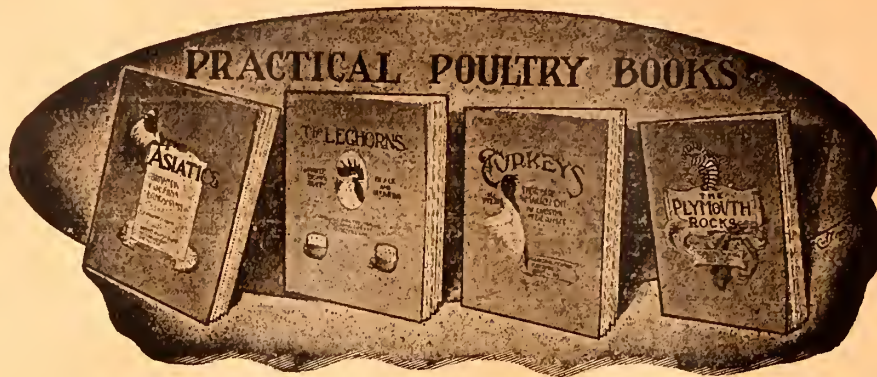
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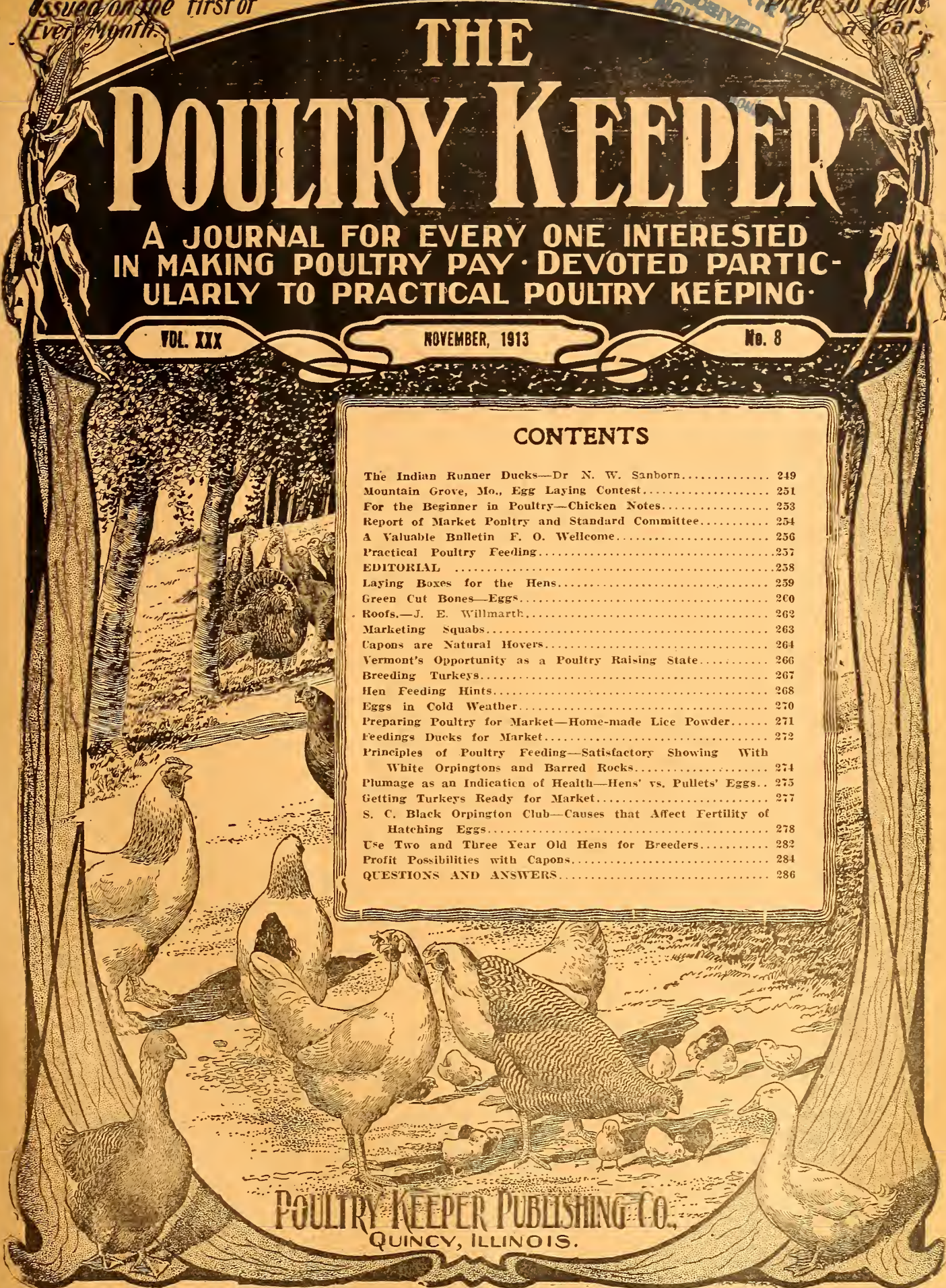
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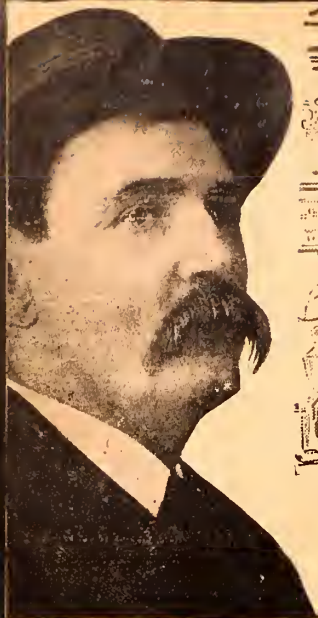
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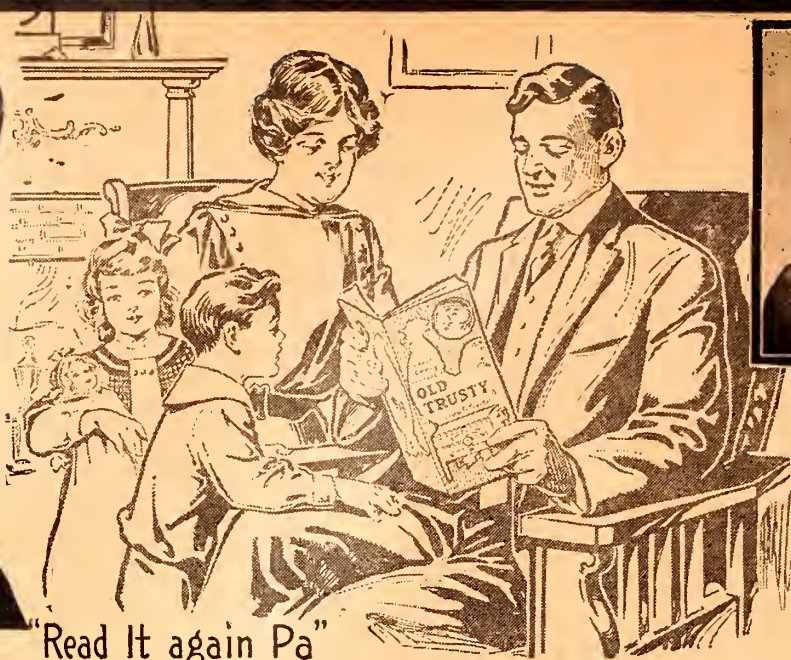
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POULTRY KEEPER PUBLISHING CO.,
QUINCY, ILLINOIS.





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POULTRY

JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY

KEEPER

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THE INDIAN RUNNER DUCKS

Dr. N. W. Sanborn, Holden, Mass.

THE last few years have seen the coming of a new duck known as the Indian Runner duck. How far back it dates I do not know, but it is only within six years that we have had it forced on our notice. For a while I classed it with the other ducks—as not to be classed with the hen for the laying of table eggs. Then so many claims began to be made for it—along practical lines—that I was obliged to test it out myself. I have had over two years experience with the Indian Runner Ducks, have hatched and reared, summered and wintered them, yet I do not know much more than when I began. I want to share with my readers some of my experi-

ences, give some of the facts as I see them, and suggest ways of caring and feeding them for good results.

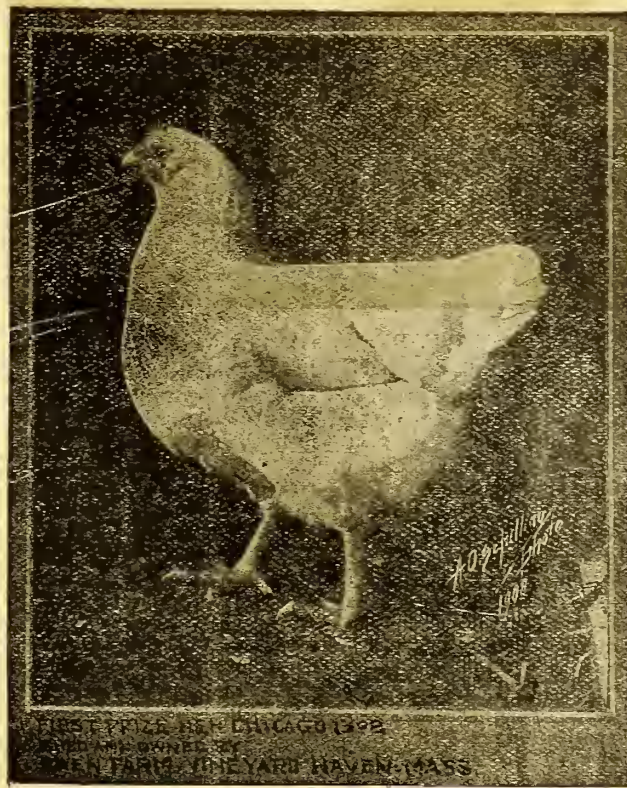
I have been fortunate in securing foundation stock that lays pure white eggs. I have also a strain that seems to be sturdy to the limit, inbreeding giving me larger and better birds each year. I have learned: a duck hatched is a duck raised. In other words, they seem to have a life lease from the start.

I have raised only a few ducklings each year. My object was to get acquainted with them, know them, and thereby be able to help other people. I started with buying twenty-four eggs, in early June, and incubating

them under hens. Half the eggs were spoiled in the express travel, probably from overheating starting the germs. Only eleven of them were worth while, giving me eleven good ducklings. I sold a trio of them, killed several drakes for my table, and had three ducks and two drakes left. I should have kept but one drake but did not dare risking the matter of being left without a male in the breeding season.

As soon as the ducks were dry, one day after hatching, they were taken from the hens, brought into the kitchen and mothered in a basket near the stove. This was in July, nice weather, warm nights, and it worked out perfectly. Three times a day they were taken from the basket, fed and watered, and seemed to get a lot of pleasure in good living. When two weeks old they were fed and watered on the grass behind the house, getting seven to ten hours of freedom each day. They were only a few days old when they gave signs of an investigating mind, running through the kitchen and dining room, eating crumbs and catching flies. They were companionable. At three weeks of age they were given the protection of a Philo brooder with the hover left out. They just grew! It was not long before they filled the brooder and had to be divided each evening between two brooders.

At four months of age they were nearly full grown and we had one spare one that was lame to eat. Then they were given a three by six foot roosting coop and carried through the winter in it. Hatched so late, they did not begin laying until March though part of this was due to my not feeding them big enough rations. It may have been just as well, because the ducks certainly made it up in the numbers of eggs laid through that year. Over and over again those three ducks laid twenty eggs a week, keeping it up till I could not see how



Maurice F. Delano, successor and sole owner.

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants its except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that he paper is worth the money. We are trying month by month to make it better and better.

they could digest the food to make so many pounds of eggs. I do not know their egg yield that first year.

Besides hatching twenty-six ducklings and eating and selling eggs for eating, I let a neighbor have a sitting. This neighbor had a trout pond near his house, fed by springs and swamp and he thought it a good stunt to try a few ducks. His eggs hatched even better than did mine and his ducklings took to the pond long before I would let mine. They left the hen when three weeks of age, took to the water and found most of the food for themselves. Much to the surprise of the good neighbor the plague of mosquitoes began to be less bothersome. The ducklings were eating the "wrigglers" before they changed into the winged insect. As he expressed it to me: "the ducks are worth all they cost just to keep down the mosquitoes!"

That second season I raised twenty-nine ducks, seventeen females and twelve males. The spare males were eaten, good eating too, and I took into the winter, seventeen females and four males. Last spring I sent a trio of them to a son who is starting in farming in Michigan, leaving me three males and fourteen females.

This year I tried to hatch a few ducks in incubators and had fair success. Local demands took all the eggs I could spare. Ducks hatched the last week in May began laying in late September and are still at it. The old ducks laid fairly well, from a hen standpoint, through the cold months, got well under way in March, and gave a splendid output through the early summer. Then I shut them into a yard that they soon stripped of grass and they promptly stopped laying and went through a complete molt. On September first they were once again given the range of the farm, getting the mash and scratch feed of the chicks on range, and in a week got well to laying.

Then came the surprise to me. Those fourteen old ducks got to laying six eggs, seven eggs, nine eggs, a day. Then they jumped to eleven, and yesterday and today they have laid twelve eggs. That is not a hundred per cent egg yield but it is way up beyond the best I can get from my yearling hens in October. These eggs are selling for fifty-five cents a dozen at my city market, are in demand, and I could sell a hundred dozen eggs today if I had them. People who are particular are using Runner duck eggs for all the purposes that hen eggs are used for. They are not strong flavored, mine are not, and folks are finding it out. At five cents per dozen higher price than hen eggs the consumer is getting fifty per cent more eggs. They are big eggs—fully two ounces—two pounds to the dozen. Are they good fried? This morning the eggs brought on the breakfast table were larger than usual, fine looking. I thought nothing of it until I was about through, when I brought out the fact that they were Runner duck eggs. I am rather "fussy" about eggs, at all times, and if these

had not been all right they would not have gone down. As it was I ate every bit of it and thought it good.

Feeding Runner Ducks.

The baby ducks get bread that is soaked in sweet milk and squeezed nearly dry. This is fed on a pie tin with a dish of water right at hand. Ducks of all ages must have water to drink right at hand. When a few days old the bread that is soaked in milk is given in a pan of water, crumbled into the water only as fast as it is eaten. At this time the ducks are on grass and can balance up the bread and milk, if it needs balancing, with green food and flies.

food enough to satisfy them out on range then they are free to eat from the dry mash hopper.

The grown ducks get the same food I feed my hens. In the morning, before I let them out of their small yard, I give them a wet mash of four parts, by measure, of bran, one of beef scrap, one of cornmeal, one of ground oats, one of low grade flour, and in the fall and winter a part of linseed meal. They get all of this that they want, the remainder being taken away and fed to the hens or chicks. At eight o'clock in the morning the yard gate is opened and the ducks go where they please. The



Maurice F. Delano, successor and sole owner.

At a month of age they are getting just the mash that is prepared for the chickens, but it is wet for the ducks, all they want. I aim to feed all they will eat, and then no more for four to five hours. Three full feeds a day is right for the rapidly growing Runner duckling. When they are five to six weeks of age you will be surprised to find them anywhere on the farm. It may be in the pond with the old ducks, it may be out in the field with ranging chicks. They are on the go, morning till night, all the time, looking for bugs, for worms, for feed of any sort. The neighbor who is so pleased with Runner ducks told me he did not feed his ducks, but I find they have access to a hopper of dry mash in one of the larger hen houses. Whenever they do not find

barn is closed, the garden far away, and they can get into little trouble. It is a pleasure to see them working hour after hour, in the grass, in the berry patches, hunting for bugs. They pick up half their living in this way and make away with countless bugs and insects that are harmful to crops.

When I feed the nearly mature chicks their evening meal of whole grain the ducks are at hand to help. It is not long before the ducks are satisfied, and go off to some quiet corner and rest. As dusk comes on they gather on the lawn near their yard, but I have other plans. I suggest by actions and sounds, that the place for them is yard and house. In Indian file they pass through the gateway, through the yard and I close the wire door of the small house behind them.

Why house them in pleasant weather? Two reasons. I want them to lay their eggs in the house where I can easily find them. Then the ducks are rather noisy and I do not like the music of their voices before I wish to be awakened. Ducks as a rule drop the eggs where they happen to be. They lay in the late hours of the night or before nine o'clock in the morning. One of my ducks has a notion that she must lay in the corner of a wagon shed and she will hold onto that egg if she can. As surely as I let them out early she will go straight to that nest and lay.

Do these ducks need a pond? The layers will do good work without more water than a good pan full. In the breeding season I think a good pond helps fertility and hatchability. I have a little bit of water, perhaps five feet across, that is made from the overflow of my barnyard watering trough. This is fed by a quarter inch stream of spring water, piped from up the hill two hundred feet away. Nine months of the year there is abundance of water for this little pool, but the last two months it has been dry much of the time. These last few weeks of splendid laying there have been days at a time when the pond was empty. However the ducks have always had drinking water handy and lots of food.

Housing Runner Ducks.

Do these ducks need warm houses in the winter? I do not know. Mine keep well, act well, and come through the winter in splendid condition, with out glass or wood to the front of their house. There is just one inch wire netting between them and the cold. Their small house is sheltered from the cold winds by the barn cellar and barnyard. In the three years I have had one duck sicken and die. Two or three have gone lame, always they are the drakes and they have been killed and eaten. This year I hatched in machine, brooded with chicks in lamp brooders, and let the ducklings get the same feed and drink as the chicks. It has been no trouble to handle them in this manner and they have practically taken care of themselves. That they have done well is told by the drakes being the largest I have yet raised and the ducks laying in September when less than five months old.

I do not advise any one to go into duck raising, even with Runner ducks, on any large scale. Try it out quietly, modestly, and if they suit your needs, enlarge to your limit and the limit of your egg market. Do not start at all unless you can be reasonably sure that they will lay you an egg that is pure white. I have no use for an egg that is even tinted with green color, and the market, the consuming public, want eggs that are not green. Somewhere near you should be found a breeder who has this sort of Indian Runner duck, the layer of the white eggs that fills the demands of the best markets. Even some of the English Runner duck flocks lay the green tinted eggs. Get the right sort and stick close to it, even though you

must inbreed. I have been hoping that some of the egg contests would put in a few pens of these Runner ducks, but I can see why they do not. It would take a different sort of care and feeding to get the best out of them. There was a pen sent to the Missouri contest last winter but the ducks were killed in the express. Too bad, as we might have got facts that

would help or hinder their popularity. We want the facts—no matter whom they hit.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

POULTRY SHOW CALENDAR.

Location	Dates.	Judges.
Berwick, Maine.	Dec. 23-26.	Lambert & Benson. Arthur C. Brooks.
Buckhannon, W. Va.	Dec. 30-Jan. 2.	M. M. Barger. A. S. Watkina.
Butler, Penn.	Jan. 6-10.	D. H. Rankin. D. H. Rankin.
Cowden, Ill.	Dec. 16-20.	B. H. Shinoski. B. W. Breighner.
Cleveland, Ohio. (Cleveland Fanciers)	Dec. 2-7.	Rose, Braun. J. T. Conkey.
Delaware, Ohio.	Dec. 8-13.	McClave, Minnich. 460 Lennox Bldg.
Evansville, Ind.	Jan. 12-17.	Simmons, Burgott.
Ewing, Ill.	Nov. 12-15.	D. L. Ziegler.
Galesburg, Ill.	Jan. 26-31.	Zike & Mullinix. Edgar L. Fenton.
Geneva, N. Y.	Dec. 2-6.	E. H. Casey.
Greensburg, Pa.	Jan. 13-17.	H. M. Richards. H. M. Richards.
Mansfield, Ohio.	Dec. 1-6.	Sidney H. Lewis. Sidney H. Lewis.
McDonald, Md.	Dec. 9-11.	R. M. Zundel. R. M. Zundel.
Mt. Airy, Md.	Nov. 26-28.	McClave & Barger. T. J. Darling.
Mt. Carmel, Pa.	Nov. 25-29.	W. B. Culley. A. V. Campbell.
Niagara Falls, N. Y.	Jan. 28-31.	Heller & Rosenow. Harry R. Zepp.
St. Louis, Mo.	Nov. 24-29.	Thos. F. Owens. Thos. F. Owens.
Terre Haute, Ind.	Dec. 31-Jan. 6.	E. L. Wallace. E. L. Wallace.
Toledo, Ohio.	Jan. 12-18.	James J. Long. James J. Long.
Wittenberg, Wis.	Dec. 8-11.	Theo. Hawes. M. Austin Potter.
Yonkers, N. Y.	Nov. 12-15.	Whittaker, Strubble & Tripp. J. S. Ball.
		Elmer Gimlin. 1237 Varland.
		W. E. Puchner. W. E. Puchner.
		W. E. Mounteney. W. E. Mounteney.



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NATIONAL EGG LAYING CONTEST REPORT FOR SEPTEMBER

Hens have made an Average of 135 Eggs Each with 46 Days yet to Lay. The Average and the Highest Pen Record will Exceed Those of Last Year. The English Leghorns Will Doubtless Win. Lady Showyou Heard From.

THE hens in the National Egg Laying Contest at the Missouri State Poultry Experiment Station have already made a higher average than the hens did in the first contest, and they have 46 days yet in which to lay before the contest closes. The English S. C. White Leghorns from Tom Barron, of Catforth, England, seem certain to win. There has not been a month during the year that this pen has not been among the ten highest pens for that month. The highest individual hen so far is no. 560, a Buff Wyandotte from Vermont. This hen has laid 249 eggs and has 46 days yet to lay. It is not probable that the individual record will be as high as Lady Showyou of last year.

The friends and admirers of Lady Showyou will be glad, I am sure, to hear what this hen has done this year. In reply to an inquiry as to how this remarkable hen was doing this year, we received a letter from Mr. John G. Poorman, of Tinley Park, Ill., who now owns this hen and this is what he had to say:

"Regarding Lady Showyou, will state that she is the most remarkable hen I ever saw. She never has been in good plumage, has not gone broody, and has been laying right along. I hatched 101 chicks from 112 of her eggs. She is laying now an egg every other day. She has laid over 170. She has not been sick a day. It seems as though she delights in being alone. She is continually on the go from morning till night.

Yours truly,

(Signed) John G. Poorman.

This hen has never gone broody in two years. Broodiness is one thing which it will pay anyone to try to breed out of his flock as far as possible if he expects to breed up a good laying strain.

There has been a grand total of 94,188 eggs laid to date. The record for September was 6,424 eggs. Pen No. 26, Buff Wyandottes from Eagleville, Mo., won the silver cup for the highest record for September.

The Third Annual Contest

The following countries will be represented in the next contest:

- 6 pens from New Zealand,
- 3 pens from Australia,
- 2 pens from Vancouver Island,
- 2 pens from Canada,
- 3 pens from England,
- 1 pen from Germany,
- 1 pen from South Africa,
- 66 pens from Mo. and the U. S.

The following varieties will be rep-

resented:

- S. C. White Leghorns,
- S. C. Buff Leghorns,
- Anconas
- Campines,
- Rhinelanders,
- S. C. Black Minorcas,
- R. C. Black Minorcas,
- S. C. Reds,
- R. C. Reds,
- Barred Plymouth Rocks
- White Plymouth Rocks,
- Buff Plymouth Rocks,
- Silver Wyandottes,
- White Wyandottes,
- Buff Wyandottes,
- Buff Orpingtons,
- White Orpingtons,
- Black Orpingtons,
- Black Langshans,

There can be no question as to the value of egg laying competitions if they are properly and honestly conducted. With egg-laying contests and experiment stations trying to solve the question of egg production, and with poultry shows encouraging the production of pure bred poultry of good shape and color, we feel with these forces combined that there are greater things in store in the future for those who keep poultry for profit. Just as time has proven honestly conducted laying contests prove to be of great value in stimulating an interest in greater egg production. These two forces must go hand in hand. Dr. Pearl of the Maine Experiment Station in his address before the American Poultry Association at Atlantic City, said; "It is safe to say that never has there been so keen and widespread an interest in the improvement of poultry in respect to egg production as there exists at the present time. All over the world poultry keepers are waking to the fact that some hens lay more eggs than others; that it costs no more to hatch, rear and care for those which lay more; and that they want this sort in their flocks.

"There would seem to be little doubt that this awakennig is due in considerable degree, at least, to the rapid development during the last ten years of egg laying contests in different parts of the world. We are indebted for the inauguration of such contests on a large scale to the enterprise of the Australians. In recent years we have seen their development in this country. It seems likely that we will see a much further growth of the laying contest idea in the United States, as well as in the European countries. To be sure some of the friends of the poultry press, who apparently see little or no value in laying tests of any sort, have been predicting that the laying competition has about run its course, and that the end is in sight; that we are, in point of fact, witnessing its last decline before utter extinction. Unprejudiced observation, however, would seem to indicate that these contests make a strong appeal to the poultry public. It is difficult to conceive of any single measure better calculated to arouse general interest in poultry keeping and to call attention to the results

which follow good care and breeding. In other words the educational value of laying contests would seem to be without question. That they can be so conducted as to contribute to existing knowledge of the laws of egg production also is beyond doubt."

The following pens have made the highest pen records thus far:

57 Black Langshans, Missouri	.....1555
30 Buff Wyandottes, Vermont	.....1597
20 White Wyandottes, Arkansas	.....1609
10 R. C. White Leghorns, Missouri	.....1618
11 Black Minorcas, Iowa	.....1642
8 S. C. White Leghorns, Cal.	.....1653
1 Anconas, Missouri	.....1670
26 Buff Wyandottes, Missouri	.....1691
19 Silver Wyandottes	.....1692
2 S. C. White Leghorns, England	.....1934

No very high records were made for September as the hens are in the midst of the moult and have not fully recovered from the hot weather of July and August.

The following is the monthly record of the ten highest pens:

Pen.	Eggs.
26 Buff Wyandottes, Missouri	.....157
17 Black Minorcas, New York	.....154
2 S. C. White Leghorns, England	.....154
10 R. C. White Leghorns, Missouri	.....147
22 Buff Wyandottes, Missouri	.....146
8 S. C. White Leghorns, Cal.	.....137
19 Silver Wyandottes, Iowa	.....133
23 Silver Wyandottes, Illinois	.....131
1 Anconas, Missouri	.....129
45 Barred Plymouth Rocks, Iowa	.....124
5 Black Minorcas, Missouri	.....124

The hens that have laid 200 eggs or over are as follows:

Pen.	Eggs.
800 Buff Wyandottes Vermont	.....249
62 S. C. White Leghorns, England	.....246
600 Buff Wyandotte, Missouri	.....245
61 S. C. White Leghorn, England	.....239
55 R. C. White Leghorn, Missouri	.....233
77 Ancona, Missouri	.....232
66 S. C. White Leghorn, England	.....231
311 S. C. White Leghorn, England	.....219
72 Ancona, Missouri	.....218
211 New York Method	.....218
735 Black Langshan, Missouri	.....215
64 S. C. White Leghorn, England	.....215
529 Black Minorca, Iowa	.....214
2054 Black Orpington, Canada	.....213
2103 New York Method	.....212
3810 Silver Wyandottes, Iowa	.....210
151 S. C. White Leghorn, California	.....208
976 Barred Plymouth Rock, Illinois	.....208
67 S. C. White Leghorn, England	.....207
927 Silver Wyandotte, Illinois	.....204
505 White Orpington, Illinois	.....204
3807 Silver Wyandottes, Iowa	.....203
939 White Orpington, Kentucky	.....203
69 S. C. White Leghorn, England	.....203
2147 Maine Method	.....203
4 S. C. Buff Leghorn, New York	.....201
667 Buff Orpington, Missouri	.....201

The Feeding Test.

Pen No. 70 which is being fed the same as the hens in the contest except that the contest hens have range in yards 30x120 feet, and pen 70 has been confined to a house for one year. This pen has made an average of 139 eggs per hen for ten and one-half months. The hens seem to have kept in good health and of the ten pens in this feeding test, this pen is in fifth place. The first five pens rank as follows, ten hens in each pen:

hens fed the Maine Method	.....1507
hens fed the New York Method	.....1439
hens fed the Canadian Method	.....1431
hens fed by the Norwich Feeder	.....1431
hens confined to a house	.....1389

Five other records lower than this.

T. E. Quisenberry, Director.
Mountain Grove, Mo.

FOR THE BEGINNER IN POULTRY.

It is said that at least 90 per cent of the people who start in the poultry business fail and give it up as a bad job. They continue to acknowledge that there is money in poultry, for they see other people getting money out of the business, but for them there is nothing in it.

Many of the people who fail knew nothing about running a business of their own when they started. They have always worked on a salary or for day's wages and need schooling in the business of buying good stock, in caring for it, and in selling it when ready for the market. A beginner of this kind should not buy more than six or a dozen hens to start with, and feed them on table scrap and lawn clippings supplemented with a little grain. When the beginner has learned to make a small flock pay, he is ready to branch out. If he desires to raise some young stock, he should start with a brood or two the first year and find out something about small chicks before investing money in expensive equipment. If he finds chicken work irksome and interest in it lagging to the point of neglect at every little rush of other duties, then he is not adapted for poultry culture.

On the other hand if he finds his interest growing and does not become discouraged at small losses, but is keen to remedy mistakes he may know that chicken fever is in his blood and may as well give it full sway as soon as he can grow into the business. There is nothing that will do the beginner so much good as to select some one poultry page and stick pretty close to the instructions he finds therein. The opinion of too many men at first is apt to confuse. Later on when he has gained a lot of experience he may safely browse about and select a bit of advice here and a bit there, rejecting such as seems not to conform to his own experience. While one is a novice one has no means of detecting the impractical among the practical.

For the beginner, egg farming with a pure-bred flock seems the safest and best plan. You may begin to sell eggs right away on the market, later perhaps sell a good many for hatching day-old chicks. This part of the business comes just when egg prices are falling off and before one wishes to pack for winter trade. Should you have a mixed flock you would be cut off from selling eggs for hatching as well as day-old chicks.

For your first little flock, build a tiny house that is destined in time to become but one unit among many that make up your big plant. Fill the house with its one unit flock, say 12 or 25, and begin diligently to learn the business of making some of your hens lay 200 eggs a year. You may not succeed right away, but if you persevere in time you may have a flock that will yield you pretty close to 200 eggs apiece a year. In the meantime you are learning a lot. When you have selected and trained that unit to profitable egg-laying you are ready to add another unit to your

house and another colony to the flock.

The ultimate size of your poultry plant must depend upon the space you have available for pens, houses, brood coops, and the time you can devote to the poultry. The man who has three to 10 acres of land may rear enough poultry to keep himself and a boy or cheap man busy the year round. There is room in the poultry business for more good live men, but just wait till you have mastered a few of the details before you give up a paying job and invest your all in a chicken venture. You are more apt to go on and win in the end if you go slowly and stick to the old job a while. Discouragements do not loom so large to the man who feels that he can back out any time he wishes as they do to the one who feels that his all is at stake.

With a small flock you have opportunity to observe individuals, to notice the little leaks, and to learn from bad mistakes in management. In a big flock little breaks that allow waste, a little here and a little there are not noticed till they begin to seriously cut in on the profits. Then indeed you look about and question what can be the trouble. Ten to one you do not find it. Or, if you do find some of the leaks, many more will go unchecked. When you have spent a year or two closely studying the small flock you know what all these little leaks are and realize that when applied to a big flock they can soon eat seriously into the profits.

As to breeds, the beginner is usually at sea. Look about you and choose that breed which most nearly suits your fancy. First determine whether you want a breed for eggs alone, or one that will prove excellent layers and at the same time give you a good carcass when marketing the surplus. Find a man who has a pure-bred flock of the breed you prefer. If he gets many eggs—gets them in early fall, winter and spring—without undue pampering, he is the man to secure your start from.

Visit some of the good egg farms and learn their methods of feeding. During the months while you are learning from the small flock make every effort to know your best layers and breed only from them. This will give your big flock of the future the firmest foundation that can be had.

Don't go into the poultry business expecting it to be a snap. You needn't expect to gain a fortune by sitting around waiting for the hens to lay. You have to work or get someone to do it for you. You will have to study and plan as you have never studied and planned before perhaps, but the money is there if you are willing to go after it.—Exchange.

CHICKEN NOTES.

The question of selling eggs by weight instead of by the dozen comes up every little while, and in some markets the dealers are willing to give the new method a trial; but as yet it has not been generally adopted. Selling eggs by weight is perfectly right and

proper and the only reason why it has not been universally adopted is because of custom; custom dies hard usually. To the laymen it seems that more headway could be made in this direction if the producers of prime eggs would insist upon the change being made. Of course the poultryman who keeps nothing but mongrel fowls and who, accordingly, produces eggs of various shapes and sizes is not strongly in favor of any change being made which will force him to take less for a dozen of his eggs than his neighbor receives for a dozen of large, uniform eggs, even though the former may be of the opinion that his neighbor's eggs are really worth more than the motly kind. But the producers of the large, uniform eggs far outnumber the producers of the other kind, and in the course of time the former may be able to get their just due. Most of the mongrel flocks of chickens will then be replaced by flocks of one uniform breed.

When roup appears in a flock and spreads rapidly, the probability is that it is in a form that is highly contagious. The sick birds soon spread the ailment to all others that drink from the same water-fountain or pick over the same ground. The only safe course to pursue in such cases is to destroy all sick birds immediately, disinfect the building and yard, and then keep all exposed birds under close observation until it is no longer probable that they will develop the disease.

No hen will lay an egg every day in the year. Even those that are classed as non-sitters will not do it at seasons when they are molting, and there is usually a rest of a few days between the different layings. These periods of non-laying may be shortened, however, by giving good care and feed. The period of idleness after molting, especially, may be shortened by taking pains to provide the kind of food that is required to produce the new coats of feathers.

Milk cannot take the place of meat in the fowls' ration, as it is not sufficiently concentrated and the hens cannot drink enough of it to supply their wants. Milk may and should when available, be provided for drinking purposes, however; give it in clean vessels which do not permit filth to get into the milk.—Exchange.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; \$1.75 for five, \$2 for six. The clubbing list on another page will show what some of the papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.

REPORT OF MARKET POULTRY AND EGG STANDARD COMMITTEE.

Mr. Essex:

Mr. President, and Fellow Members: This will simply be a report of progress on the Market Poultry and Egg Standard. There is an impression abroad among a small number of members that this would be a final report; that we would have the work ready to be submitted to you, and the Standard ready to be printed. We consider that this Standard is too important a matter to rush through inside of a year. I think that the majority of the members now present are old members, and they understand the situation thoroughly; therefore I shall not attempt to explain to you my reason, and the reasons of the other members of the Committee, for taking our time at the work. We believe you thoroughly understand the importance of it, and unless you desire to have it further explained than it was explained last year in the annual report, I will say no more on that subject. I cannot do better than to read you extracts from the report of progress that I made to the president of the Association on May 14th.

(Report Read by Mr. Essex.)

We held an organization meeting in Chicago, Ill., from October 27th to 30th at which you, President Hicks, and Mr. Campbell were present. The Committee held three meetings a day. Arrangements were made for collecting further information in foreign countries; for the taking of photographs; and for securing practical information upon the present standing of the different branches of the industry.

Sub-Committees were appointed to collect information and carry on the work under the following heads:

- 1—A Committee on Poultry.
- 2—A Committee on Eggs.
- 3—A Committee on Illustrating.
- 4—A Committee on Publication.
- 5—A Committee on Publicity.
- 6—A Committee on Editing.

The Sub-Committee on Market Poultry met subsequently (from Dec. 14th to 24th) at Chicago, Topeka and Atchison, visiting cold storage plants, and securing information and photographs thereat.

Further meetings of Sub-Committees were advisable, but could not be held owing to a lack of funds; and as the information desired to be gathered can only be secured at certain seasons of the year, some portions of the work have had to be put over until next season.

Up to this time no editing of the matter collected has been done as this can only be properly dealt with after reports of respective Sub-Committees are complete.

The Committee has been very careful to keep to itself all information and photographs obtained, so that when handed over to the Association the matter may be copyrighted.

The work on Market Poultry has very well progressed; but not so much has been done with regard to Market Eggs owing to the difficulty of attend-

ing to this section of the work at the proper season.

Having reference to your suggestion that a meeting of the Committee should be held, do you not think it would be saving money to the Association to have the meeting held at Atlantic City a day or two previous to the annual meeting? It would hardly pay to hold a special meeting for a meeting of the committee at this time of the year is difficult. My opinion is that the best interests of the Association will be conserved by avoiding any special meeting unless progress in the work of collecting information can be made at the same time. It may be that members of the Committee intend being present at the annual meeting; if so, the holding of a meeting at that time would save money.

Mr. Essex—"The above extracts from my report of progress to President Hicks will give you a fair idea of how far we have gone in the work. Much remains to be done. We have to make investigations of the various markets and their peculiarities. Take the South Shore trade, for example, near Boston. That is altogether different from the Philadelphia and New York markets. The only time to get the information we need is at the season when these various markets are in full operation. The same applies to the marketing of eggs. The commercial end of the business is so important that we feel our work should not be hurriedly done.

To give you an idea of the manner in which this Committee is doing things, I will read you extracts from the minutes of our first meeting, held at Chicago, October 28th to 30th, 1912."

The meeting took place in Mr. Mandeville's office.

Those present at that meeting were the following members of the Committee:

- R. H. Essex, Buffalo, N. Y.
W. R. Graham, Gueph, Ont., Can.
T. E. Quisenberry, Mountain Grove, Mo.

Harry Lamon, Washington, D. C.
Paul Mandeville, Chicago, Ill.
H. C. Pierce, Philadelphia, Pa.
W. A. Lippincott, Manhattan, Kas.
G. C. Bowman, Topeka, Kas.
F. C. Hare, Quincy, Illinois.
Mr. J. M. Foster was not able to be present on account of illness.

The visitors in attendance were:

- Pres. R. V. Hicks, of A. P. A.
Sec. S. T. Campbell, of A. P. A.
R. V. Kempster, Columbia, Mo.
A. G. Philips, Lafayette, Ind.

Chairman Essex read to the Committee an article which appeared in Inland Poultry Journal in which the writer dealt with the question of publishing a Market Poultry and Egg Standard. The article argued both for and against it, presenting the case in a very fair manner. The Chairman suggested that members of the Committee in their work should bear this article in mind, with a view to safeguarding the interests of fanciers as well as market poultrymen.

Chairman Essex read the motion of Mr. Quisenberry at Denver, 1911, showing that the Committee had power to publish and distribute the New Standard. He also read his resolution passed by the Executive Committee at Nashville, legalizing the appointment of this Committee. He said that this Committee's resolution made in open meeting at Nashville to appropriate \$5,000.00 was amended by Mr. Zimmer, based on a suggestion by Mr. Curtis, and that the motion by Mr. Zimmer authorized this Committee to proceed with its work in accordance with Mr. Quisenberry's motion; limited the Standard to 200 pages; and authorized the Committee to spend \$5,000.00 towards the work. He stated that Mr. Zimmer's amendment carried, and that the Committee's Nashville report was adopted with that change.

Chairman Essex stated that he would like to have every person present express an opinion regarding the making of the Standard, and offer general suggestions before work was commenced. He would ask each one individually to do so, beginning with President Hicks.

President Hicks—"You should tell what the live market bird should be in general conformation and then specify the demand for dressed poultry and eggs."

Mr. Graham—"What is wanted is a uniform product. We should not pay attention to any breed. We don't want to tread on the fancier's toes. The Standard must be simple, plain, practical and concise."

Mr. Quisenberry wanted a Standard that could be used by farmers' sons and daughters in selecting poultry and eggs.

Mr. Lamon believed that the Standard should be descriptive. An educational Standard to send to farmers telling them what the packers actually want.

President Hicks—"Would you tell how to keep eggs?"

Mr. Lamon—"Yes, not much, but we should certainly consider feeding and tell how to put poultry and eggs in the best market condition."

Mr. Hare felt that the Standard should explain the live utility standard; and give score cards for the different classes of dead poultry and eggs.

Mr. Bowman wanted a book that could be depended on. One as nearly perfect as possible. There should be standards for different sizes of broilers fryers and roasting chickens. The vitality of the bird was a leading question.

Several members indorsed the idea of adding a page about feeding poultry.

Mr. Lippincott desired to safeguard the interests of the pure-breds and should not allow mongrels to win.

Mr. Hicks cautioned the Committee that one of the strong arguments against the Market Poultry and Egg Standard was that dunghills would win the prizes.

Mr. Graham stated that at the Ontario Poultry Show in the open class mongrels had never won for they never

admitted them to competition, and that in the boxed class, where they were admitted, they had never won during twelve years.

Mr. Pierce wanted to include instructions how poultry should be dressed and eggs shown. Would give one page to preparation. There should be several classes for eggs.

Mr. Mandeville believed that the filler should be made to fit the eggs and not the egg to fit the filler. The price for large eggs was not enough more to pay for producing large eggs.

Mr. Pierce thought that the standard market egg should weigh 24 to 26 ounces. Cut for heavier eggs. This latter view met with several objections.

Secretary Campbell would regret to see the Committee discriminate against large eggs. See that standard breeds are taken care of. \$1.00 sufficiently low price for the Standard. Don't make mistake of not having text clear.

The afternoon session and all subsequent meetings took place at the Hotel Sherman.

After general discussion the Chairman stated that he would appoint Sub-Committees to do the work on the Standard. He outlined the manner in which the work should be divided, and indicated that the interests of all parties must be conserved. Motions should be made laying down not only the division of the work of Committees, but stating clearly the basis of the work, and naming the reports and motions which govern it.

He asked for time to consider the make-up of the Committee before naming the appointments.

After further discussion it was moved by Mr. Mandeville and seconded by Mr. Pierce that the work of the Market Poultry and Egg Standard Committee be referred to Sub-Committees as follows:

1. A Committee on Poultry.
2. A Committee on Eggs.
3. A Committee on Illustrating.
4. A Committee on Publication.
5. A Committee on Publicity.
6. A Committee on Editing.

Carried.

The work of the Poultry, Egg and Publication Committees shall be subject to the approval of the Committee on Editing, and in case of disagreement shall be referred to the Committee of the whole. Carried.

It was moved by Mr. Pierce and seconded by Mr. Quisenberry that the work of the Sub-Committee on Poultry shall consist of:

The classification of poultry, the addition of classes for squabs, old or mature pigeons, guineas, ducks, geese, turkeys and capons, the safeguarding of poultry (not overlooking A. O. V. poultry) and acting in accordance with the report of this Committee at the A. P. A. Convention at Nashville; the emphasizing of the fact that the use of standard-bred poultry is advisable and explaining the benefits to be derived from the use of standard-bred males on a flock of common chickens in obtaining uniformity of type, etc.; dwelling on requirements of vitality in breeding fowls; showing the methods

of dressing poultry for the shows and rules for showing; illustrating methods of killing, packing and marketing; the preparation of score cards, suitable disqualifications and a glossary of poultry of poultry terms; telling the color of skin; requiring the exhibitor to show birds of uniform type in each class; and considering the suggestions of Chairman Essex's circular letter of February 9th under the subheads "Shows," "Market Poultry" and "General Remarks," and such other work as may properly come within the province of this Sub-Committee, including the obtaining of further information by correspondence and otherwise. Carried.

Moved by Mr. Mandeville and seconded by Mr. Lamon that the work of the Sub-Committee on Eggs shall consider the suggestions contained in Chairman Essex's circular letter of February 9th, and shall be in accordance with Committee report to the A. P. A. at Nashville, and shall consider the term "New Laid Eggs" in the description of classes in the Standard; and shall perform such other work as may come within the province of this Sub-Committee including the obtaining of further information by correspondence or otherwise. Carried.

Mr. Lamon moved, seconded by Mr. Pierce, that the Chairman and Messrs. Mandeville and Bowman be a Sub-Committee to confer with the National Poultry, Butter and Egg Association to secure the appointment of a Committee with power from that body to confer with the Market Poultry and Egg Standard Committee. Carried.

It was moved by Mr. Graham and seconded by Mr. Pierce that the title of the Standard shall be "The American Standard of Market Poultry and Eggs. Carried.

Mr. Pierce suggested that all members of the Committee shall be on the lookout for photographs for the Standard, that photographs be taken of the dressed bird hanging up against a plain background (preferably black) and that side, breast and back views be obtained, and also similar views of poultry as prepared for show.

President Hicks was of the opinion that if the Chairman of the Committee believed a trip to some plant or other suitable place by the members of a Sub-Committee was necessary, that this expense would be approved by the Finance Committee of the A. P. A. The President also felt that the expenses of stenographic and other help used by the Sub-Committees were justifiable.

Mr. Pierce moved, seconded by Mr. Lippincott, that the expense accounts of the members of the Committee be divided into per diem, hotel, traveling, meals and office expenses, and that each expense account should be sent to the Chairman of the Sub-Committee to which it pertained for his approval, and that the Chairmen of the Sub-Committees shall be entitled to charge per diem allowance for the time actually occupied in the work of their respective committees. The Chairmen of the Sub-Committees to send the accounts to the Chairman of the Committee of the whole for his approval. Carried.

Moved by Mr. Hare, seconded by Mr. Lamon, that all negatives and all photographs and illustrations and all other material secured or made for use in the American Standard for Market Poultry and Eggs, be the property of the American Poultry Association, and that no prints or reproductions be made, except for the sole use of Association, and that neither negatives nor prints nor illustrations nor other material shall leave the possession of any member of this committee except as follows, and that the negatives and prints and illustrations and other materials be sent to the Chairman of the Committee. After the proper use has been made of them, they are to be delivered to the Secretary of the A. P. A.

Moved by Mr. Lippincott, seconded by Mr. Mandeville, that all illustrations used or secured for use in the American Standard of Market Poultry and Eggs shall be original and specially prepared for that purpose. Carried.

Chairman Essex then announced the members of the Sub-Committees as follows:

1. Poultry: Messrs. Graham, Bowman, Pierce and Hare.
2. Eggs: Messrs. Mandeville, Quisenberry, Lippincott, Graham and Foster.
3. Illustrating: Messrs. Lamon, Graham, Pierce and Mandeville.
4. Publication: Messrs. Hare, Lamon, Quisenberry, Lippincott and Foster.
5. Publicity: Mr. Essex.
6. Editing: Mr. Essex.

It was moved by Mr. Graham and seconded by Mr. Quisenberry that in the event of a Sub-Committee desiring to hold a meeting, said meeting shall not be held at the expense of the American Poultry Association without the consent of the Chairman of the Committee of the whole. Carried.

Moved by Mr. Pierce, seconded by Mr. Quisenberry, that it is the sense of this Committee that the Chairman of each Sub-Committee send a written report of progress of their respective work to the Chairman of the Committee of the whole at least once a month. Carried.

Mr. Essex—"From these extracts you will gain an idea of what we expect the Standard to be. It will be unnecessary for me to read any further. Similar work was done at the other meetings held each day, and you will not be interested in further details. If you want any more information on the subject we shall be glad to give it to you."

Respectfully submitted,

Robert Essex,
Chairman.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

A VALUABLE BULLETIN

BULLETIN No. 214, Maine Agricultural Experiment Station, published last July has just reached me. It is entitled, "The Biology of Poultry Keeping" and consists of a lecture given at Columbia University, January 31, 1912, by Doctor Raymond Pearl, biologist at the Maine Experiment Station. It strikes me as being the most instructive bulletin for the practical poultry raiser that I have yet seen. The document from beginning to end gives scientific confirmation to the doctrines of breeding, feeding and care that many of our leading breeders and writers have promulgated in the poultry press for many years.

Biology means simply "the science of life," so it is not a word that should frighten any of us. Dr. Pearl has the ability to put his scientific knowledge before us in words that we all can comprehend. The Doctor refers to poultry keeping as "one kind of farming, which in one form or another, knows no limitations of space, and only those limitations of climate which forbid any sort of agriculture whatever." He presents as the three fundamental elements involved in successful poultry keeping: 1, good stock; 2, proper management; 3, good sense in the conduct of the commercial end, including (a) buying the supplies; (b) selling the produce; (c) economically controlling the labor factor in the business. Under the heading Good Stock we read: "Good stock is in the last analysis a question of breeding." The beginner must purchase his stock, of course, but as the Doctor says "somebody must have bred it. There is no way to get stock of high quality except by breeding."

We find that there are three primary factors involved in poultry breeding without anyone of which success of the highest type will never come, and with all three of which it is sure to come in time." The first of these is the ability to "see" a bird. Dr. Pearl explains at length that "the ability to see a bird" means the ability to recognize the individuality of one's birds; to know a good bird when we see it. This is laid down as being "the most fundamental qualification for a breeder to possess and is the most difficult of all to acquire."

The second primary factor involved in poultry breeding is stated to be "constitutional vigor and vitality." The breeder must be able to distinguish a good bird from a poor one. Here it is ever to be kept in mind that the primary and most essential characteristic of a good bird must always be a sound constitution and plenty of vitality and vigor. Without these qualities it is impossible to have first class stock. No bird which shows signs of weakness in this fundamental regard should ever be used as a breeder under any circumstances."

"The third basic factor which makes for success in practical breeding is inbreeding. A careful study of the history of the best improved strains of live stock of all sorts, including

poultry, leaves no room for doubt that the attainment of the highest degree of excellence has always been associated with the practice of a very considerable amount of inbreeding of rather close degree. What the successful breeder aims to do is to get his stock into such condition that there is only one kind of 'blood' in it. The quickest way, indeed the only way, practically to obtain this result is by the practice of some degree of inbreeding. Sometimes a great stride toward the desired end may be made by mating brother and sister or parent and offspring together. That a mating of such close relatives will surely result in disaster is one of the carefully nursed superstitions of breeding which has often been exploded. The results which follow inbreeding depend entirely upon the nature of the individuals inbred. The time has come when a vigorous protest should be made against the indiscriminating condemnation of inbreeding. It should be clearly recognized that if the experience of stock breeders extending throughout the world, and as far back as trustworthy data are available means anything at all it plainly indicates that some degree of inbreeding is an essential to the attainment of the highest degree of success in the breeding of animals, poultry forming no exception to the rule."

In all of this Dr. Pearl is considering the practice of breeding that is based upon careful and competent selection for mating of individuals that possess great "constitutional vigor and vitality."

Under the heading of Housing we find that "it is now clearly recognized and generally admitted by all competent poultrymen that certain things are absolutely essential to any poultry house which is to give good results. These are; (1) fresh air, (2) freedom from dampness, (3) freedom from draughts, (4) sunlight, and (5) cleanliness. Experiments being made at various times and places indicate clearly that in northern climates, where birds must be shut up in the house during a part of the year in order to give best results, there should be allowed in the house at least three square feet of floor space, and preferably a little more. Fowls will lay better during the winter months in a properly constructed house open to the outside air in the day time, so that they live practically out of doors, than in any heated house which has yet been devised. If a laying house is dry the temperature may be neglected. If a house has a tendency to dampness, it will give poor results regardless of temperature." After discussing the merits of long continuous houses and separate colony houses and showing that "local conditions and circumstances must decide in each individual case which system of housing will be adopted," the bulletin takes up the feeding question. We read: "Not only have many and curious substances been suggested as poultry food, but

they have been combined in formulas as weird as a medieval apothecary's prescription. Actually practical poultry feeding is much more of an art than a science in the present state of knowledge. While for pedagogical reasons it seems wise in the teaching of poultry husbandry to spend a considerable amount of time in calculating balanced rations and nutritive ratios it is very doubtful if all such activity has any real or tangible relation to practical poultry feeding. The successful feeding of poultry depends upon acquaintance with fowls. The basic biological factor is once more individuality. Each individual hen is an independent living thing, possessing well marked likes and dislikes of her own with respect to food. In the practical feeding of flocks of poultry large enough to be a commercial proposition, the methods which have been worked out by the successful poultryman are essentially attempts to satisfy the individual tastes of the birds to as great a degree as possible, at a minimum labor cost. The result is obtained in practice by offering to the flock a variety of food materials so that they may have some opportunity of choice as to what they shall eat. If we feed corn, wheat and oats the fowl which likes the corn has the opportunity to live on corn, whereas the fowl which likes about three parts wheat and one part oats is able to satisfy her taste in this regard. As a result of this manifest need for a variety of choice as to what they shall eat, practice now generally accepted as best is to put regularly before fowls food substances belonging to four different categories. These categories are: 1. Dry whole (or coarsely broken) grains, (e. g., corn, wheat, oats, barley, etc.). 2. Ground grains (e. g., bran, middlings, corn meal, linseed meal and other finely ground grains). 3. Animal products (e. g., beef scrap, blood meal, fish scrap, green cut bone, etc.). 4. Succulent or green foods, (e. g., mangolds, cabbages, beets, sprouted oats, green corn fodder, etc.). The proportions in which these different kinds of food materials are fed differ to a considerable extent among different poultrymen. The exact proportions in which they are given really matters very little, owing to the fact already brought out, that the hen compounds her own ration to her own taste if given the material. Furthermore, it makes little difference whether the ground grains are fed wet or dry. It is cheaper to feed them dry (because of the labor saved), and therefore the 'dry mash system' of feeding has become popular. In feeding fowls in flocks it is important, in accordance with the principles of individuality, to select the birds which are to make up a flock so that they will be as uniform a lot as possible in respect to size, stage of development, etc. Careful grading in this way in putting birds into the laying house pays in the egg basket. The more nearly uniform in structure and habit the component units of a flock are, the more will the effect of individuality be minimized."

The very vital general principles of

poultry breeding and maintenance that are so ably discussed in this bulletin will be recognized by all who have been careful readers of the Poultry Keeper for the past dozen years as being neither new nor revolutionary; but their importance will be more thoroughly impressed upon many by their reiteration and confirmation by so eminent an authority as Dr. Pearl F. O. Wellcome.

PEACTICAL POULTRY FEEDING.

Although it is convenient for the poultry keeper to be acquainted with the composition and food value of the feeding material on the market, he does not necessarily need to devise or compound a scientific ration for his flocks. The best results can be obtained by plain feeding of foodstuffs, the various materials being fed separately, allowing each bird to balance its own ration.

The best feeding for fowls in full laying is as follows: In the morning a plain mash, made up of two parts pollard middlings), and one part bran, by measure; the proportions may be varied according to the quality of the pollard. At noon, meat in the proportion of one ounce (cooked) to each bird. Green feed, such as cabbage, lettuce, clover, watercress, mangels or alfalfa to be fed during the day. For the evening meal, oats and wheat, alternately each day, and in cold weather corn may occasionally be given.

Sharp gravel grit and crushed oyster-shell should always be before the birds and also clean, fresh water.

This same system of feeding may be used for breeders. However, the quantity of meat must be reduced considerably or the birds will be overforced, and the chicks are apt to be weak.

The whole of the mash should be moistened with meat soup and mixed to a crumbly condition. It should be fed in troughs, and these must be kept clean and sweet, no food being allowed to accumulate or become sour.

Skim-milk is one of the best egg-producing foods, and in spring and summer, the natural laying season of birds, it may take the place of animal food. A good method of preparing it is to let the milk sour, pour off the whey and boil the curd.

Pullets should not be forced to maturity, as is often the practice with late-hatched stock; they should be left to grow steadily. Forced maturity results in small eggs, and late-hatched birds are more apt to acquire disease. When feeding the early-laying pullet the food should not be changed during the autumn or winter months, for this will not only check egg production, but will also throw the birds into a moult.

There is no definite rule by which the poultry keeper may determine the quantity of food his stock requires. Give each meal without waste; the good layer will convert the food into

eggs if fed regularly, while the poor layer will turn them into fat.

By keeping the fowls sheltered from rain and wind, food is saved. Heat, to dry the birds when wet, and to ward off the cold must come from the food.—Exchange.

PROFIT IN CAPONS.

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a years subscription to Poultry Keeper Address, Poultry Keeper Publishing Co., Quincy, Illinois.

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Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

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No. 8

It is seldom wise to leave chicks out in the small coops after November first. A sunny barn cellar or open front wood house, is much better than the small coop out in the lot. Better still is the clean, roomy pen on the poultry house. A chick that is worth wintering is worth housing carefully from now on. The hens that are molting this month need the protection of tight roofs and absence of drafts. The modern houses give the most protection and yet admit needed air for health. See that the stock is not too close together on the roost. Too little room there will injure the birds and is likely to help produce colds and roup.

The egg records of the Leghorns at the two egg contests have attracted much attention. No one can say, now, that Leghorns do not lay in winter weather. Winter before last the temperature at Storrs, Conn., went as low as twenty-two degrees below zero and combs were frozen, but the Leghorns in the contest went right along laying. We hear of many folks who are buying pens of Leghorn pullets to try out for themselves, the work of this active breed. No breed has all the good points, neither is any free from faults, and it is a fair deal to test out at home on a small scale before venturing in to keeping large numbers. We have to try out fowls as we would new varieties of garden seeds, and know by actual handling what is best for us to keep.

Indian Runner ducks are becoming better known through the country. We have been pleased with some of the egg records that have come to us this autumn. One reader writes that his flock of old Runner ducks gave him twice as good an egg yield through October and November than did his yearling hens. His ducks hatched in May began laying in September and kept it up till well into October, when some of them grew a new coat of feathers. We need to remember, however, that ducks do not stand the close confinement that hens

do. It is probably due, largely, to the lack of opportunity to get the varied diet that is the lot of the free range fowl.

Ship live or dressed poultry in time to get the Thanksgiving sales. Prices may be lower after Thanksgiving, not getting back to normal until the middle of December. If you plan to get the market for Thanksgiving day, see that your poultry gets to its destination by Monday or Tuesday. If you have a few fine cockerels to dispose of, the yellow skinned sort, plump and round, it will pay you to seek some nearby butcher who has a fancy trade. A few business-like poultrymen, that we know, cater to the direct family trade of the neighborhood. It does not take much argument to sell a good Wyandotte, Rock or R. I. Red cockerel for the Sunday dinner.

Silicate of soda, liquid water glass, is probably the best preservative for eggs. Fresh eggs, clean and unwashed, are packed in this liquid and kept for future use. This is usually done in times of low egg prices and the eggs taken out when prices are higher. Families are doing this for their own consumption. Twenty-five years ago we remember of seeing a minister come home from a trip into the country bringing two pails of eggs, twelve dozen, paying a cent each. That was a time of low prices, such as we have never seen since. These eggs were covered with a liquid containing lime and other materials, and kept from summer till winter. Liquid water glass has come into general use. An improved form is to be put on the market, in granular form, needing the addition of water to make it ready for your use. The dry "water glass" is to be sold by parcels post and delivered at the door of housewife and poultryman. We already have a good supply and will test it out this autumn. The real test comes in the keeping of eggs of summer through the heated term and into the cooler months of fall. Remember that eggs do not improve with age, are better if infertile

and must not be soiled or washed. Remove males from pens, gather the eggs every day, and pack down when cool and clean. The keeping of such eggs, buying at summer prices and holding till winter, will help solve the problem of meeting the cost of high living. It is the consumer, not the producer, who needs the water glass to preserve his eggs for home use.

At the close of the forty-seventh week of the Egg Contest, at Storrs, Conn., the best pen of Barred Plymouth Rocks has laid 744 eggs; White Plymouth Rocks, 830; Buff Plymouth Rocks, 702; Columbian Plymouth Rocks, 771; Silver Wyandottes, 755; White Wyandottes, 936; Buff Wyandottes, 665; Columbian Wyandottes, 713; Single Comb R. I. Reds, 908; Rose Comb R. I. Reds, 780; Brown Leghorns, 640; White Leghorns, 1147; Buff Leghorns, 824; Black Minorcas, 713; Blue Andalusians, 748; Anconas, 602; Buff Orpingtons, 680; Black Orpingtons, 375; White Orpingtons, 730; White-Laced Red Cornish, 549; Buttercups, 453. These records are for pens of five females, mostly pullets. This contest ends with October 31st. The contest of 1913-14 will start November 1st, each pen having ten females instead of five. This will give a more fair average of egg yield than the smaller number of birds as in the past two years. We plan to give more facts as to this, and other, Contests through the coming year. In December we intend to present some of the lessons that may be gained from the reading of the records of the entire year's work at this Storrs Contest.

Can we have a few letters from readers who have succeeded or failed with raising turkeys this year. We know of one breeder who lost every turkey hatched this year. Another one has now eight hundred out of one thousand hatched this year. Tell us your experience, good or bad, and give your method of care and feeding. There is great interest in turkeys and we want to get at the rugged facts in their history today. We know what was done thirty years ago, we know what some folks have been doing lately, but we desire to get the actual results of 1913.

If at any time you run out of green roots the coming winter, try out the feeding of dry beet pulp. It has seemed to answer every purpose at one of the large poultry plants, where it has been used for two years. If you fail to get beet pulp, then try sprouted oats through the cold months, until the growing grass can take its place.

We desire to extend our readers the opportunity of giving their experience at poultry work and shall be glad to publish these letters. The letters can be gotten up in your own way and we will edit them properly before printing them in Poultry Keeper. Doubtless you have been interested in reading the letters which have been sent us by other subscribers, and they in turn will be interested in reading your letter.

LAYING BOXES FOR THE HENS.

In providing laying boxes for the hens the main point to be considered is the possibility of keeping them clean and sanitary. The great danger is that they will soon become infested with mites and lice, hence the necessity of having the boxes so constructed as to be easily and quickly cleaned.

Boxes should be of a size to fit the hens; thus the larger breeds should have larger boxes. Nests however, should not be made so large that two or three hens can crowd on at once, with consequent strife and broken eggs. The number of nests should be about one for every three hens in the house. Some poultrymen use separate boxes placed under a shelf along one side of the building. It is a good plan to have the nests in semi-darkness, as hens are supposed to like seclusion when laying. They are not so likely to form

the habit of egg-eating if nests are not fully open to the light. This pernicious habit is usually formed by accident. The nesting boxes form a tempting place in which to scratch if they are placed in a strong light; an egg is broken, it is eaten, the taste is enjoyed and the habit is formed. Darkening the nests may even then overcome it, but better it were never contracted.

An excellent method of making nests is to put the sides together, bottomless, resting this frame upon a shelf a little wider than the box. The boxes should be half filled with nesting material, which can be easily changed as desired by simply removing the frame and sweeping the shelf clean. This is the easiest style of nest to keep free from vermin. Hay and straw are poor material for the nests, being too bulky and unyielding. Seed and chaff from the bottom of the hay mow is much better. Best of all, however, is cedar

excelsior, as it helps to keep lice in check. Nesting material may be removed and placed outside for cleansing. It should always however, be thoroughly dry when returned to the nests. It is best to provide new every few months as the old becomes so discolored and foul that exposure to the action of the elements will not cleanse it.

There are many variations of the nesting box which might be mentioned. The more advanced breeders of fancy stock are using the trap nest almost exclusively. This hardly seems practical for the poultryman who keeps hens for eggs particularly, and it is scarcely necessary unless one is building up a particular strain for breeding. One could have a building equipped with trap nests, in which his best hens are kept to obtain eggs for hatching. In fact if one is in the business on a considerable scale it will pay him to improve his flock in this way—(Ex-



Make Your Hens Lay

When Eggs Are Worth Most

HENS relish juicy bugs and worms because these supply the protein feed they require to make eggs. The craving for meat and bone food—protein feed—is simply nature working out the egg-laying proclivity. Hens must have food rich in protein or egg-making elements, or it will be impossible for them to lay.

Our little book tells you all about the how and why of this. It makes you master of egg-getting. It's a book that opens up to you the real possibilities with poultry.

It's simply a matter of knowing what food to supply and how to prepare it. It is now established beyond all doubt that raw, green bone, with adhering meat and gristle, cut fine, is the ideal egg-producing food. Its cost is a mere trifle and its preparation is easy with a

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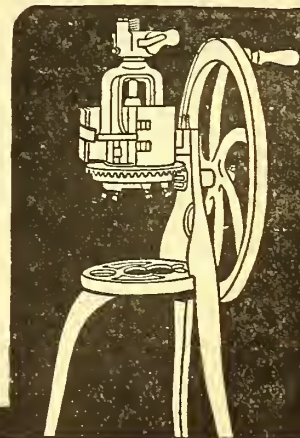
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the two lugs over the loose end as shown in cut. Cut off surplus with scissors.

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My three books, ordered with eggs, \$1 additional.
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HOLDEN, MASS.

GREEN CUT BONE.

Green cut bone, when absolutely fresh and properly ground is one of the best known foods for chickens. It provides all the elements necessary for the production of eggs and there are still some elements left for the maintenance of the bird itself. At the season of the year when bugs, worms and animal life are practically out of reach of the fowls, there is no substitute so efficient as green cut bone to take the place of these very necessary dainties to the poultry family. It contains meat, blood and a large amount of phosphate of lime, together with other nutritious substances in partial solution.

Green cut bone will make the little chicks grow quickly and adds vigor to both the young and old stock. It is a wonderful tonic for molting hens, and as an egg producer it has no equal. It will frequently increase the egg yield of the hens that give indications of outliving their usefulness.

If you have a number of pullets that are old enough to be laying but are slow in getting started, try feeding them green cut bone for several days in succession, and watch the results. You will be surprised to see how quickly they will respond to the treatment. You will also find that green cut bone will materially increase the growth and vigor of your growing flock, and that they will develop much more rapidly if given a substantial feeding two or three times a week. It is also particularly good for cockerels intended for breeding purpose later in the season. It is one of the best known flesh and muscle producers and eggs from breeding hens fed on a reasonable amount of green cut bone will produce a very large percentage of healthy and vigorous chicks.

No doubt you understand what green cut bone or, as it is often called, ground bone and fresh bone, is but in order that you may not confuse it with beef scrap and other similar preparations, let us say that it is the fresh bones taken from the meat sold for your own table and which your butcher is unable to sell for any other purpose except fertilizer. Many butchers grind these pieces of bone in electric grinders, and sell it to their customers at three and one-half cents per pound. If you are unable to buy this ground bone, it will pay you to get a machine, buy bones from your butcher and grind them for your own use. This is really the much cheaper way of buying this food. These cutters can now be purchased for a very small sum and on very easy terms, and it is very little more trouble to prepare this food with one of these grinders than to mix up the mash or any other

ration. Be very careful in selecting your cutter that you get one strong enough to cut the bones and not cause them to crush and splinter. Chickens eat this ration very greedily and there is danger of splinters lodging in their throats and causing death.

While green cut bone, as we have said before, is one of the cheapest and best of foods known to poultry raisers of to-day, do not make the mistake of over-feeding it. If you do this, it is likely to cause bowel trouble. If you see any signs of diarrhea discontinue its use at once for several days, and when you begin to feed it again, reduce the quantity somewhat. For ordinary feeding the right proportion is three pounds to a hundred hens if fed daily. Some prefer to feed in the litter, others in the hopper, and still others feed green cut bone in the mash. The results from these different methods seem to be about the same.

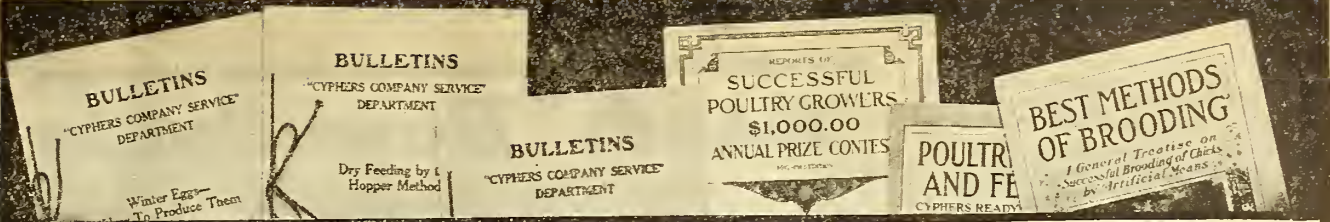
The last but not the least important thing of all in this connection is to be sure your green cut bone is fresh, as tainted meat of any kind is likely to cause ptomaine poison, limberneck and enteritis. However, you cannot make any mistake in using green cut bone if it is perfectly fresh, and in the right proportions. Try it and convince yourself.—Exchange.

EGGS.

Eggs sold yesterday for 50 cents a dozen at the farm houses in nearby New England. Delivered or in the stores, the price was some cents higher. Producers say the price seems sure to go up, and up. Yet there is more money invested in poultry in New England today than ever before.

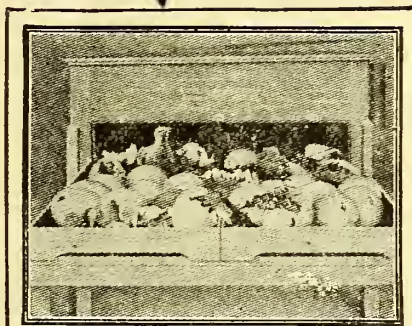
Scanning the prize lists of two poultry shows of national importance, it is noted that the most coveted prizes, the blue ribbons and the silver cups, are for fowls displaying nearest perfection of plumage, size, color and weight. Egg laying ability is not even mentioned, except in the utility classes, which are tucked away in a corner, as a rule.

Isn't it about time for New England's wealthy poultry fanciers to ask themselves the old conundrum, "Why is a hen?" Is it not to produce eggs, rather than plumage? Would it not be a more worthy triumph to produce a breed of fowl that would lay consistently 250 or more eggs a year, than to accumulate blue ribbons for pullets that are perfection to the eye, but that cease laying just when the public must pay 50 cents a dozen for fresh eggs or else patronize the cold storage plants.—Boston Daily Post, Oct. 10, 1913.



Cyphers Co's

Free Service



Cyphers Incubator 100 Per Cent Hatches—Ostrich Eggs— On the Other Side of the World

The following report, published in the "Agricultural Journal of the Cape of Good Hope," issued under the direction of the British Government, shows remarkable results of Standard Cyphers Incubators in hatching ostrich eggs in South Africa:

*** All of our chicks are incubated in Cyphers Incubators and most of the parent birds were also incubated. You will see by our egg record that we have sixteen camps of breeding birds, one cock and two hens to a camp. Of these only fourteen laid; the other two were only mated this year.

"For reasons of our own we separated our birds at the end of September, although you will notice they were mostly all laying well at the time, but of the 603 eggs we hatched 410 chicks, nearly 400 of which are alive and doing splendidly.

"This, in a year when so many are complaining of having few or no chicks, you will admit speaks well for the incubator.

Bowden Hall Egg Record, 1910

Total, July	110
Total, August	233
Total, September	255
Grand Total, 668	

Some of Our Best Hatches

40 Fertile eggs	40 chicks
38 Fertile eggs	35 chicks
37 Fertile eggs	36 chicks
37 Fertile eggs	37 chicks
39 Fertile eggs	38 chicks
41 Fertile eggs	40 chicks

"Altogether, out of 603 eggs laid, 430 were fertile, from which we got 410 chicks. Yours truly,
ROELOF B. KÖTZE"

Whoever you are, wherever you are, you are entitled to the knowledge and experience developed by the Cyphers Company for the benefit of all poultry raisers.

The books displayed above give some idea of the *thoroughness*—the far-reaching care with which this Company has solved and demonstrated chicken raising problems. And all the information, all the help and advice you may desire on poultry problems, is yours for the simple request.

We look at the matter *broadly*. We know that the more we help chicken raisers, the more people come to know that the Cyphers Company is headquarters for sound, practical, *money-making* information, the greater our business will be. So we offer this valuable free service without regard to what incubator you own or what methods you follow. Please don't hesitate to ask us

for information. Our large department for handling this correspondence consists of poultrymen of long experience. It is headed by Grant M. Curtis, president of the Cyphers Incubator Co., famous as a writer and authority on advanced poultry topics. Every inquiry receives careful attention and correct and helpful reply, based not only on thorough poultry knowledge but on *every-day experience* and *proof* at the Cyphers Company \$75,000.00 Experiment and Demonstration Farm, the largest and best equipped all-purpose poultry plant in existence, public or private.

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| No. 6—Dryness Essential for Poultry Hens. | No. 18—Line Breeding and Trap Nesting. |
| No. 7—Common-Sense Feeding of Fowls. | No. 19—Best Markets for Table Poultry. |
| No. 8—Important Don'ts for Beginners to Memorize. | No. 20—Where to Start in Poultry Business. |
| No. 9—Proper Brooding of Chicks. | No. 21—Common Diseases of Fowls and Chicks. |
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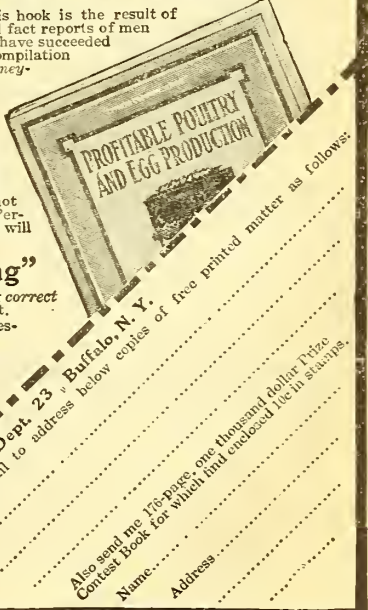
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4 FINGERS You can count on the four fingers of one hand every poultry raiser in the world who can pick out all the unhatchable eggs before incubation and not use the Magic Egg Tester. Why guess? Why waste money, eggs, space and time? \$2.00 each by mail. Fully guaranteed. Newest incubator methods with each Tester. Illustrated circular sent for the asking. Magic Egg Tester Works, Dept E., Buffalo, N. Y.

"Dandy" Bone Cutter

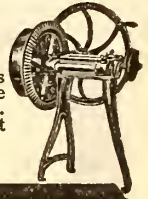
You needn't pay one penny for this bone cutter until you try it and it satisfies you. Feeding green bone is one of the first steps to gain a big egg yield. But the bone must be cut right. The Dandy Green Bone Cutter cuts across the grain of the bone, enabling the hen to digest the nutritive elements better and convert same into eggs, blood, feathers. Our terms on the Dandy Bone Cutter are

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ROOFS.

J. E. Willmarth, Amityville, N. Y.

Poultry house roofs may be of many shapes. Hips and cupolas may suit one's fancy. Possibly these are ornamental but they are but seldom useful. Shed roofs and two way or hip roofs are most common. They each have their advantages, and possibly disadvantages. Under certain circumstances the two way or hip roof is the most practical. Under other conditions the shed roof is more practical. The latter is the cheapest form of roof that can be built, and also has many advantages as a covering for a poultry building. With such a roof, with the highest part of the house facing the south, the sun is enabled to reach all parts of the interior, if proper windows are provided. Next to its cheapness this is the greatest advantage of the shed roof. But heat always rises and seeks the highest portion of a building, and with an opening near the top of the front of the building some of this heat will escape. However, we have had personal experience with such shaped roofs on buildings in which there was an opening in the front the entire length of the building, eighteen inches wide. This was open all day and a muslin covered frame provided which was let down at night and in driving storms.

We are still using such a building and find it very satisfactory, and we cannot see any appreciable difference in temperature between this and another building which has a hip roof.

Another great advantage of the shed roof is that when it storms, all water falling on the roof is carried off to the rear. This leaves the space in front of the house comparatively dry, especially if the storms come from anywhere but the direct south.

The other building which we mention above, has a hip roof with the longest pitch to the rear, the hip or ridge being about two and a half feet from the front. This building gives us much better head room as the entrance door is directly under the peak, thus we do most of our walking directly under the highest part of the

building. This enables us to have a comparatively low roof, with sufficient head room.

This is the one great disadvantage of the shed roof house. The entrance door of this building is in one end, directly adjoining the front.

This is the highest place possible to have it, but naturally, when one walks inside, he has to keep a little distance away from the front wall, and thus the roof gets nearer his head and often results in a bump, unless one is of rather short stature. If one were building a square building or one nearly so, it would be possible to have the gable ends facing the north and south. This would give us better head room with a peak roof with ridge in center, this would be highest part, and the door may be made in the center of the south side. Such a construction would admit of quite a low roof.

Possibly some readers cannot see the idea of having as low a roof as possible. In cold weather this is an advantage for it makes less space for the heat from the fowls to keep warm enough for it to be comfortable for them. In fact fowls will get along nicely in a building a couple of feet high, if it is properly ventilated, but such a building is impracticable, for the keeper has to go into his buildings and thus they must be high enough to admit of his doing this comfortably.

Having decided as to which style of roof you prefer, the next thing is to see what it shall be made of. With a roof of considerable pitch we can use shingles, but they are seldom satisfactory for covering for a poultry building. Shingles will shed the water but they are never wind proof. True, they give good ventilation and in warm climates would probably answer best as far as this item is concerned, but where the winters are cold, they admit of too much draft and will not retain the heat, but most serious of all, the cracks and crevices between shingles make excellent hiding and breeding places for lice and mites, and it is almost impossible to expel them from such quarters. This one and most serious fault makes shingles impractical for our use.

We prefer a smooth, tight roof of boards covered with roofing paper. Such construction gives us a smooth surface on the inside and a wind and rain proof covering on the outside. This is the most practical form of roof for poultry buildings. We prefer the boards to run from peak to eaves, then if there is a leak in the paper covering, the water will follow the grain of the boards underneath and most of it will carry itself off and not come through on the inside. Then with the most careful carpentry boards will shrink more or less, and there are bound to be some cracks between them. This is apt to form a slight gully in the paper, but if this has a downward pitch, it does but little damage. If, as is most often done, the boards are laid the other way a slight break in the paper will let the water through, this will go only as far as the first crack between the boards underneath and then will fall through on the inside, or if as noted above, there are slight cracks between the boards, the paper settles down in these, and forms a small gutter. Moisture will stay in these places longer than on the rest of the roof, and this tends to rot out the paper in such gullies, and also the edges of the boards tend to wear through the paper. So the next roof you build, have your boards run with the pitch and you will have a better roof and one that will last longer.

A word about applying roofing paper. Many manufacturers will direct that you begin at the bottom of the roof and work up. We say not. Begin at the ridge and work down. Unroll the paper the full length of the ridge. Cut off. Nail securely along ridge or highest part, then put on the next strip of paper, shoving the top edge underneath the lower edge of the first piece applied. Nail this fast, the lower edge of first piece being on top of top edge of second piece. Proceed the same way with each piece until the roof is completely covered. By securing the top edge of each strip of paper first, its own weight will tend to keep it smooth. where, if we fasten the bottom edge first it is almost impossible to keep the paper free from wrinkles.

MARKETING SQUABS.

Squab raising as an adjunct to the regular poultry farm or the farm poultry yard is steadily gaining in favor. The advent of the parcel post has brought the isolated farmer and poultry man nearer to his retail market. Heretofore he found difficulty in finding a paying market for any considerable number of squabs unless he was raising on an enormous scale, enough to pay him to make frequent express shipments with ice in summer. Now he can ship a dozen here a half dozen there to private customers, to hotels and private sanitariums at twenty to fifty miles distance and finds they carry very nicely.

The heaviest demand for squabs is in winter, the lightest in summer, un-

less you can get a nearby summer resort on your market list. We find that it pays to sell the squabs graded according to size. That is the squabs that weigh eight pounds to the dozen in one package, the ten pounders in another and the very large ones by themselves. Prices are regulated according to size. Prime white squabs will sell in eastern cities at from \$4 to \$6 a dozen for the size that averages ten to eleven pounds to the dozen, price depending on the season. The six pounds to the dozen size sell for about \$3 if fine and white. Culls sell as low as 75 cents and this usually includes the small dark birds. Others range between the two extremes.


For a particular trade it will pay better to raise a grade of squabs that average between ten and eleven pounds to the dozen even though they rear a smaller number of birds in the year. It also pays to select the best of your breeders until you have a flock that will produce a uniform squab. Some birds feed their young better than others who have the same size frame to impart to their progeny. Old pigeons sell for as low as twenty-five cents a pair and are better sold alive than dressed.

Of the breeds that it pays best to raise, a cross between the Homers and one of the larger breeds seems most satisfactory. The Homers are very prolific breeders but run as low as six and eight pounds to the dozen.

The runts will rear squabs that weigh two pounds apiece but are indifferent breeders. A cross between the two extremes makes a good sized squab and a fairly good breeder. The result of such a cross may be carefully controlled by selection of the best until you get a uniform flock that can be depended upon to average just about the number of young you wish in a season and of the size that you find pays best for your market. In the very large squab, producers find it hard to get enough for them to pay for the increase in size, where it cuts very heavily on the producing qualities.

When once you have obtained a customer that is fairly regular in his buying-try to give him always the same size and quality, which caught his custom in the first place unless he expresses a desire for a slightly different type. Never allow your quality to slump off or the size to run low when you have established a trade on a given size. Rather strive always to improve on the quality. One satisfied customer usually leads to more—(Exchange).

Have you any stock or eggs to sell? Our cheap rates shown in the classified ad. department will enable you to make the desired sales.



Twice As Many Eggs! This Book Tells How

“The Golden Egg”—Free to You

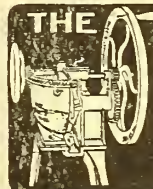
POULTRYMEN! Get in line for more egg profits. We can put you on the right road. That's why we are printing **“The Golden Egg”**—the greatest egg-making book ever published. Explains **The Humphrey Way** and tells how

- To feed your hens right.
- To get eggs all winter.
- To get the finest egg-making food for almost nothing.
- To start lazy hens laying.
- To get fertile eggs.
- To get eggs for early setting.
- To shorten the moulting period.
- To feed fresh cut bone.
- To get twice as many eggs.

You must feed your hens right—that's the secret of making them lay. This 48-page book, **“The Golden Egg,”** tells just what and how to feed your hens. No hen will lay while moulting. Proper feeding will shorten the moulting period—that means more eggs.

“The Golden Egg” shows why and how fresh cut bone prepared in a Humphrey Bone Cutter makes bone, muscle, feathers and eggs. Thousands of farmers are making their hens pay big profits by feeding them **The Humphrey Way**. Be one of the successful progressive poultrymen who are profiting by our experience!

Write us *today*—a post card will do. We'll send **“The Golden Egg,”** with its dollar-laden message, to you. Don't delay!



THE HUMPHREY
GREEN BONE and VEGETABLE GUTTER
will save half your feed bills and double egg yield. Guaranteed to cut more bone, in less time, with less labor, than any other. Send for Special Trial Offer and handsome catalogue.
HUMPHREY,
Class St. Factory, Joliet, Ills.

SUCCESS WITH POULTRY

Contains MORE AND BETTER
Practical, Reliable Information
on the general subject of

Poultry for Profit

Than any other book published.
It treats of every branch of
Practical Money Making
Poultry

And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsome by illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

HOW TO GET STARTED
LEADING STANDARD
BREEDS
CHARACTERISTICS OF
BREEDS
PRACTICAL POULTRY HOUSES
(Plans)
POWLS: CARE AND FEEDING
MODEL BROODING HOUSES
(Plans)
CARE OF ADULT FOWLS
FEEDING FOR EGGS
A HEN CATECHISM
FEEDING YOUNG CHICKENS
CARE OF GROWING STOCK
ARTIFICIAL INCUBATION
INCUBATOR CELLARS
BROILER AND BROILER
RAISING
CARE OF BROODER CHICKS
PEKIN DUCKS FOR PROFIT
5000 DUCKS WITH STAND-
ARD-BRED POULTRY
PROFITABLE EGG FARMING
TURKEYS: CARE AND MAN-
AGEMENT
CAPONS AND CAPONIZING
POULTRY AND FRUIT COM-
BINED
DISEASES OF POULTRY

The publisher's price of "Success With Poultry" is \$1. We will send it postpaid and Poultry Keeper one full year for price of book alone, \$1. If already a subscriber, we will extend your subscription one year and send the book to any address you furnish. If taken alone the price of "Success With Poultry" is \$1. Address,

Poultry Keeper Publishing Co.,
Quincy, Illinois.

BUFF WYANDOTTES

THE GREAT GENERAL PURPOSE BREED—BIG BARGAINS IN BREEDING STOCK NOW

Let me try to please you. Send for circulars containing best lot of testimonials put out by any breeder. Ten years a breeder of Buff Wyandottes.

ORIGINATOR "HIGH QUALITY" STRAIN.

J. E. WILLMARTH,

AMITYVILLE, N. Y.

J. T. FRENCH

BREEDER OF

Exhibition Barred Plymouth Rocks

OF THE HIGHEST QUALITY.

Winners at Toledo, Detroit, Cleveland and Chicago, and many other shows in strongest competition 36 prizes in one season. Stock of my raising has scored 94 points in competition.

Eggs, \$3.00 and \$5.00 per 15 straight.
535 WEST GROVE PLACE,

TOLEDO, OHIO.

CAPONS ARE NATURAL BROODERS.

I have seen but very little in the papers about capons as brooders for little chicks, and I consider them the safest and only good way to raise early chicks. They give the natural heat and are very careful and attentive to the little fellows. Of course it is understood that a capon does not sit and hatch the eggs, but will take incubator chicks, or chicks hatched by hens, and take better care of them than the hen herself. In the first place, his plumage is much more abundant, the feathers are longer and softer, his spread of wings is much greater than Madam Hen's—in fact his accommodations are much more ample in every respect. The capon has a commanding "cluck, cluck," that the little chicks seem to understand perfectly, and when the occasion demands he has the capacity to raise his voice so that the youngsters that have strayed some distance away may hear him and regain the brood in time to avoid danger, and I have never seen a hawk take a chick away from a capon. This summer I saw one of my capons jump three feet in the air and pull feathers out of a hawk, and the hawk did not lose much time in getting away. Another time a crow lit on a fence post intending to drop down and catch a chick for his dinner, but Mr. Capon saw him, and he stood guard of the crow, sending his chicks home. They ran to their brood coops, and after they reached home the crow started to fly away. The capon followed him for some distance, then came home with a very loud "cluck, cluck," and called his brood to him.

One capon will raise four or five broods of chicks in one season. Last spring I shipped two capons to a party living in western Kansas. In May I received a card from the party saying how well pleased he was with them. At that time they were rearing their second brood. Ninety five chicks were with the two capons. The way I have found best to teach capons to mother chicks is to place the capon in a coop two feet square and three feet high with no perch in it, but straw in the bottom. This will compel the capon to go to roost squatting on the floor. Keep this coop dark and handle the

capon often for a few days before intending to give him the chicks. In a few days he will become quite gentle. Then after dark take one or two little chicks and place under him. The capon will not object to this, but rather like it. Should he for any reason seem to be restless, stroke his feathers and talk to him in a soothing voice and all will soon be well. You will have to be up early the next morning to see how things progress. Usually the next morning the capon will be talking, scolding and hovering the little fellows the same as a hen. Sometimes one will seem to be in doubt, will hold up one foot in his feathers, standing on one leg and not say much. When they perform in this manner, try again the second night. In the meantime keep the capon confined to the coop and as dark as possible. By the second morning the most obstinate of them will be clucking and ready to fight for the brood. After they have once learned to take the chicks one can gradually increase the number. A capon can easily care for 20 chicks during cold weather, and in warmer weather 40 to 50.

After their brood of chicks is raised, the capon can be fattened, and if he is of large breed like the Buff Orpington, can be made to weigh from 15 to 18 pounds, and will bring on the market 18 to 20 cents a pound, and the expense of oil to run a brooder for one hatch is more than a capon will cost. If bought this fall before birds are placed in winter quarters one can get them for \$1 to \$1.50 each, where if on the other hand one waits until January or February they will have to pay about \$2.50 to \$3.00 each for them. To those that have had trouble with their brooders, I would say try a few capons and be convinced.—Exchange.

To any reader of Poultry Keeper sending us a list of twenty names, of people interested in poultry raising, no matter whether they keep one or a hundred hens, we will send free of charge a copy of our booklet number four on "Feeding for Eggs." This booklet contains much information on this all-important subject of service to those wanting winter eggs.

USE GERMOZONE

For Bowel Complaint in old or young chickens: Clean up, change feed and give Germozone, a teaspoonful to a quart of drinking water.

For Roup, Colds, watery eyes or nostrils, swelled head, nostrils stopped up, etc., a teaspoonful of Germozone to a glass of warm water. Inject through the nostrils into the head passages. Wash soiled places under the wings with same solution. Give Germozone in the drinking water as for bowel trouble.

For Yellow Canker or diphtheria in mouth or throat of chickens: Remove the canker and apply Germozone right from the bottle. One application generally effects complete cure.

For Regulating Bowels: Give Germozone twice a week as for bowel complaint. It is marvelous how much better chickens will thrive, grow, or produce when bowels are kept regular.

For any Sore, Cut, Wound, Burn, irritation, itching or tenderness of the skin, apply Germozone diluted, one teaspoonful to a glass of water.

For Old Sores, Ulcers, etc., apply Germozone full strength (right from the bottle) once or twice a day.

For Dogs, Singing Birds, and pet stock, a little Germozone in the drinking water (a teaspoonful to a quart of water) is a great bowel regulator, mouth and throat cleanser. Many birds do not sing because of sore throat. Germozone will generally start them singing.

Many other uses. See our large pamphlet for complete list of uses of Germozone.

GERMOZONE may be purchased at most every town; 10,000 dealers in U. S. Fifty cents per bottle. Sample 10 cents postpaid. Booklets free.

GEO. H. LEE CO., Omaha, Neb.

DANGER OF DUSTY STRAW.

Poultry breeders are advised to use bright straw, or clean litter, in the poultry houses, because dusty, dirty, rat ridden litter is a positive menace to the birds. We know of one epidemic of chicken-pox which was caused by the owner, through a mistaken idea of economy, putting in for litter a lot of damp, dirty, ratty straw.

The time spent in curing these birds, and the loss in vitality, cost him far more than the best of straw would have cost. We like to have some unthreshed grain in the poultry house litter. If leaves are used, they should be several inches deep, and kept stirred up to prevent packing. If the floor is bare at the beginning of winter, and has been thoroughly cleansed, put on three or four inches of litter, and when that is broken up, add more. In removing litter, take from the bottom. When you go in to feed, toss the litter with a fork to keep it from packing. Do not throw damp cabbage or many broken leaves of cabbage in the litter. Nothing smells nastier, or makes the floor more objectionable, than quantities of cabbage leaves left to rot on it. Hang the cabbage head up; let the chickens pick it out as they like.

If the litter becomes damp through a leaky roof, overturned water bucket, or other cause, throw it out. Let the floor dry, and replace with clean litter. Good litter should be planned for the chicken house as regularly as bedding for the horses and cattle. Chickens are in a better condition when they have a place to scratch. If the comfort and wishes of the hen were consulted often, there would be fewer complaints of nonlaying hens—(Exchange).

DO YOU WANT MORE EGGS THIS WINTER?

Thousands of people are following the plan of feeding their hens ground up green bone, raw meats or vegetables to keep them laying during their usually idle season. The plan has proven unusually successful.

Every poultry keeper should take advantage of it.

This year promises to be an exceedingly good year for the man or woman

who has eggs to sell. Meat and other products now demand high prices and, in fact the entire market indicates a tendency toward higher prices.

If you are raising poultry it is worth your while to look up the proposition of the F. W. Mann Co., Box 57, Milford, Mass. They have a machine that does excellent work grinding bone, meats and vegetables. It has 15 years of experience behind it, and is known as the original bone cutter.

The particular advantages of the Mann machine is that it cuts all of the stuff you put in it. It is not necessary to throw away a tendon or gristle. There are no big slices or splinters that get through the machine. It does its work easily and quickly. The operator does not have to dig out particles of bone, meat or gristle from the machine.

It is a self governing, automatic speed machine which anybody can run.

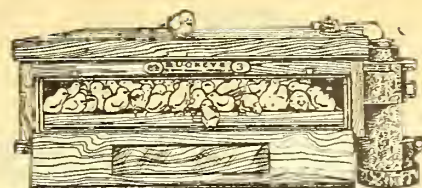
Almost any way to make every hen a paying hen has merit, but the Mann way strikes us as being the real economical and dependable way.

We suggest that you write the Mann Company for their proposition. A few dollars invested in their machine, returns quickly in profits earned. You can make every hen a paying hen this year and for many years to come.

Instead of selling your possible "profit killers" give them a chance to make more money for you. They may make more profits for you laying eggs than you could possibly get by marketing them now.

An interesting catalogue is published by the above concern which can be had by writing them.

We have a special offer for "Poultry Keeper" for three years to any address in the United States, upon receipt of One Dollar, or we will send the paper for one year to three separate addresses. Either of these offers means one subscription free of charge. In sending in your own subscription, by making a little effort right in your own neighborhood, you can get two others to send in their subscriptions with you and get all three subscriptions for one dollar. This will be a material assistance to us and will be appreciated.



THE BEST JUDGE OF Incubators IS THE MAN WHO SELLS THEM

He must know—because his reputation is at stake in every sale. He cannot afford to risk losing your trade by selling you a machine which will not do what the manufacturer claims for it. On the other hand, you take absolutely no chance when you buy an incubator which is backed both by the manufacturer and dealer with such a broad, sweeping guarantee as we offer with the

"BUCKEYE"

It is

GUARANTEED

to hatch every hatchable egg. There are no exceptions and no strings to this statement. Anybody can hatch chickens with a "BUCKEYE." Sold and guaranteed by over a thousand dealers. Over 325,000 in successful operation.

OUR FREE CATALOG

tells why the best dealers prefer to sell the "BUCKEYE." Let us give you the name of the "BUCKEYE" dealer in your town who will be glad to show you the machine in operation and prove to you that it will hatch more and better chicks than any old hen or incubator you ever owned. Write us today.

THE BUCKEYE INCUBATOR CO
507 Euclid Ave., SPRINGFIELD, OHIO

Made in 5 sizes and Sold
As Low As \$10.00

McKee's Royal Blue AND WHITE

ORPINGTONS and M. B. TURKEYS are leading in the south to-day. Many valuable show birds shipped to all parts of the country. More proof of quality, our White Orpingtons won at the great National Conservation Exposition show at Knoxville, Tenn., Sept. 22 to 27, 1913. 1-2-3-4-5 cock-erel. 1-2-4-5 pullet, 1-4-5 hen, 1 cock, 1 pen, a purse of gold and a diploma, 5 ribbons on 5 entries of Blue Orpingtons. These fine birds are for sale, price \$100. Turkeys \$10 a trio. White Orpingtons \$7.50 a trio up, \$12.50 a pen and up. Eggs from our finest whites this season 1914 at \$10 per 15. Catalog free.

McKee's Orpington Yards

Garvey McKee, prop., breeder and importer.
Box. P. K. Watertown, Tenn.

ORPINGTONS, WHITE, BUFF and BLACK. Prices will be made that must move them. Write me your wants. Specials at \$1.50, \$3, \$5 each. Satisfaction guaranteed. Progressive Farm, J. C. Beare, Fort Gage, Ill

Build Own Incubator Easy



My big Free Book of plans and instructions makes all simple as A B C. Shows how my patented Lamps, Regulators, Thermometers, Tanks, Egg Trays etc., save money and worry. Thousands enthusiastic. Write now for big Free Book. H.M. Shear, Dept. B Quincy, Ill



And my Hens are Singing, Laying, Happy and Healthy

By its use a hen may be made to lay her entire life crop of eggs in one or two years. The normal time is five years. It does not injure the hen.

If directions are followed it saves all the cost of oyster shell, all the cost of beef scrap and all the cost of charcoal. It contains no pepper, mustard waste, or other injurious substances.

It insures an **EASY MOULT.**

Five pounds of prescription No. 4 contain more egg making material than a ton of oyster shell and 25 pounds of beef scrap combined.

It insures **FERTILITY** in breeding stock. It insures high vitality in the egg so that white diarrhoea does not appear at hatching time. It is an excellent tonic for growing chicks.

Try it four months and you will get more eggs than you ever have before in the same length of time and season of the year. Five pounds for \$1 and your money back if you are not satisfied after using. Sample carton, 1 pound, 25c. Liberal reduction on 50 and 100 pounds in bulk.

THE NABOB REMEDY CO., Box B,
Gambier, Ohio.

BOURNE "BIGNUM" POULTRY BAND.



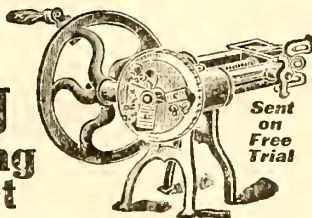
Bin-num-ber band, black numbers from 1 to 100, showing 10 feet away, printed on white, light blue, pink, green, yellow, cherry and red celluloid. Withstands weather and water.

BOURNE "ALUMINE" POULTRY BAND.

The plain double clinch band in common use. Cheaper than the "Bignum" band. All aluminum, no celluloid. Numbered to order. Send two one cent United States stamps for samples and descriptive circulars of these poultry bands. Mention P. K.

BOURNE MANUFACTURING CO.
Dept. L. 216 Howard St., Melrose, Mass.

Big Egg Getting Secret

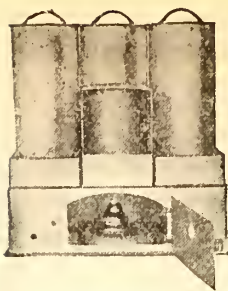


Don't buy high priced patent "egg foods" and "egg makers." Nothing equals green bone. Cut it with a

STANDARD BONE CUTTER

(greatly improved) and get the best egg-making food for almost nothing. No breaking or clogging. Cuts across the grain, runs easy, handles large bones. Sent on free trial plan. 12 sizes for hand and power, costing from \$6.75 to \$195. Book free.

STANDARD BONE CUTTER CO., Millford, Mass



Don't Wait--Now is the Time

To equip your poultry houses with **NON-FREEZING** Poultry drinking fountains, **FEED HOPPERS** and **EXERCISERS**, and all kinds of such articles. Have them on hand when you are ready to put your stock in winter quarters. This cut illustrates our No. 4 combination water and feeder. Keeps the water and feed warm. Will increase the egg yield 1-3 in freezing weather. Get our catalogue describing 60 different articles. We make everything a poultryman wants; it is free.

WENDELL INCUBATOR CO. 60 Main St. Holly, Mich.

VERMONT'S OPPORTUNITY AS POULTRY RAISING STATE.

Vermont never gets credit for doing a thing until something else is done that attracts the attention of the whole world, then all the good that has ever happened is reviewed. This spasmodic way of booming the state is due in part to the belief by many, that things are good enough as they are and by indifference on the part of others who like to see a good thing done, but are slow to start it. However, good comes even from this and it will not be long before we will have grasped the opportunity. Those that doubt in their thoughts will have to believe what they see with their eyes, for a better time will dawn for Vermont. Ample proof of this can be had by anyone who will take the time to review the report of the last State Poultry Show, held at St. Albans, Jan. 14 to 17, which was the largest show ever held in the state. At this show a number of entries from without the state were on exhibition. The attendance was large and the management expect even more at their next show.

The most noteworthy prize was the Wirthmore Silver Cup won by N. H. Penniman of St. Johnsbury. This cup is valued at \$75 and must be won three years in succession in order for a member to become its permanent possessor. Twenty-three other Silver cups, besides these were awarded, also numerous other prizes, ranging in value from \$6 down. Among the breeds not found on the average farm were Bantams, Silkies, Sicilians, etc. As a whole, the show was an advertisement for "More and Better Poultry". Ample proof of this is had from the fact that one week later, the Enosburg Poultry and Pet Stock Association of Enosburg Falls, opened its first annual show and had 300 birds on exhibition. Surely Vermont can just as well raise the poultry for the large New England States as to let the Western States raise it, and not force their Boston cousins to eat cold storage poultry. Park and Pollards' year book says that Massachusetts imports from without the State twenty to twenty-five million dollars worth of poultry and eggs annually. Now if the Bay State needs any such amount of poultry as that, it is Vermont's duty to see that she gets it. Vermont can and should produce all the poultry that Massachusetts needs, besides her own home supply. There is no question that if the buying public knew that the goods were from Vermont, they would sell above all others. Evidence

of this may be had from the fact that an enterprising dealer in Blackstone street, a few years back, seeing the turkeys all tagged "Vermont Turkeys" stuck up a sign "Fresh Vermont Cranberries". It makes one smile, but nevertheless, it shows what respect Bostonians have for Vermont.

Harry T. Bates.

Vermont.

SPROUTING OATS FOR WINTER GREEN FOOD.

Many poultrymen report satisfactory results from the use of sprouted oats in winter. It should be clearly understood however, that they are not fed for the food value of the oats themselves but rather for their stimulating effect upon the digestive organs. They prove an excellent laxative and consequently must not be fed too liberally but, properly used, they relieve the poultryman from the necessity of providing succulent food in other forms during the cold months.

The process of preparing the oats, as practiced at the Maine station, begins with soaking the grain in water at a temperature of 60 to 70 (degs. F. for about 48 hours in pails or galvanized washtubs. During this soaking process there should be added from five to ten drops of formalin to kill the spores of moulds and to insure a clean, sweet feed. After soaking they are spread out about one inch thick on trays, which are placed on a sprouting rack, seven to each rack, the trays being ten inches apart, and kept at a temperature of from 60 to 80 degrees. In from seven to ten days, depending upon the temperature, they will have developed sprouts about three to four inches long, as well as a massive root development, the entire mass being very tender and succulent. The fowls will eat them ravenously. About one square inch of feeding surface is supplied daily to each fowl or what they will clean up quickly.—(Exchange).

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. (costing ten cents per word for all four months), is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

BREEDING TURKEYS.

The turkey crop is fast ripening up and much interest is, or should be, centered in laying the foundation for the crop next season. While the cream of the flock is yet in the land and in the hands of the grower it devolves upon the prospective grower of next season to look well over the ground and choose early the hens and toms for next season's mating. It is folly of the greatest degree to inbreed in this line of fowls and the one who becomes so careless as to fail in introducing new blood into his flock each succeeding year would best leave this branch of the poultry industry alone.

There is really no best breed of turkeys in our land, but as we fancy the different breeds our success devolves upon our handling the favorite breed of our choosing. While the Mammoth Bronze type has good features we also find favor in the Narragansetts, Bourbon Reds and their allied types. The Mammoth types are the most profitable in the selling season in-as-much as the more weight the carcass carries the more dollars are produced from the flock, and this is all very well so long as the consuming public do not discriminate in size.

In some sections the market will handle very well the large to mammoth carcass of the bronze type, while in other sections where the laboring class would seek to have a family holiday roast, the medium carcass is demanded and we must cater to this demand. In the selection of our breed we must look to the source of our market and its demand, be it local or foreign, wealthy, medium or poor. Many poor people are barred from enjoying turkey roasts from the fact of the great price or demand for turkey meat and the fact that we as a rule endeavor to grow a few large carcasses rather than a greater number of medium, well-fattened birds.

We should take all these features into consideration in selecting our breed and market, then produce and sell to our best advantage. Anyone can grow a few turkeys who has an ordinary range. It is a business proposition and should be made so the entire season. Instinct bred back from the wild fowl has given turkey growing an unsavory reputation in not a few neighborhoods, and has led sometimes to unfriendly feuds, neighborhood quarrels and even life-time estrangements all through the instinct of the turkey to roam elsewhere than upon its prescribed domain and become mixed up with neighbor's flocks.

Yet in nine cases out of ten the owners of the flocks are at fault. If our near neighbor keeps a certain breed and color, it would be our first thought to get for ourselves some distinctive color then there would be no disputed ownership in case the flocks become mixed. Our second thought would be to avoid this mixing up. With the present day wire fencing it is possible to fit the average farm so that all stock might be kept at home on its own range, turkeys not excepted. It is too much the custom with this line of

Get Winter Eggs

So sure am I that Dr. Hess Poultry Pan-a-ce-a will tone up the dormant egg organs, and make your hens lay during winter and keep them healthy and free from roup, that I have authorized your dealer to supply you with enough to feed your whole flock, and if my Pan-a-ce-a does not do what I claim, return the empty packages and get your money back. That's the squarest man-to-man offer it is possible to make—every package of my Pan-a-ce-a has been sold for over 19 years on the same liberal money-back guarantee. Costs only a penny a day for 30 fowl.
1½ lbs. 25c; 5 lbs. 60c; 25-lb. pack \$2.50. Except in Canada and the far West.

GILBERT HESS,
Doctor of
Veterinary Science
Doctor of
Medicine

Dr. HESS & CLARK
Ashland
Ohio

Dr. Hess
Poultry
PAN-A-CE-A

fowls to become careless in their keeping and actually cultivate their roaming propensities in compelling the growing flock to rustle far and wide with no home attraction or feeding.

If we place a ban upon the hen mother the youngsters will not roam far, but when we starve them to roaming as is a great custom they soon rustle far and wide for feed and soon get out of our calling or jurisdiction oftentimes. We have encountered flocks of these birds roaming a mile or more from their farmyard, easy prey to the pot hunter or sealawag who goes gunning after our quail or any other game he comes upon. This is unprofitable business to grow turkeys under such circumstances, and this is one reason why the turkey crop of our country is abnormally small every season, and why we do not have enough turkey meat upon our holiday tables and the why of prohibition prices to the working poor who should eat and enjoy turkey. If we would establish a home in the farm yard for our turkey flock, and instead of perching in trees, house with perches in an open front shed where they can be fed every evening and perch comfortably by night, we can greatly prevail upon the flock to stay about our premises. They will range then over the farm where they belong, come home at our call and by regular feeding we can toll them home at eventide where we have them under control. A flock of turkeys perched upon our neighbor's fence or barn roof for the greater portion of the growing season, gleaning from his fields is not the right way to be neighborly.

If you are about to go into turkey growing and you ought to be, do not try to get a breed that will not roam. This is their instinct and is very easily cultivated by the carelessness of the

owner, the greater the instinct to roam about. There is no best breed to our knowledge, but all are good. All fine flavored in meat and valuable to grow for home use or market. You can make no mistake if you choose your fancy, but let it be different if possible from your near neighbor, then do your part in growing them upon your own domain like you would your other belongings and assets—(Exchange).

LOST TOO MANY CHICKS THE FIRST YEAR.

I started in the first day of this year to try the poultry business, as my health would not let me stay indoors. I had twelve R. I. Reds and decided to see what I could do with these to start on. I had concluded to try both Barred Rocks and Reds, but a friend thought it would be too much trouble, so I concluded to keep the Reds exclusively. I bought 88 R. I. Red eggs and hatched 68 and now have my old hens and about twenty cockerels and pullets. I expect to sell all of the cockerels but two and get enough money to buy a pure bred cock to mate with my pullets, and use my cockerels with hens. In all I have set about 450 eggs this year and hatched about 355 chicks. I sold \$23.00 worth of young chicks and we ate about 15 chickens. Have about 79 young ones on hands now; the balance have died. I consider my showing poor, but had I known more about chickens, I could have raised 25 per cent more. Will keep my mongrel pullets in a separate yard with no males and sell all their eggs on the market.

D. C. Stewart,
Tennessee.

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BRED FOR
Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants.
INCUBATOR EGGS—\$5 per 100; \$45 per 1,000.

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\$3,000 invested in Barred Rocks and buildings. Booklet free.

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No sir, no more lice and we mean it. The lice problem won't worry you if you will do as the leading successful poultrymen have done for 30 years. Stop experimenting—get

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LAMBERT'S Death To Lice**

and your lice troubles will be no more. Safe, sure, quick, easy to apply. Will not injure hens, eggs, chicks, or soil plumage. Sold in 10c, 25c, 50c and \$1.00 sizes. Send 2c for latest copy of Lambert's "POCKET BOOK OF POINTERS".

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Weed Out Those Drones "The Ideal" Trap Nest

SHOWS WHICH HEN LAID THE EGG.

The world's leading trap-nesters use them. The "Ideal" is practical for you or I will refund your money. The cost is small. Mr. N. G. Dun, Van Buren, Ark., writes: "I am more than pleased." Have made the nests at

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NO WATCHING! NO FREIGHT!**
PLANS, TRAPS, BANDS AND
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THE POULTRY KEEPER

HEN FEEDING HINTS.

A splendid mixture for laying hens is equal parts of wheat, cracked corn and oats, which should be scattered in the litter.

Bran or middlings and beef scraps should be kept in receptacles to which the fowls have access at all times.

Plenty of exercise increases the egg yield.

Provide 4 or 5 inches of good, clean litter in which to scatter the grain.

Cabbages, mangels, potatoes, sprouted oats, etc., make excellent green feed.

When wet mashes are fed, be sure they are crumbly and not sticky.

For the first three days chicks may be fed a mixture of equal parts hard-boiled eggs or stale bread, or stale bread soaked in milk. When bread and milk are used, care should be exercised to squeeze all milk out of the bread. From the third or fourth day until the chicks can eat wheat and cracked corn commercial chick feed is a good ration.

Plenty of pure, fresh water, grit, shell, and green feed should be available from the first day.

There is very little danger of overheating young stock.

Feed the chickens about five times daily and only what they will eat up clean in a few minutes, except at night when they should receive all they want—(Exchange.)

ometers have proven their absolute accuracy for many years and are considered the standard by the best incubator manufacturers and by experienced poultrymen all over the country.

Every strong, lively chick you hatch means just that much more chance for your success. Then don't trust your hatching eggs to an incubator that has not an accurate—a "Tycos"—thermometer in each egg-chamber. The best poultrymen use and the best incubator manufacturers equip their machines with "Tycos" thermometers.

Read what Walter C. Ernst, breeder of Plymouth Rocks, Houdans and Leghorns, Hillside Poultry Farm, Hinton, Iowa, says: "Have been engaged in poultry raising for a number of years and have had a good many thermometers, but since using the "Tycos" I have had bigger and better hatches than ever. No one could make a mistake by buying "Tycos" thermometers."

"Tycos" thermometers are the result of 60 years of progressive investigation and research work. They are made with the greatest attention paid to every little detail. After filling the mercury tubes every instrument is "aged" and then "pointed" to ascertain its absolutely correct, individual scale and each thermometer must pass a thorough final test 100 per cent accurate.

"Tycos" thermometers tell you the exact temperature. There's no danger of overheating or chilling the eggs in your incubator if you heed their warnings and adjust the regulator to meet the heat requirements.

"Tycos" thermometers are manufactured by the Taylor Instrument Companies, Rochester, N. Y., the well known makers of high grade thermometers for all purposes. They have an instructive little booklet, "Thermometer Facts Worth Knowing", which tells how "Tycos" instruments are made. It will be mailed free to the readers of Poultry Keeper. Better write today for a copy of this little ther-booklet.

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MINERAL
FIBRE WICKS
DO NOT
BURN OR
CEASE



MINERAL
FIBRE WICKS
DO NOT
BURN OR
CEASE

Practically indestructible. Keep lamps well filled with oil and wicks do not need trimming, running uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and aid keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two, 15-16 inch wide; or Number three, 11-8 inches wide. Price, ten cents each. Special rate made on large lots. Fit any lamp. Address,

Poultry Keeper Publishing Company, Quincy, Illinois

**SUPERB FLOCKS OF POULTRY
SOLD TO A SOUTHERN
BREEDER.**

To whom it may concern:

This is to certify that I have this day sold to J. H. Wendler, of Lakeland, Florida, my entire flocks of Black Orpingtons, Silver Penciled Plymouth Rocks, Columbian Wyandottes and Silver Laced Wyandottes. This sale is made without any reserve whatever and includes all of the breeding birds of Owen Farms in these varieties, among the winning blacks being 1st cockerel, New York, December, 1911, 1st pen and 1st hen, Chicago, December 1912, 1st cockerel at Nashville and Memphis in the fall of 1912, winning the sweepstakes at both shows for best cockerel in the show, and my first and third cocks at the Greater New York Fair and Exposition. In Columbians it includes the 1st pullet at New York, December, 1911; 1st pullet at Brockton the same fall and several other winning birds. In Silver Penciled Rocks it includes several first prize winners at Madison Square Garden in December, 1911, and at Brockton the same year. The Silver Laced Wyandottes have never been exhibited.

This collection of birds will give Mr. Wendler, without doubt, the best flocks in these varieties in the South and as good birds as there are in existence, and I can heartily recommend all my friends and my customers in these varieties to go to Mr. Wendler and I know that he will give them absolute satisfaction.

My reason for selling these flocks is that I wish to give all my time and room to my five main varieties, White and Buff Orpingtons, White Plymouth Rocks, White and Single Comb Rhode Island Reds.

Very truly yours,

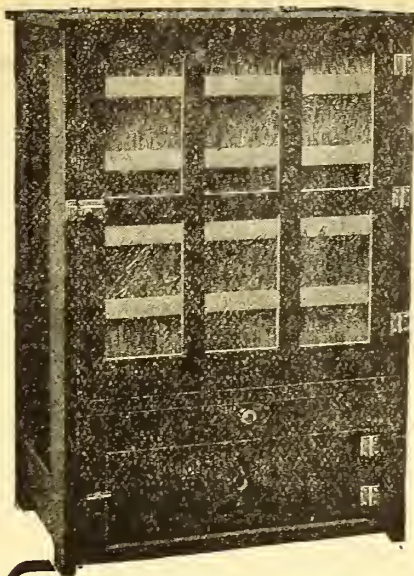
Maurice Delauo

Successor to Owen Farms.

Wineyard Haven, Mass.

Oct. 7, 1913

Mr. Garvey McKee, R. F. D. 1, Watertown, Tennessee, who has for several years advertised White Orpington stock, through the columns of the Poultry Keeper, made almost a complete sweep at the recent Knoxville show, taking 13 out of a possible 20 prizes on White Orpingtons. He also captured at this show, five ribbons on his Blue Orpington entries. The latter are new favorites, having been imported direct from English breeders. In addition to these two varieties of Orpingtons, Mr. McKee handles Mammoth Bronze Turkeys, and is in an excellent position to take care of orders for stock in any of these varieties. The Orpingtons have been very popular in this country for several years past and are superb exhibition or market birds and winter layers of large brown shelled eggs. Any one wanting a good combination show and utility bird can well afford to look into the merits of the Orpingtons. Mr. McKee has made repeated importations direct from leading English fanciers and can furnish strictly first class stock at reasonable prices.



**Increase Egg Yield
This Winter,
Save Money on Feed,
Make Chicks Grow
Rapidly, Strong**

by installing an Ideal Grain Sprouter and feed your hens the green food that is absolutely necessary to insure prolific egg production.

Eggs are going higher in price every year, the demand is far exceeding the supply, and it looks like good times and plenty of money for the man who has one of our sprouters.

The IDEAL Grain Sprouter

- is the best machine for sprouting grain ever made;
- will produce sprouts over two inches long in 24 hours;
- sprouts any kind of grain better, in less time and without fuss or muss;
- produces three to four bushels of feed from one bushel of grain;
- pays for itself in a single month by saving in feed bills, increasing egg yield, supplying food that makes chicks grow strong and vigorous.

The "Ideal" is made in several sizes—for a few hens up to hundreds. Can be used in summer (without lamp) as it has proper arrangements for moisture and ventilation to produce quick results and crisp feed.

CONSTRUCTION

Made of best lumber—double walls, insulated with heavy deadening felt—inside lined with galvanized iron—frame of trays heavy galvanized iron—bottoms of trays heavy wire meshing—front of machine glass, which induces green sprouts. These sprouts require very small amount of artificial heat which is produced by the Ideal Safety Lamp, the fumes of which pass through ventilators.

Get Special Low Price Offer Today

Don't delay but write at once for special low price freight prepaid introductory offer, full particulars and description of this perfect grain sprouter. No poultry man should be without it. It is the Biggest Money Maker for the Poultryman since the Incubator was invented.

Made by J. W. Miller Co., Manufacturers of Incubators, Brooders and Poultry Supplies, which is sufficient guarantee of its excellence.

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YOUR CHICKENS**

WILL GIVE YOU

FERTILE EGGS IN ABUNDANCE

If fed H-P Egg Scratch and H-P Egg Mash. These High Protein Foods are Clean, Sound, Wholesome and rich in sweet, nutritious Egg-Making materials. They are balanced specially for Egg production, and will keep your laying hens healthy and profitable. Send postal for catalog and freight prepaid prices to,

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So sure are we of pleasing you with the high quality of our stock, we are perfectly willing to send any shipment to you C. O. D. subject to your inspection before you pay for them. Our records show by this method that fully 99 per cent of our shipments are accepted. We challenge any breeder to show as good a record. We sell birds on their merits and we will sell to you if you give us a chance. Our Special Sale Circular tells about the 2000 birds we offer for sale and includes Cocks, Cockerels, Hens, Pullets, Pens, Trios and Single Birds, just as you wish them. We can furnish Exhibition birds for any show or utility birds as low as \$1.25 each. Send today for a copy of our Sale Circular giving you reduced prices on every bird we offer. **GOSHEN POULTRY FARMS, R. F. D. No. 2, GOSHEN, INDIANA.**

The Call of the Hen

By Walter Hogan

The final word on the selection and breeding of poultry; gives the value of every hen; accurate, scientific; no guess work; tells what you most need to know. Send \$2.00 to the Sonoma County National Bank, Petaluma, Cal., and get the book; after a week return if not satisfied and money refunded.

A Natural Poultry Land

Poultry do best in an open winter country. It is artificial to house birds 4 to 5 months in the year.

In the open air, with ample green feeds the year around, they lay better, grow faster and are more vigorous.

The Southeast is a natural poultry region. A growing season of 200 to 300 days annually (varying with locality) allows for a wide range of green foods the year round and reduces the cost of maintenance to a minimum.

If you intend starting in the poultry business and have but limited means, no section can offer you more certain success than the Southeast.

Land at \$15 an Acre up

prices varying with improvements and location, can be purchased in many sections near to good local markets. A Northern Florida poultryman sells his eggs the year around to a local hotel for 40 cents per dozen. Thus profitable home markets are assured. Small fruit growing in connection with the poultry business makes a profitable combination.

Send at once for the "Southern Field" magazine, lists of farms for sale and other information you may desire.

M. V. RICHARDS, Land and Industrial Agent
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All for\$1.25

This is one of the best offers ever made to poultry readers. It gives the best practical book on money-making poultry and two poultry papers at a greatly reduced rate. Address,

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CAPON TOOLS




CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use **PILLING CAPONIZING SETS**

Postpaid \$2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make Poultry Marker 25c. Cape Worm Extractor 25c. French Killing Knife 50c. Capon Book Free.

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Natural Hen Incubator

200 Egg Size **\$3.00**



Let us send you our Catalog and prove to you that we have the incubator you cannot afford to be without. It assures you immediate success in the Poultry Business. Its cost is very small. It needs but little attention, and produces the greatest percentage of healthy, vigorous chicks. It is the only Incubator without mistakes.

J. F. SIEMS Patent **Over 550,000 Sold**

Mr. R. I. Whitmer, from Kans., writes—"It is the grandest thing I ever saw." Another—"It's a labor-saving invention." Another—"Greatest success of the age." Another—"I hatched out 107 chicks from 640 untested eggs," etc. Thousands of voluntary testimonials. No freight to pay. More agents needed. Send postal today for Catalog containing Special Introductory Offer. Address

Natural Hen Incubator Co.
Station H, Dept. 1, Los Angeles, Cal

EGGS IN COLD WEATHER.

Winter eggs are desired by all poultry raisers. The greatest profit in market egg production lies in the selling of winter eggs. Market prices of eggs commence to go higher in September and no decrease is noted until February and March. Therefore, to realize a big profit in the selling of market eggs, we must strive to have the pullets commence egg production early in the fall and keep it up all winter.

One of the necessary considerations for winter egg production is proper housing. Every progressive poultryman concedes the fresh air or open front type of house as the proper one. In reality these types of houses are essential to vigorous, healthy stock, and only healthy stock can be profitable. The warm, closed type of house is fast passing out of use. Only in some of the farms of the less progressive poultrymen do we find these disease-breeding coops. I find the fresh air type of house to give far better results than the closed one. The temperature of the building is never so low as to endanger the fowls, nor is the interior damp and illy ventilated.

Openings covered with muslin or cheesecloth will allow the entrance of fresh air with no possibility of creating drafts. Such openings will allow ample ventilation and keep the interior nice and dry. The floor and litter will be free from dampness to a certain degree and not wet and cold as is the case with the closed type of house. These cloth covered openings are preferably located in the south side of the poultry house. A frame should be made to fit snugly in the opening and the cloth should be tacked on and the frame put in place and hinged so it can be opened on warm, clear days to admit more air and sunshine. The frame can then be opened up entirely in the spring and a frame covered with inch mesh netting substituted. Or the netting can be placed on the outside of the opening and kept in place the year round. I also have a muslin covered inner door to my poultry house. In winter time, during the day, the outside door is hooked open and the cloth covered door is kept closed. This arrangement admits of more light and fresh air but excludes drafts.

Exercise is one of the necessary re-

quirements for inducing winter egg production. The hens must be kept busy and contented if we are to get maximum results. Idle hens contract bad habits, such as feather pulling, egg eating, etc. Idleness is also conducive to excessive fatness and unproductiveness. Therefore, to get the best results I endeavor to have the hens keep busy from morning till night. There are several ways to encourage them to exercise and not the least of these is in keeping deep litter on the floor in which to scatter all the grain. The litter is preferably from six to eight inches deep. Straw, I believe, affords one of the best materials for litter as the grain sifts through nicely. Leaves serve the purpose well for a time but are easily broken up and then pack down and become worthless, the grain remaining on top where it can easily be picked up by the fowls. Hay is also good to use as litter, but I always prefer good, long straw when it can be had. The past winter, however, I resorted to alfalfa and found it satisfactory. Several of the mowings were cured in the shade and then stored away for winter use. Care was exercised in handling to prevent shaking off the leaves. Alfalfa when used as litter also serves as green food to a certain extent as the hens are always picking at the green leaves.

If the poultry house has not been whitewashed, do so now, and put it in a sanitary condition before real winter weather sets in. Thousands of lice have, no doubt, been bred during the hot summer and we want to get rid of them now. Whitewashing the interior will also make it lighter and give it a better appearance. To get the best results the whitewash should be put on hot. A little coal oil or crude carbolic acid mixed with it will make it more effective—(Exchange).

DON'T SUBSCRIBE

To any poultry papers, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and journals and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

PREPARING POULTRY FOR MARKET.

Some Good Methods for Fattening and Dressing Fowls Economically.

It is surprising to note how little attention the majority of farm people pay to some of the important details of marketing poultry products.

The success or failure of any business depends upon several factors; not the least of which is proper heed to the little things. "Despise not the small things."

It pays to build up a reputation for first class goods; and to have your name and guarantee behind them. Good hotels, restaurants and first class groceries in all of the larger cities are eager to get this kind of produce. And any wide awake person can find other customers that will pay as good prices for strictly first-class produce, delivered regularly each week.

In preparing dressed poultry for sale be very careful not to tear the skin; and be careful also, to grade the different sizes. Do not put large and small birds in the same package. Do not pack two varieties of chickens or other dressed fowls together. The same rule applies to those on foot. For instance if you have both Buff and Barred Rocks, place the Buff in one coop and Barred in another. Old and young, of course, must be kept separate. If you crowd all varieties, ages and sizes into the same coop, your best fowls will go at the same price as your poorest ones.

When preparing dressed poultry for market quite an improvement can be made in their appearance by what is known as "plumping." This is done by dipping the dressed fowl into boiling, or rather, scalding hot water, holding it there for ten seconds, then plunging it at once into cold water. After this hang the fowl in a cool place, until ready to pack. Use nice clean boxes.

Hints on How to Fatten Poultry.

By careful feeding the fowls gain in weight very rapidly, in a short time. If whole grain must be fed, boiled corn and barley will give as good results as anything. But cornmeal, barley meal and oatmeal made into a mash with a little salt and charcoal added occasionally will give quicker results. If some kind of "cracklings" can be added, so much the better. Feed the fowls, several times a day, all they will eat, for about 15 days, if they can be kept thriving that length of time. If not, they should be sent to market sooner. It is not advisable to keep fowls after they lose their appetite for food. In fact, if a fowl begins to lose its appetite soon after being cooped, it is a sign that there is something wrong either with the feed or general care, or else it is merely a case of over-feeding. It is never a good idea to leave food before the fowls, after they have eaten their fill. Withholding food for a time will sometimes stimulate a jaded appetite. Remember the above mixture is suitable only for chickens, In making a fattening mixture for

You can depend upon this being absolutely correct.

If a "Tycos" says so, it's the truth.

A good hatch depends upon the right temperature. But unless you have an accurate thermometer, you can't be sure that the heat is what the instrument indicates. You MUST have an accurate thermometer. Therefore, ALWAYS specify that your incubators be equipped with

"Tycos" Incubator Thermometers

Their accuracy is permanent and reliable. When buying an incubator or brooder, insist on the manufacturer equipping with Tycos Thermometers. If your present incubator or brooder is not equipped with these reliable thermometers, go to your dealer and ask for Tycos— if he cannot supply you, send direct to us.

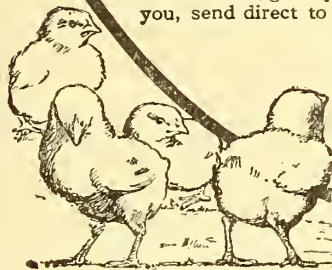
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Tycos' Incubator Hygrometer 1.50
Tycos' Certified Incubator Thermometer 1.50
Tycos' Electric Lighted Incubator Thermometer	2.50

Write for free booklet, "Thermometer Facts Worth Knowing."

Taylor Instrument Companies,

116 Ames Street
ROCHESTER, N. Y.



chickens and also for ducks, we sometimes use buttermilk instead of water. When milk is used no cracklings or meat of any kind is necessary, and is usually more plentiful than meat. Raw potatoes chopped will take the place of the green stuff. Plenty of grit is necessary at all times; also pure, fresh water.

Fattening of Ducks Requires Different Treatment

Do not attempt to fatten ducks upon the above ration. It is not suitable for turkeys or geese either. While part of the ingredients would be all right for ducks the others would be all wrong. In the first place, a duck's food must not be too highly concentrated. Here is where beginners so often meet disaster. Not alone when feeding ducks for market, but at any and all times. Bran plays an important part. There is no domestic fowl that will take on fat more rapidly than a duck, when properly fed and cared for. But they must not be kept in small, damp coops. We keep these fowls in large yards with dry, well ventilated houses to stay in at night.

They need exercise and fresh air. We feed ducks, morning, noon and night, all they will eat of the following mixture. Equal parts cornmeal, middlings and bran, moistened with buttermilk or water, usually the former. Mix well, adding a little salt and some powdered charcoal once a day. Then to the above mixture, we add a quantity of raw or cooked vegetables. Raw cabbage, green rye and celery are all good for ducks. Provide plenty of pure water to drink; also coarse sharp sand—(Exchange).

A GOOD HOME-MADE POULTRY LICE POWDER

Nearly every poultry keeper is troubled more or less with lice on his fowls. While there are many ready prepared lice mixtures on the market, none are more effective than a mixture recommended by Pennsylvania State College. It can be made at home and is much cheaper than the commercial preparations. The formula is: two and one-half lbs. plaster of paris; three-fourths pint gasoline; one-fourth pint crude carbolic acid.

When the ingredients are mixed one will have an effective lice powder that costs less than five cents a pound. The mixture should be worked through a fine sieve to break up any lumps that may be present and to get it in such form that it will sift readily. When it is first mixed it will be too wet to sift, but the gasoline will soon evaporate. The active principle in driving away the lice is the carbolic acid.

To use the home-made preparation, which should be kept on hand the year round, one simply sifts it over the birds the same as any other lice powder. By perforating the bottom of an ordinary baking powder can, a convenient sifter can be made. Then one holds the fowl to be treated, rubs back the feathers and applies the powder. A few applications will suffice. It may be used on young chicks which are affected as well as on older fowls. It is well to treat sitting hens very thoroughly before the eggs are placed under them and then again after the eggs are hatched. It is also well to treat all fowls at time of putting them into winter quarters—(Exchange).

RHEUMATISM

A Home Cure given by One Who Had It.

In the spring of 1901 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. After you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free. Don't delay. Write today.

Mark H. Jackson, No. 8, Gurney Bldg.
Syracuse, N. Y.

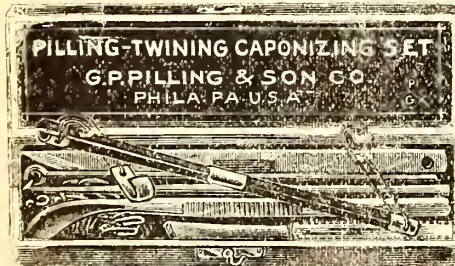
SPECIAL BARGAIN.

Oats Sprouter almost given away. Get our special offer No. 3. Don't miss this opportunity. Write.

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POULTRY MAGAZINE.

Have you seen a copy of Poultry Post? It's brimful of interesting and helpful news to beginner. Circulation worldwide. 4 mo. trial, 10c. Sample copy free. D26. Goshen, Ind.

**PROFIT IN CAPONS.**

The wise farmer, looking to profit, sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem, as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions, including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75, we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

SIGILIAN BUTTERGUPS

S. C. Reds, Indian Runner Ducks and Fantail Pigeons

1914 Mating List now ready. 12 Blue Ribbons won by above Beds and Buttercups. DR. C. S. BROUILLET, Box P. K. Gardner, Mass.

FEEDING DUCKS FOR MARKET.

No domestic fowl will respond to good care more quickly than a half-grown Pekin duck. Plenty of feed, given at proper intervals, will fatten a Pekin duck or duckling, for market in from 10 to 15 days. Other breeds take a little longer time because they all eat less than the Pekins. I find that when Pekin ducks are fed as they should be through the laying season they are not hard to fatten after they stop laying, because they have to be well fed while laying. It is a well-known fact that a thin Pekin duck will lay very few eggs.

At this season the ducks, young and old alike, are losing a good many feathers, but I never pick ducks at this time of year. They fatten better when allowed to molt naturally.

When feeding for market I keep ducks yarded part of the time only. They would not need to be confined at all if no other poultry was near, but ducks require more food than chickens, and if chickens are allowed to feed with them, the chickens, as a rule, get most of the food. Ducks are very timid and when the chickens rush in they get frightened and leave. Then, too, young ducks should never be kept or fed in the same yard with the old birds because the latter are sometimes very abusive.

When feeding ducks for market I have found it an excellent plan to keep them yarded until a little after noon each day. They are fed all they will eat, morning, noon and night. Breakfast and dinner are given in the yards before they are turned out, and as their last meal is given after the chickens go to roost it does not matter whether it is placed inside the yard fence or not.

Broad beards take the place of troughs, since they are easier to keep clean. After the noon meal the ducks are allowed to forage until evening. They get some exercise and do much better than when I kept them confined in yards throughout the fattening period.

Of course, ducks need shelter, even when the weather is not very cold. On stormy nights they must not be forced to sit in the yards or where it is cold, or damp. They are liable to take roup and are almost sure to have cramps or some such ailment. It is sometimes called rheumatism, but, whatever it is, it cannot be treated with any success when ducks have become badly affected. However, it can be easily prevented by driving the ducks into their houses, after the evening feed has been given, and closing the doors so that they will be forced to sleep where it is dry, instead of on cold, damp ground. During summer, when the ground is

warm and dry, I have found it a good plan to let all the ducks, except the very smallest ones, stay out in the yards. It saves the work required to keep houses clean.

At this time of year, however, and all through the winter months, ducks need comfortable houses with plenty of bedding. Straw or litter should be used for this purpose, and sawdust should never be used, because the ducks are liable to eat it, this being apt to occur when they are not provided with plenty of sand and other grit. A Pekin duck requires some grit with each and every meal. It must be near at hand, else they will "shovel" up almost anything in reach. We keep plenty of clean, coarse sand, oyster shell and coal cinders close to the feed board in each yard. Where sand is not to be had, commercial chick grit might be used as a substitute. It is not advisable to add grit of any kind to their feed.

Whole grain is not the best feed for ducks. I have learned, by long experience, that ducks of all ages, i. e. newly hatched, partially or fully matured, will thrive much better upon ground grain.

When ducks are being fattened for market I use skim-milk, or buttermilk, to moisten the ground grain. As a rule, I use equal parts of bran, corn meal and middlings moistened with milk. Once a day there is added a little charcoal (about a tablespoonful for each gallon of feed) finely pulverized, and a half teaspoonful of salt. Then to the above mixture is added a quantity of either raw or cooked vegetables. Raw Cabbage, chopped, is always greatly relished. When boiled (mashed) potatoes are used, either the middlings or corn meal is omitted, usually the former.

Ducks must have plenty of clean water to drink at all times, and especially while feeding, as they drink and rinse their beaks often.—Exchange.

Have you derived any benefit from the numerous suggestions and articles furnished by some of our other readers who have given you the benefit of their ideas through the columns of the Poultry Keeper? Possibly your success or failure furnishes some idea of value to other readers who may avoid loss by knowing of your experience. We shall be glad to print your experiences on practical lines if you will take the time to write them out. Simply get the matter up in your own way and we will properly edit the copy before printing it in our columns.

BUFF. BARRED ROCKS; White, Golden, Partridges Wyandottes; White, Brown, Buff Leghorns; Colored Moscow, Pekin, wild Mallard Ducks; White Geese; Turkeys; Guinea. Prize winners. Free catalog. B. F. Kahler, Hughesville, Pa. 11-4

OATS SPROUTERS

The sprouting of oats for winter green food has been advocated for a number of years past, but only during the last year or two has it been possible to buy a contrivance that would conveniently do the work. It is true that the oats may be sprouted satisfactorily in home-made sprouters, but if the flock is of material size it is hard to plan a regular supply, owing to a lack of trays, besides this, the home-made trays are likely to become moldy and such a tray will prove a serious loss and the condition of the small percentage of oats that will sprout well is such as to cause sickness among the hens.

The commercial machines now on the market are made in different sizes and with multiple trays to give an endless supply of wholesome green food and this is the only kind that should ever be fed to poultry. These machines are so arranged that artificial heat may be applied and the oats forced into quick growth. Nothing will quite take the place of succulent grass growth for green food quite so well as sprouted oats, and a short trial to test the likes of the hens and what it will do in the way of promoting health and winter eggs, will convince any breeder that sprouted oats should be fed all winter long. Those who are obliged to keep the birds in restricted runs and coops may well make the feeding of sprouted oats, an all year 'round diet.

ANOTHER GREAT WINNING.

Dr. LeGear's White Rocks have again demonstrated their superiority over all others by their great winning at the Missouri State Fair, just past, (Sept. 27th to Oct. 3rd, 1913.) They had strong competition, but did not lose a ribbon. Won every prize competed for. Made a clean sweep, and also Grand Champion bird of the whole show.

There were only three prizes offered in each class. We entered 1 cock, 8 cockerels, 4 hens, 4 pullets and 2 pens, and won 1st cock; 1st, 2nd and 3rd cockerel; 1st, 2nd and 3rd hen; 1st 2nd and 3rd pullet; 1st and 2nd pen, and the Grand Champion sweepstakes bird of the whole show, all breeds competing. What more could be desired if you are looking for the best White Rocks in the country?

"Lady Ideal" our one year old White Rock hen, which was the champion bird of the whole show, was the admiration of all visitors to the Missouri State Fair. She has snow white plumage; beautiful yellow legs; a long broad back; low well spread tail and is an ideal White Rock in every way. By being the best bird in the show she won the Useful Poultry Journal Silver Loving Cup offered for the champion bird of the state fair show. She will be mated to the Blue Ribbon cockerel at the Missouri State Fair, and this mating is bound to bring prize winners.

We showed "Lady Ideal" last year as a pullet and she won everywhere



Purina Chicken Chowder is a dry mash which contains just the ingredients to insure an abundance of eggs right through the Winter. Dry Purina Chicken Chowder should be kept before hens all of the time. The more Chicken Chowder Biddy eats the more eggs she will lay. Hens should also have Purina Scratch Feed, two or three times a day, in a litter.

Col. Purina guarantees

More eggs or money back

to any poultry raiser who uses Purina Chicken Chowder according to directions and fails to get more eggs.

Purina Poultry Feeds are for sale by the leading dealers. Your dealer will order them for you, if he doesn't already carry them in stock.

Poultry Book Free

For your dealer's name I will send you this 48-page Poultry Book, containing plans of houses, breeding and feeding charts, space for daily egg records, cures of diseases, care for baby chicks, etc. It also contains information about Col. Purina's half price galvanized iron Chick Drinking Fountain (2 for 25c) and more details about his galvanized iron Automatic Chicken Chowder Feeder (50c). Write today.



Col. Purina, Purina Mills,
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shown.

All our birds are absolutely our own raising. We have cockerels hatched in March that weigh eight pounds, and pullets the same that weigh six pounds.

Bred and owned by Dr. L. D. LeGear, 713 Howard St., St. Louis, Mo. Farm at Kirkwood, Mo.

SECTIONAL OATS SPROUTER.

For the first time in this issue, the Des Moines Incubator Co.—one of the oldest and best known manufacturers in the U. S.—offers something new, practical and valuable to the poultry raisers.

This concern, well established and well known to our readers as manufacturers of the highest class incubators, Brooders and up-to-date Poultry Appliances have now come forward with a new Grain Sprouter. This Grain Sprouter, as we notice from their literature, is not only entirely different from any other sprouter on the market, but also seems to have points of exceptional merits. Unlike any other sprouter, the Successful is built in sections, which enables any one of our readers to buy the base and one or two sections of this wonderful sprouter at a small outlay. Later on, as soon as the requirements demand it, one can increase the capacity for green feed at a nominal outlay by purchasing additional sections.

All poultry raisers know the value

of green food for poultry, but not all realize the great advantages sprouted oats have over any other green food as an egg producer, and cheap feed provider during the winter months, when eggs are highest in price and the greatest profit from poultry should be obtained.

Sprouted oats stimulate greater activity among the birds, thus increasing the fertility in winter eggs, enabling you to hatch a higher percentage of real early chicks.

The Successful Grain Sprouter, built in sections and with double steel walls is absolutely safe in any part of the house. For further description we refer you to their advertisement on another page of this issue. We strongly advise every one of our readers to write to the Des Moines Incubator Co., 565 Third St., Des Moines, Iowa, for their beautifully illustrated descriptive matter. It will prove both interesting and instructive.

The best favor you can do Poultry Keeper is to tell your poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special club offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.

Don't Feed Green Food!

Do away with the bother by using Succulenta Tablets

They are better and cheaper and more relished by all fowl. Simply dissolve one tablet in one quart drink or water for fowl. Sample can (100 large tablets) by mail 50¢. Can of 500 large tablets by mail \$1.00. **YOUR MONEY BACK IF NOT SATISFIED.** Drop postal for particulars to The Succulenta Co., P. O. Box 405-11, Newark, N. J.

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 Requires only one filling of lamp. Shipped direct. No agents. Guaranteed to please. Saves 75c to \$1.25 every hatch. Reduces oil expense 50 percent. Saves Money!



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45 Varieties Land and Water Fowls

Send for free illustrated catalog, which tells you much you should know. Stock and eggs at all times.

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56 BREEDS

Chickens, Ducks, Geese and Turkeys. Hardy, northern raised, pure bred, of finest plumage. Fowls, eggs and incubators at lowest prices. America's greatest poultry farm. Send for large, fine 19th Annual Catalog and Poultry Book. **R. F. NEUBERT, BOX 842 MANKATO, MINN.**

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OCULUM produces more eggs than anything known. Two cents worth lasts a chicken a year. It cures the worst poultry diseases almost instantly. It is selling in every continent and state. Sold by dealers and direct. Price per bottle 50c and \$1.00. Money back if not satisfactory. Postal brings particulars. "Agents wanted."

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Success With Poultry

Is worth more than all other poultry books put together, if you want to learn how to

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118 Pages, (9x12 inches Handsomely and Extensively Illustrated. Printed on Embossed Paper. Describes Different Breeds, tells how to Feed and Care for Old and Young. How to Run Incubators and Brooders

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POULTRY KEEPER PUBLISHING CO., Quincy, Ill.

PRINCIPLES OF POULTRY FEEDING.

Try to Bring About Spring and Summer Conditions.

We hear of many laying rations for hens during the winter all of which, to say the least, makes it very confusing to the farmer, and leads him to believe that the compounding of a balanced laying ration, is a very difficult thing. After all is said, it may be stated that it is not possible to improve upon the method of nature. Fowls given free range during the spring months have no difficulty in balancing their ration. During the spring and early summer the hens find an abundance of insects and worms and succulent green food. Mind you, I say succulent green food. A hen can no more make eggs on coarse fibery vegetation than a milch cow can make milk on straw. With the ordinary grains fed on the farm, and the animal and green foods obtained on the range, the hen is fed a perfectly balanced ration, and as the result, the egg basket is kept full.

The farmer, then, who would make the most out of his hens, must, during the entire year, feed the hens similar foods to that which they obtain on the range during the spring months. This ought to be a very simple matter, but it is safe to say that on most farms, the hens are fed a ration composed of grains alone. As a result, when the range no longer supplies animal and green food the hens cease laying.

Providing for Green Food During Winter.

An acre or two sown in rye will supply the hens with an abundance of green food during the winter months. The rye should be sowed as soon in the fall as possible, so as to give it a good root growth before cold weather sets in. Rye will stand freezing weather better than anything else that could be put in the ground, and will make some growth during cold weather. If the farmer liked, he could pasture the rye with chickens during the winter months and still harvest a crop of rye the following summer.

Clover or alfalfa hay, or silage cut up fine or fed with ground grains will supply the needed green food, though it may be stated, that this is not nearly

as good as rye. Still if one has made no other provision for green food, these will do very well.

An Essential Food and How to Provide It.

The other essential of heavy egg production—animal food—is not so easily provided as is green food. Perhaps, the easiest way to provide this essential is to purchase beef scrap or beef meal. This is all ready to feed and if one considers the value of his time, the feeding of the prepared animal food is perhaps, the most economical. The prepared beef products are high in protein, and it is easy to overfeed of them. Beef scraps or meal should be fed in the mash, about fifteen pounds being used in every hundred pounds of mash.

By patronizing the local butcher, one can frequently purchase animal food at a very reasonable figure. Cracklings the "leavings" from tallow and lard rendering, are identical with the commercial scrap or meal. The cracklings are usually pressed into cakes, which must be pulverized before they can be fed with mash. A good way to prepare the cracklings is to place several pounds in a kettle and boil until the mass is separated. While still warm, stir in two or three pounds of cut clover or alfalfa. Thicken with wheat bran or mixed feed. This mash is especially acceptable to the hen on a cool, frosty morning.

If one cares to invest in a bone cutter, the problem of furnishing the hens with animal food is solved. Green bone can be purchased from the butcher for a song, and is considered the best egg stimulant. The amount to feed is an ounce to each fowl three times a week. The bone may be fed alone, or in the mash as preferred.—Exchange.

SATISFACTORY SHOWING WITH WHITE ORPINGTONS AND BARRED ROCKS.

Editor, Poultry Keeper:

I am raising poultry for profit as that is about all I am able to do, and sometimes hardly that. I have been raising White Orpingtons this year, that is, getting a start, but hatched a lot of Barred Rocks with them for market and consider them good chickens. I bought six Orpington pullets

and a cockerel last spring. One died soon after I received it and another one in about six weeks. I have raised about 160 from the rest, and will save about 25 pullets for breeders. Have lost very few little chicks this season.

I expect to commence hatching about the first of the year. I have same very large cockerels, one weighing nine pounds the day he was six months old. They are from pullet eggs but have been crowded every day of their lives. I buy 100 lbs. wheat; 100 lbs. cracked corn; 100 lbs. scratch feed and mix all together and feed in hoppers. My chickens do not know what it is to be hungry. For mash, I use 100 lbs. bran; 100 lbs. shorts 100 lbs. corn meal; 20 lbs. oil meal; and 15 lbs. tankage. I use the tankage because it has about 60 per cent protein and beef scraps only about 40 per cent and the cost of the tankage is much less. I have used tankage for two seasons with good results. I expect to try blood meal next season.

I set my incubator on August 24th, and got 112 chicks out of 123 fertile eggs. In hatching I tried a little experiment. I put a cloth, about four thicknesses, in one corner, large enough to hold 35 eggs and marked the eggs and never took the cover off. These eggs hatched about six hours ahead of the rest and this was not all. In about ten days they began to die. I examined them and found the yolks were as tough as a gum boot heel. I suppose the eggs got too hot as the heat could pass through the rest of the tray except where the cloth was. I have just as good results with machine hatched chicks as with hen hatched. I used fireless brooders of my own make and they are fine. I am going to try Capons for brooders next year. Every one who comes here seems to think he never saw such fine, healthy chickens. They ask me what I do to make them look that way. I say feed, and then feed some more. If your birds lack vitality, you will have nothing but feathers and bones. My birds do not seem to know that this is the season for taking their annual vacation, and I am getting about a 60 per cent egg yield. I have sold \$119 worth of young chicks this season and have 150 left. My feed bill has been \$45 so far, and I have from 15 to 25 old hens eating out of that feed all the time.

C. C. Bentley.

Ohio.

PLUMAGE AS AN INDICATION OF HEALTH.

The wide-awake poultry breeder can choose from a flock the fowls that are out of condition by merely looking at them. He knows that a bird with dull plumage, loosely carried, is out of condition as truly as the cattle breeder knows from the hair of the cattle if they are "fit." If many birds have rough, dull plumage, it is well to look into the house, the yards and the feed bucket. Something is wrong some where.

The plumage may lack lustre on account of exposure. The sun turns

some varieties of birds brassy; it fades the buffs and dulls the blacks, but the alert appearance of the bird, its bright eyes and activity, are unchanged by sunburn. Fading matters greatly only to the prospective exhibitor—lack of condition is of vital importance to every poultry breeder.

The first permanent feathers replace the chick feathers gradually. There will be a time when the chicks seem in splendid show shape, every feather in the wing, the tail looking good, but the first thing you know the wing is ragged, likewise the tail, and the bird is impossible for the show room. This is a trying period for young stock; they need full feed then as during the regular moult, for they are making not only new feathers, but flesh and bone; they are increasing in size and the pullets are getting ready to lay. If they are given good range, with shade, plenty of feed, and room at night, the permanent plumage will be all that the breeding of the bird permits.

Some birds are very slow in getting their permanent feathers; they will be so bare that the back is sunburned; their tails may not appear; there will be a general lack of feathering out. Slow feathering is often due to lack of animal food. If these tardy birds have had meat, there is no use of giving more; if not, add a little animal food to the ration, in the shape of beef scraps, good tankage, or milk curds. A little iron tonic in the mash is also good. Look for lice on dull plumaged birds; lice and mites are responsible for many stunted chickens. Give them a dust bath. Chickens seem to need the contact with the earth to keep their skins in good condition. The scouring with dirt possibly has the same effect on them that a good rub with a bath towel has on the human. At least it is natural, and should be provided.

Overcrowding at night, faulty ventilation, and lack of vitality for any other reason than the above—together

with lice and mites—will quickly affect the plumage. The poultry breeder should look over his flock frequently, and by noting the first symptoms prevent further trouble promptly—(or change).

HENS VERSUS PULLETS EGGS

Editor, Poultry Keeper:

I got your card a day or two ago and now I am coming back at you, not with any of my own stuff, but with a few extracts from an article by a man that most likely knows more about poultry than I ever thought of, but you will see that he agrees with me on the subject of breeding. The article I am quoting from is by James E. Rice of Cornell University.

He says in part: "We advise people to breed hens rather than pullets, because hens lay larger eggs. They do not lay as many eggs in the fall and winter as do pullets, therefore if properly handled, hens should be in better physical condition than pullets to give strong, vigorous, good-sized chicks."

Too many times in the past, breeders in their desire to get the largest net income from their stock, have bred continuously from their pullets and thus have not had the benefit of the winnowing effect of time, in eliminating individuals that died the following year."

This is only a small part of Prof. Rice's article and the article in full should be read by every poultryman for the reason that the author's ideas are not merely theoretical, but practical and full knowledge acquired by actual practice.

L. O. Hardenbrook.

Washington.

PITTSFIELD POULTRY PAYS

Barred Rocks—White Rocks

Buy Your Breeders Now. Save Money.

Introduce new blood into your stock now to insure good spring hatchings—get the strain noted for heavy egg production, hardiness and stamina. We never had such a splendid collection of pure bred Pittsfield Breeders—Barred and White Rocks. Birds of heavy laying qualities—perfectly marked—perfectly formed—strong and vigorous. You need some of these birds to build up and strengthen your flock. While utility breeders are our specialty, we have some of the finest exhibition birds in the country—every year we have customers whose Pittsfield birds catch the Judge's eye at the big poultry show. At this time of year we bring in from range a large quantity of carefully selected breeders. These birds will not enter our winter quarters, so that at no other time can you buy pure bred Pittsfield breeders at such



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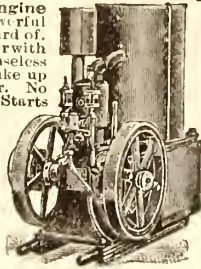
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Runs on Cheap Kerosene

Will run on distillate and kerosene; but kerosene costs less than half as much as gasoline. Besides, kerosene consumes more heat units than gasoline. Result—more power—steadier power—at one-half the expense of fuel. Comes to you all ready to run feed grinders, generators, pumps, saws, electric light plants, etc. Always in stock ready to ship.

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Poultry Raising in Virginia



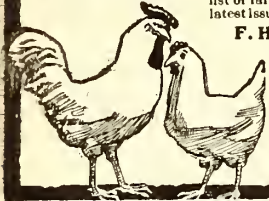
is especially profitable owing to the mild climate, good transportation facilities and nearness to big markets. Suitable farm land in desirable localities can be purchased for

\$10 an acre and up

Write to us today for information, illustrated booklets, list of farms, etc.; also for latest issue of our magazine.

F. H. LaBaume

Agricultural and Industrial Agent
NORFOLK & WESTERN RY.
Room 254
N. & W. Ry. Bldg.
Roanoke, Va.



MORE EGGS—MORE MONEY

Feed **CRY'S CO.**
A purified shell egg (cubic) guaranteed 99% Pure Carbonate of Lime.
Need no oyster shells or other grit, better results, less cost. Fine for little chicks. Highest endorsements. Write for booklet.
C. A. HARTZ & CO., St. Louis, Mo.

POULTRY LESSONS FREE. BROODERS BUYERS OF Successful INCUBATORS
Buy 1012 Book sent FREE for a postal. Don't buy any incubator till you write to **DES MOINES INCUBATOR CO.,** 67 Second St., Des Moines, Iowa

25 PAT. APPLIED FOR

Aluminum only; two sizes; adjustable to fit any fowl. Held by double lock. Can't lose off. Postpaid 12-15c; 25-20c; 50-35c; 100-60c. Initials 10c per 100 extra. 50 or less 5c. Also Pigeon Bands.
T. SADWALLADER, Box 1206, Salem, Ohio.

A number of articles were run in the columns of Poultry Keeper during the last year about the extensive system of room brooding of baby chicks, which originated in the Pacific Coast States. The system, however, is equally practical anywhere else and can be used in all sorts of climates provided the rooms are warmed to the proper degree. This system makes it possible to handle hundreds or even thousands of chicks in one large room, where they can be cared for with a minimum of labor and fuel expense. The Simplex Brooder Stove Co., whose advertisement will be found in this issue, are leading manufacturers of these brooder stoves and have a book in which they fully explain and illustrate the system. If interested in a safe and practical way of brooding chicks on an extensive scale, write them for a copy of their book, which will be sent you free of charge.

FACTS FOR SPORT LOVERS.

It is a curious fact that men who are satisfied with sensational and inaccurate news in other departments will instantly resent the falsifying of sporting news. They "won't stand for it." They want the truth, without fear, favor or bias. Those interested in the sporting events of the world generally agree that The Chicago Record-Herald is a model in this regard. Whether it be baseball, football, boxing, racing, automobiling, yachting, golf or any other event in the world of athletics or sports, you can always find a good, breezy, accurate report of it in the Record-Herald.

This wide-awake newspaper has a large staff of expert reporters of sports, who devote all their time and skill to this department alone. They have every facility that modern enterprise can devise for the quick and complete reporting of Chicago sporting events, while at the same time the athletic news of the whole country is received by telegraph up to the last moment of going to press.

When the Olympic games were held in Stockholm last summer The Record-Herald's head sporting editor, G. W. Axelson, crossed the Atlantic and sent full cable reports of the results every day from the grand stand. From one to two full pages are devoted to sports every week day, while on Sunday the four pages of "green sheet" offer a feast for "fans" and other lovers of sport.

The Record-Herald has earned its reputation all right. It gets all the sporting news—and gets it right.

ILLINOIS STATE SHOW.

The twentieth annual exhibit of the Illinois State Poultry Association will be held at Springfield, Illinois, January 5-11, 1914.

The Association is doing a great work trying to promote the poultry industry in Illinois and it deserves the support of every up-to-date poultryman in Illinois.

Everything possible has been done for the benefit of the exhibitors. This show gives more winning ribbons for one entry fee than any other show in the country.

Classes are made for champions in every breed and shape and color ribbons are given on male and female in every class.

We have the best show hall in America, with room to coop all entries in single tiers with wide aisles.

The officers, none of whom are allowed to show, are all old exhibitors and know how to make the exhibitors comfortable.

The annual banquet will be held on Wednesday evening of show week and it will be interesting to all.

A number of specialty meetings will be held in connection with this show.

Send in your name and address for a catalog at once. Catalogs will be mailed November 15th. Theo. S. McCoy, secretary, Galesburg, Ill.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay." and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

Our Big Dollar Offers

SENT TO SAME OR SEPARATE ADDRESSES.

HERE ARE 12 DIFFERENT CLUBS. ANY ONE SENT TO YOUR ADDRESS FOR \$1.00.

Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50
McCall's Magazine .... .50	Am. Poul. Advocate.. .50	Peoples' Popular Monthly ..... .50
Farm & Home ..... .50	Farm Poultry ..... .50	Farm & Fireside ..... .50
Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50
Reliable P. JI. .... .50	Fruit Grower 1.00	Philo System Poultry Book ..... .50
Housewife ..... .50		Poultry Keeper .....\$ .50
Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50	Book "Success With Poultry" 1.00
Farm Poultry ..... .50	Green's Fruit Grower. .50	
Ladies' World ..... .50	Farm & Fireside .... .50	
Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50	Poultry Keeper .....\$ .50
Reliable P. JI. .... .50	Farm & Fireside ..... .50	Farm & Home ..... .50
American P. World .. .50	Farm & Home ..... .50	Farm Poultry ..... .50

Poultry Keeper Publishing Co., Quincy, Ill.: Enclosed find \$1.00 for which send the following publications for one year to the address below:

..... P. O.

..... State

..... St. or R. F. D.

..... Name

GETTING TURKEYS READY FOR THE MARKET.

Dry pick the birds and draw immediately after killing and save all feathers. Plump birds by placing on shallow trough arranged so that the head can rest on one side and the feet or knees on the other and this will place the breast on the bottom of the trough, and then place a plank on the row of birds. This presses down the birds and causes a plumpness and fullness and gives a round full appearance to the breast. As soon as set placed in bags that have been numbered and let each bag have the exact weight of the bird and state if hen or cock, or cockerel or poult.

Pack these bags in barrel or in box without ice and head carefully, and ship promptly. Be sure to see that the birds are chilled thoroughly and allow no delay in the killing and chilling and plumping and shipping. Have ice houses that will accommodate the plumping troughs, and place them in at once after drawing the bird. Wring cloths out of ice water and wipe the birds out well and see that all refuse is removed. Allow no careless work and see that there is no hot water used about the birds and no scalding should be tolerated. All appliances kept ice cold and clean, and all weights exact and all shipments announced by cards and all merchants kept informed of delays and keep in close touch with your market. Try to be correctly informed as to trains, and ship to travel at night and to arrive and be cared for in the morning, and this will insure promptness all around.

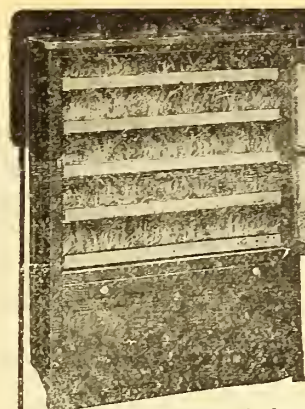
One bit of advice let me ask you to remember—be sure to have your market ready before you raise the turkeys and keep up with market conditions. The knowledge of a certain market will make a customer take more care and pride in the preparation of the goods, and will enable him, with some degree of safety, to feed for flavor as well as for fatness, and celery seed and nuts will give a fine flavor.

Many merchants have preferences as to the methods of handling shipments and it is wise to ask your merchant if he wants the goods in large or small packages.

I would suggest that you ask the merchant if he wants the goods in bags or if he prefers them in bulk. The correct way is to have each bird in clean white bag and have it numbered and the weight, but the merchant may have good reasons for departing from this method and it is well to ask him about this.

There are wheels within wheels in all departments of trades, and the man at the helm of a certain industry has methods suited to his particular line that he had studied out and his ideas must be respected.

The man who deals in a way to ship all birds alive minimizes his work and I would suggest that nothing but sound grain be fed to the birds to be shipped as this insures sound meat and good condition.



5,000 Grain Sprouters
1/2 Usual Price

Front Contains More Glass Which Gives More Sprouts

Made in 4 Sizes

This is exceptionally good news to thousands of poultry raisers who have long contemplated the purchase of an efficient Grain Sprouter, but felt they could hardly afford the price.

By buying large quantities of raw material—best lumber, steel, glass, etc.—for cash, we secured it at a discount of about 40%. This saving we give to you. But the low price we are thus enabled to make is

Good for November ONLY

as we may be forced to buy additional material in the open market and pay the full price, the same as others. Today we stand as a dominant force in cutting the price on dependable grain sprouters and if you as a poultryman, realize the necessity of feeding fresh green food to your fowls, you will order one of our machines—not because it sells at about 1/2 the usual price others charge, but because

Reliance Grain Sprouters

are the most efficient machines ever built. Thousands of these low-priced grain sprouters are in use on the most successful poultry farms in America, on country farms, in city suburbs—saving and making money for their owners. Figure it up for yourself what the "Reliance" will do for you. Count the egg money doubled, the feed bill cut in half, the healthier and plumper chicks that bring better market prices. Then count the saving in cost of the "Reliance" and you can see you are losing money every day you delay.

The "Reliance" will produce three to four bushels of sprouts from one bushel of grain and do it quicker with less care and attention than other machines. In fact, there is

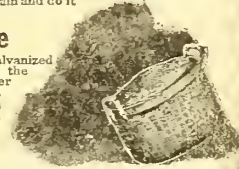
None Better Made—No Matter What the Price

The "Reliance" has double walls, heavier insulation, extra galvanized iron linings, galvanized trays, strong screening. The lumber is of highest grade, the heating system is better, the ventilating system is faultless, besides the front contains more glass which induces larger quantity of sprouts. Don't put it off any longer, but get a "Reliance" in action at once.

Write right now, and learn what a really low price we place upon our machines. Facts and literature will be sent by return mail. We ship same day order is received. You have several sizes to choose from. See literature.

RELiance INCUBATOR CO., Dept. 38, FREEPORT, ILLINOIS
Manufacturers of Grain Sprouters, Incubators, Brooders

3 bu. of Sprouts from 1 bu. Grain



No green food for several days before shipping and not much at any time during the last fattening process if you wish the very best results. Green oats is not advised at all for fattening birds as it has a tendency to make the flesh less firm. If you are a little afraid of the solid grain diet you can use a little oat meal mixed with it, as the oat meal is somewhat laxative, and always remember not to take the birds right off the range and ship as this is not wise. Give a solid grain diet several days before shipping.

Get the turkeys off the range and place in boxes with clean hay in bottom and sprinkle with a good lice powder, and spray well with carbolic solution. Repeat this every day for several days and thus you will know you send no germs away from your place on your birds, and this often is closely noticed by the people seeing the birds. One man lost what would have been a good trade by a man finding lice on the birds in the coop ready at the depot for shipment. The man called others to see and the shipper of the lousy birds found it impossible to build up a local trade.

It pays to be clean and honest with all shipments, as the other way will be found out in some way and cause you trouble and regret.—Exchange.

BIG PROFITS IN EGGS.

There's a good substantial profit in eggs at any time of the year, but now when prices are sky-high and likely to go higher still, there's absolutely no better proposition for the poultryman or farmer.

This raises the question, "How can I make my hens lay in winter?" The

answer is just this; "Feed them right."

The food a hen ordinarily gets in winter does not force her to lay. In summer she gets insects, grasshoppers, worms, etc. In winter all this is missing. If you want your hens to lay you must give them something to replace it.

What's the best food? Why, fresh cut bone is the one right thing. This food will absolutely compel your hens to lay. You'll get as many eggs in winter as you did in summer.

It means economy in feed, too. Just consider this—a piece of raw bone the size of a turnip will feed 10 to 20 hens. Cost to you at the most 2 or 3 cents—in many cases, nothing. Now can you see where you save on feed? Fresh cut bone is by far the lowest priced and most efficient egg producing food.

The best way to prepare it is in a Humphrey Green Bone Cutter. We have tested this machine and found it second to none for its purpose.

The makers—Humphrey & Sons, Glass St. factory, Joliet Illinois—publish a free book, "The Golden Egg," which explains thoroughly the right feeding of hens for egg production. If you desire fuller information on this money-making method, write them at once for a free copy.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting someone else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

Win with Good Layers



There is no need to keep White Leghorns that are not good layers just because you want prize winners. FERRIS LEGHORNS have been bred for eggs and exhibition more than

thirteen years. They have been trap-nested and only the best layers used for breeding for so many years that LAYING QUALITIES ARE BRED IN THE BONE.

Trap-nest records of 160 or more eggs a year are required from all our best exhibition birds. This is why the laying qualities of FERRIS LEGHORNS are so widely known. Size, health, vigor are present in every bird—we raise no other kind.

Standard qualities are given extra attention. Hundreds of fine exhibition birds for sale. They have splendid shape in every section—good heads, long concave backs, low wide spread tails. Their plumage is perfectly white, their shanks are a deep yellow. They are the kind that are winning for our customers all over the United States in strongest competition.

FERRIS LEGHORNS WIN.

Here are a few of the recent winnings that help establish the superior quality of Ferris Leghorns:

Iowa State Fair, August, 1913—Silver cup for best cockerel and numerous other prizes.

Maryland State Fair, Sept., 1913—1st and 2d cock, 1st and 2d hen, 1st pullet.

West Michigan State Fair, Sept., 1913—1st and 2d cock, 1st and 2d hen, 1st and 2d cockerel, 1st and 2d pullet, 1st pen.

West Virginia State Fair, Sept., 1913—1st and 2d cock, 1st cockerel.

We will exhibit at 30 or more of the leading fairs and shows this fall and winter. Watch our winnings and remember we can furnish equally good birds for your show.

Good breeding cocks and cockerels at \$5.00, \$7.00, and \$10.00. Good exhibition males at \$15.00 to \$30. Pullets and hens for breeding, \$2.50, \$3.50 and \$5.00; for exhibition, \$7.50 to \$15.

WE SHIP ON APPROVAL—MONEY BACK IF NOT SATISFIED. WE INSURE ALL STOCK FOR THIRTY DAYS—REPLACE ALL THAT DIE OR BECOME ILL.

You should have a copy of our 132 page catalogue—the most complete White Leghorn catalogue ever published. Gives prices and description of all grades of stock. It also gives a lot of information that may be of interest to you—how we feed and house our stock, how we breed for eggs, how we produce exhibition stock, etc. Write a postal today and let us prove to you that Ferris Leghorns will suit you. You will be surprised at the low prices we will quote on the stock you need.

George B. Ferris, Ferris Leghorn Farm, 669 North Union, Grand Rapids, Michigan.



MADISON SQUARE WINNERS. Rose and S. Comb Brown and White Leghorns of the best strains bred, 242 240 and 244 egg strains. Big eggs, big birds. Winners everywhere, start with the best. **BARRED ROCKS, WHITE WYANDOTTES, the very best.**

W. W. KULP

Box 24

Pottstown, Pa.

HATCHING EGGS

BREEDING STOCK

S. C. Leghorns, White and Barred Rocks. All eggs and stock **GUARANTEED**. Write for big new catalog: "Tywacana Quality." It gives much information of value to poultrymen. It's free.

WACANA FARMS POULTRY CO. TYWACANA FARMS POULTRY CO.,
A. E. Wright, Supt.
Box W, Farmingdale, Long Island, N. Y.

Wyckoff's S. C. White Leghorns

ACKNOWLEDGED EVERYWHERE THE WORLD'S GREATEST LAYING STRAIN. UNEQUALED IN STANDARD QUALITIES. Remember that we are the **ORIGINATORS**, and for over 30 years **SPECIALTY BREEDERS** of the justly celebrated **"WYCKOFF STRAIN"** of **S. C. WHITE LEGHORNS**, the **MOST PROFITABLE STRAIN OF POULTRY IN AMERICA** today. Place your orders at headquarters and make no mistake.

Two thousand choice yearling hens, fine strong early cockerels, and a few yearling cocks must be sold at once to make room, and prices will be made especially attractive to early buyers. Send for catalogue and state wants as near as possible and mention the Poultry Keeper. Address

C. H. WYCKOFF & SON, Box P. K. Aurora, Cayuga Co. N. Y.

S. C. BLACK ORPINGTON CLUB.

The National Meet of the National Single Comb Black Orpington Club will be held at the Pittsburg show, Jan. 19-24. In addition to the regular show offerings \$200 in cash will be offered by the club, and also five club cups and the gold medals and ribbons to winners of 1, 2, 3, 4 in old and young males and pens. This is a tremendous offering and should bring out an immense class of blacks. W. P. Craig, Empire Bldg., Pittsburg is the secretary of the show and entries should be made with him by members. State cups will be offered in nearly every state in the Union and at all shows in the United States and Canada gold medals and specials will be offered by the club. The new 1914 catalog is now nearly ready for the press and those who wish their names in the next catalog should act quickly. Dues are \$1 per year and Milton W. Brown, Sta. L, Cincinnati is the secretary.

CAUSES THAT EFFECT FERTILITY OF HATCHING EGGS.

In writing this article for Poultry Keeper, it is my intention to give the readers some idea of how we manage our breeding stock so that during the breeding season we get eggs that will hatch strong, vigorous chicks.

It is a well known fact that it will not do to force birds to molt early as this injures the possibilities of the hatching eggs, by giving us eggs from birds of poor vitality. We cannot expect the young chicks to grow off strongly if they are the descendants of poor or weakened stock. We never force a bird to molt, even if we do not have any to show at the early shows.

Another thing is letting the males and females run together during the molting season. The cockerels should be separated from the females as soon as their sex can be determined, and the old males from the females as soon as the breeding season is over. The males should be fed well and taken care of properly until wanted for the breeding pens the coming season, and one may then expect good strong chicks that will live and grow as they will have been produced from old stock of good vitality. Everyone does not have the room to keep a large flock of cockerels separate and in such cases a coop should be made to keep the breeders in. A coop five feet square

will be large enough for two males. I use sand on the floor and use such coops only for training and conditioning our show birds as we have a large farm of about five hundred acres. We yard our males in small yards about 40 by 20 yards. In each yard we keep eight to ten males. We give them good care and feed. All our feed is produced right here on the farm. Our pullets range all over the fields and woods hunting bugs and scattered grain. Along in December we select the finest pullets from our flock for breeders and let me say right here that they are full of life and vigor. Some farmers do not feed their birds grain, if they have free range, thinking that they can pick up their own living but this injures the vitality of the breeders. They need feed and plenty of it.

We have added a new variety to our yards. They are the Blue Orpingtons, and they are kept on a separate farm so that there will be no danger of their mixing with our Champion White Orpingtons. We can book orders direct for English stock for those who so desire.

McKee's White Orpington Yards.

Garvey McKee, prop.

R. 1, Watertown, Tenn.

KEEPING CHICKENS ON A CITY LOT.

During the summer of 1910 a number of my neighbors were trying the Philo system of handling crickens. I borrowed a Philo book from one of them to read. It described a two story coop, 3x6 feet. I did not think much of the system but decided to enlarge it a little and try one coop. I bought two large boxes for a wholesale dry goods firm for 50 cents each, took them all apart and built a coop 4x6 ft. and 4ft. high, put on a gable roof, hinged a part of one side of it, put in a floor two feet from the bottom, hinged both sides of the bottom part so as to throw it open in good weather, covered roof, both sides and ends with Bird's Paroid roofing. Made two roosting trays; sides and roosts are 1x2 inches, 3 ft. 10 in. long, ends are 1x3x13½ inches. Bottom is Paroid roofing making them light and easy to handle. These are taken out every morning and cleaned and not put back until evening. This keeps them clean and free from vermin.

Sept. 13th of that year I purchased 12 Buff Orpington yearling hens and

a cockerel. I kept an accurate account of all feed bought and all eggs and chickens sold up to Sept. 1st, 1911, and showed a net gain of \$69.20. The eggs used by ourselves were credited to the chicken account the same as if sold.

The spring of 1911 I sent for the new Philo book which showed a style of coop 3x6 ft., 30 in. high. I found this much better, easier to make and not so expensive. By getting goods boxes and making them myself, covering sides and ends with Paroid roofing, I can make the coops for \$4.00 each. This includes a window 1x6 ft. across the top on front side of coop.

Sept 1st, 1911, I increased the number of hens and pullets to 40. 12 of the pullets were White Leghorns. To Sept. 1st, 1912, I had a net gain of \$169.71. The third year I increased to 60 hens and pullets, one third Buff Orpingtons. The following is the egg record for the 12 months:

Month	No. of eggs	Sale for consumption	Sale hatching
Sept. 1912	526	\$10.91	
Oct. 1912	380	10.52	
Nov. 1912	332	10.10	
Dec. 1912	580	19.31	
Jan. 1913	580	16.44	
Feb. 1913	720	16.25	
March, 1913	1498	27.16	\$ 6.50
April, 1913	1551	21.53	20.60
May, 1913	1406	21.15	10.50
June, 1913	1285	20.74	4.50
July, 1913	1026	19.21	
August, 1913	715	15.20	\$42.10

\$208.46

Total sales, \$250.56

The cost of feed for the 12 months was \$119.47 leaving a net gain of \$131.09 from eggs alone.

In May and June, I hatched 135 chickens and their feed up to Sept. 1st was included in the \$119.47. I lost only two chickens out of the 135 hatched and lost them in August after they were two months old. The flock of 60 hens averaged 176 1-6 eggs each for the year.

My lot is 40 by 140 ft. and the part I use for chickens is 26x50 ft. and on this portion of the lot I have two cherry and three peach trees. We picked over a bushel of cherries and four bushels of very fine peaches.

The Philo system is all right, if not neglected, and I am confident that one can get a larger egg yield than by any other system, and the chickens never bother your neighbors.

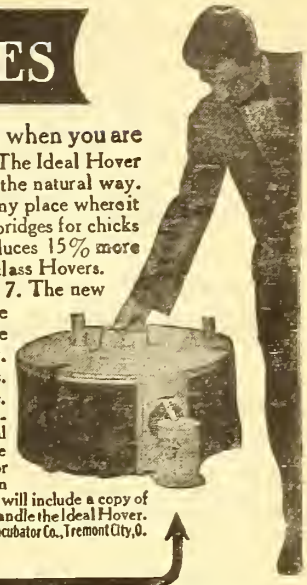
Sept. 20th I got my first pullet egg from White Leghorns hatched May 3. Iowa. O. J. Chapman.

WHAT EVERY POULTRYMAN SHOULD KNOW.

One of the first things the beginner should learn—and the old-timer remember—is that a judicious system of feeding is not only very essential to the well-being of poultry, but care in feeding fowls has also a very

10 IMPORTANT FEATURES

These 10 Important Features should be considered when you are at a loss to know just which Hover to select. 1. The Ideal Hover may be carried with lamp burning. 2. It broods the chicks the natural way. 3. Can be used in a Brooder, Colony House, Henhouse, or any place where it is suitable to brood chicks. 4. It sets on level floor with no bridges for chicks to climb. 5. Has a Hot Air Double Drum Heater that produces 15% more heat than the Single Drum Heater used in most of the better class Hovers. 6. It is the best Hover made for winter and early spring use. 7. The new Automatic Lamp is perfection in itself, oil fount is outside of the lamp box feeding cool oil to the wick and will never cause trouble by smoking. 8. Lamp flame is always in plain view. 9. It is 24 inches in diameter and will brood 100 chicks. 10. While the quality ranks with the best it sells at a lower price. Before selecting your Hover for 1914 we want you to write us for Circular showing how the Ideal Hover is constructed, also showing it in actual use on the State Farm at Dayton, Ohio, where seventeen were used last June with excellent results. We will also send you Circular of the Queen Incubator which we sell. It tells all about our Special Combination Offer of the Queen and the Ideal Hover, and if you will mention this paper when you write us we will include a copy of "How to Raise 90% of Your Chicks." Write us today. Dealers wanted to handle the Ideal Hover. NEW CARLISLE MFG. CO., New Carlisle, O., Successors The Duplex Incubator Co., Tremont City, O.



great influence upon the profit and loss of the business.

That fowls cannot be remunerative if starved can be taken for granted, so the prime object of feeding is to give the quantity and quality of food which will produce the greatest amount of flesh and eggs.

The problem is rather a nice one. In summer-time no one experiences any difficulty in getting along real well with their flocks, as far as feeding is concerned. But if the matter is neglected in any way during the winter, an empty egg basket will eat up all the summers profits.

There is one important article of diet, without which it is absolutely impossible to keep fowls in health—and that is an ample and daily supply of green or fresh vegetable food. The omission of this causes half the deaths of fowls, when kept in confinement, besides reducing the quantity of eggs laid to a ridiculously small number.

To overcome the winter's problem of daily supplying green food necessary to the health of the fowl and their prolific egg production, the Reliance Incubator Company has perfected a grain sprouter which will produce the very best of green food for poultry.

This green food is even more necessary to chickens than to adult fowls, for it is to its use that splendid fowls are built up, that the fertility of eggs is increased, that egg production is doubled. And since this green food may be obtained in quantities averaging three to four bushels from one bushel of grain, through the medium of the Reliance Grain Sprouter, it is also the most economical of all foods, as bushel upon bushel of it can be produced at a cost of little more than ten cents each.

Remember, green stuff of some sort is absolutely necessary to properly balance the supply of other foods and beef scrap, which are always kept before little chicks and grown fowls. And the simplest, easiest, cheapest method of securing the same during the winter months is by installing an efficient,

dependable grain sprouter.

The Reliance Grain Sprouter has passed all the tests and also stands in the front rank as far as construction is concerned, at the same time it sells at a price much lower than one would think possible. The advertisement of this concern appears in another part of this paper. It would be well for all to read it and send for literature which tells more about the feeding and care of chicks with green sprouts. The concern manufacturing this grain sprouter is located at Freeport, Ill., and operates under the name of the Reliance Incubator Company. Write direct for any information and prices, and mention this paper.

At this season of the year, colds and swelled heads show up among almost all flocks. Even the well kept flock may have a case of sniffs, from a bird being chilled by the cold fall rains. This single case if neglected and the bird allowed to remain with the others, may inoculate other birds in the flock and the cases develop into real roup which is often hard to cure. Readers of this Poultry Keeper, will find in this issue the advertisement of "Oculum" which has been used extensively for years for just such trouble. This remedy may be used as a preventive as well as a cure and those wanting to know more about what can be done with "Oculum" should write the manufacturers.

We would like to get a number of suitable short articles of about five hundred words each to use in our coming issues. If you are not now a subscriber or if you are now on our list, and will send us a suitable article on any subject relating to poultry, we will enter or extend your subscription for one year. Hatching and brooding will soon be in order and articles on these subjects will be especially timely. When sending in your article, clip this memo. and send with it, so that your subscription may be properly entered.

DON'T SUBSCRIBE

—TO ANY—

Poultry or Farm Papers or Magazines

Send you get our prices. We can supply at

GREATLY REDUCED PRICES.

Any publication in the U. S. If you do not find what you want in this list, write to us in most every combination you get Poultry Keeper Free, and in every case you save money. On Canadian and Foreign subscriptions ask for prices.

Where three or more papers are taken in one club, there is an additional discount.

POULTRY.	Alone.	Price With Discount.
American Poultry Advocate ... \$.50		\$.75
American Poultry Journal	1.00	1.25
American Poultry World .....	.50	.75
Mass Poultry .....	.50	.75
Reichel-Zuechter .....	.75	1.00
North-West Poultry Journal ...	.50	.75
Pigeon News	1.00	1.25
Poultry Review	1.00	1.00
Poultry Tribune .....	.50	.75
Poultry Success .....	.50	.75
Poultry Herald .....	.50	.75
Practical Poultry Journal50	.75
Western Poultry Journal50	.75

AGRICULTURE.

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Send in list of the publications you wish and we will quote a reduced rate on the list. Address,

Poultry Keeper Pub. Co.
QUINCY, ILLINOIS.

FEEDING FOR EGG PRODUCTION.

It has been conclusively proven that exercise is essential to egg production. No animal if left to itself under natural conditions will indulge in such a variety of feeds as will poultry. Birds feeding in this way pick up grubs, grain and weed seeds, pieces of grass, making their meal consist of anything that comes before them. It has long been admitted that flocks of hens kept on free range where they are able to pick up a variety of feeds produce more eggs and require less shell in feeding than do those birds kept under more intensive methods.

During the winter, when birds are confined to the houses, and with flocks kept under intensive methods, the feeder strives to overcome any bad effect of these conditions by selecting a system of feeding that will furnish the birds with variety and will force them to take exercise. It was with these objects in view that the Maine experiment station worked out its system of feeding. The ration used consists of a combination of grains fed in the litter twice daily with a dry mash before the birds at all times. For each 100 birds four quarts of cracked corn scattered in the litter in the morning, two quarts each of wheat and oats at 10 o'clock.

The dry mash is slightly modified from month to month as follows: First month in laying houses, 300 pounds wheat bran, 100 pound each corn meal, low-grade flour and meat scrap; second month, 200 pounds wheat bran, 100 pounds each corn meal, flour, gluten feed and meat scrap; third month, same as for the second month, with addition of 50 pounds linseed meal. From this time on the linseed meal is put into the mash every alternate month.—Exchange.

SUCCESS WITH POULTRY.

The best book on poultry ever published, one which embraces every branch of the poultry business, is Success With Poultry. From the first chapter, "How to Get Started," to the different chapters on every phase of poultry for profit, this is a book that is of greater value than any other ever published.

Do you want to get plans for building in use in the big poultry plants of the country? Success With Poultry will tell you.

Do you want to get plans for building practical poultry houses? Success With Poultry contains them.

Do you want to learn about raising capons, foods and diseases of poultry and remedies? Success With Poultry tells this.

Success With Poultry contains 128 pages (9x12 inches in size) with numerous half-tones and etchings. Price is \$1 per copy. For price of book alone we will furnish a full year's subscription to Poultry Keeper and send Success With Poultry postpaid. Offer is good for new subs or renewals. Address, Poultry Keeper Publishing Co., Quincy, Illinois

THE YOUTH'S COMPANION IN 1914.

Seven college presidents and a number of college instructors, including ex-President Taft, will contribute to The Youth's Companion during 1914.

Then there is Gene Stratton Porter, whose stories of Indiana woods and swamps have made her famous, and Kate Douglas Wiggin, who never wrote a dull line in her life, and Mrs. Burton Harrison, who remembers when conversation was really an art as practised in Washington and in the manner of Virginia. And this is just a beginning of the list.

If you know The Companion, you have a pretty clear idea of what is in store for next year's readers. If you do not know, ask us to send you sample copies—for instance, those containing the opening chapters of Arthur Stanwood Pier's fine serial—"His Father's Sin." Full announcement for 1914 will be sent with the sample copies.

For the year's subscription of \$2.00 there is included The Companion Practical Home Calendar for 1914, and all the issues of the paper for the remaining weeks of 1913, dating from the time the subscription is received. The Youth's Companion, 144 Berkeley St., Boston, Mass.

New subscriptions received by Poultry Keeper at special rate of \$2.25 for Youth's Companion and Poultry Keeper, new subs or renewals. Send order to Poultry Keeper Pub. Co., Quincy, Illinois.

SPECIAL CLUBBING OFFER.

By special arrangements with the publishers we can furnish any poultry paper at one-half price, providing the order includes a year's subscription to Poultry Keeper at regular price. For instance, for 75c we can furnish a full year's subscription to Poultry Keeper and your choice of Reliable Poultry Journal, American Poultry Advocate, or any other 50c poultry paper. Make up a list of the papers you desire and let us quote you a reduced price on the lot. Address Poultry Keeper Publishing Co., Quincy, Illinois.

We have had considerable demand in the past for egg record blanks. The subject of trap-nesting is so important and the matter of weeding out unprofitable birds so well understood now, that we have issued some egg record blanks, which we will offer as a premium in connection with a year's subscription to Poultry Keeper at fifty cents a year, we to send, postpaid twelve egg record cards, without additional charge. This offer is good on new subscriptions, or on renewals.

If you are interested in advertising send for a copy of our rate card which shows our charges for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our classified ad. department in the back part of each issue furnishes an easy way to get started at a low cost.

ST. LOUIS SHOW.

The St. Louis Poultry, Pigeon and Pet Stock Association announces that two thousand premium lists were mailed Oct. 6th. Anyone not receiving one may obtain one by sending name and address.

Remember our entry closes on Nov. 12th, entry fee, \$1.00 for single birds, \$3.00 for breeding pens, and \$5.00 for display pens.

There seems to be some misunderstanding as regards the poultry situation in St. Louis, and some explanation is due the public in reference to same. Our organization which is composed of over eighty members, and which is incorporated under the laws of Missouri, a member of the American Poultry Association since Dec. 20th, 1907, which is giving its sixth annual show, having met all our obligations and given the exhibitor and the public a square deal, will hold its show November 24th to 29th inclusive at 1015-19 Washington Ave., the finest location in St. Louis from an attendance and exhibition standpoint. We are opposed by another organization composed of three members which had its inception a few months ago, and, by renting the Coliseum, expect to reap the benefits of our endeavors to make St. Louis the greatest poultry show of the West which has taken us years to accomplish,—an opposition based on jealousy and mercenary motives.

We have arranged with the State Poultry Board, through Mr. Quisenberry, to make one of the finest exhibits ever given in the country; also, we have set aside a special hall for lectures and caponizing demonstrations.

Our grand old state of Missouri leads in the poultry output of the country and the St. Louis Poultry, Pigeon and Pet Stock Association, with the help of honest breeders, will, indeed, make St. Louis the greatest fancy poultry center of the West.

JAS. J. LONG, Secretary,
4115 Louisiana Ave.

Dr. Jules Baron, Pres.

Julius C. Garrel, Vice Pres.

J. H. Sentenne, Treasurer.

W. A. Kappay, Superintendent.

Geo. Hartley, (Trenton, Ill.) Asst. Superintendent.

A SUCCESSFUL POULTRY SUPPLY HOUSE.

The Geo. H. Lee Co. of Omaha, makers of Lee's Lice Killer, Germozone, Mandy Lee Incubators and other poultry products advertised by them in these columns, have been making extensive improvements in their Omaha factory during the past summer in preparation for a heavy fall, winter and spring trade.

In the supply department, all mixing, bottling, conveying and packing is now done by machinery so that from start to finish each product is uncontaminated by exposure or handling. One of Mr. Lee's inventions in the machinery line is a bottle filler that fills twenty-eight sample bottles of Germozone at a time in six seconds.

Thousands of these are distributed free.

All of the Lee products are originals and never copies. Old poultrymen will remember the furor that greeted Lee's Lice Killer when it appeared seventeen years ago. Before that time it was not considered possible to rid chickens of vermin without handling, dusting, dipping or greasing each individual bird.

The Lee Company has made wonderful strides in trade, now having factories at Omaha and Los Angeles, with distributing branches at many other points, and has especially made and retained a reputation for reliability of product and uniformity of strength and quality at all times.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year if sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, if desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote you promptly.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU!



START WITH AN 800 EGG ESSEX MAMMOTH AND SEE IT GROW

Once again the "Essex-Model" takes the lead. We offer you an 800-Egg Mammoth Incubator to start with. You can add to it 400-Egg Sections any time. No cellar to dig. No building to do. It is all complete with heater.

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Write us for particulars of this extraordinary opportunity. Ask for Catalogue M. We Manufacture

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MORE EGGS



Your Profit

Is increased by making your hens lay more eggs.


Dr. LeGear's Poultry Powder Makes Hens Lay

Mix it liberally with their feed and your nests will always be full. It keeps your flock healthy and free from disease.

Large Packages, 25c and 50c
At Druggists and Dealers Everywhere

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Write for Stock and Poultry Book—It's Free.



Try The Sure Hatch at My Risk



My incubator is the Ever-Ready, Ever-Dependable Chick Producer—more reliable than the setting hen, and more profitable. No experience needed. Automatic in operation; requires little attention. Never-failing even in freezing weather.

I'm Selling it for Less Than Inferior Machines Cost—at My Direct-to-You Factory Price

I'll send it to you, freight paid, on 60 days' free trial. Your money back if not satisfied. Get started early to make your profits big. Write today for free illustrated catalog and low prices.

My U. S. Poultry Book is not a catalog, but a book of important facts. Proven by practical demonstration. It isn't for sale at any price. I'm giving it away free to every purchaser of a Sure Hatch incubator.

FRANK HAMMOND, Pres., Sure Hatch Incubator Co., Box 2 Fremont, Nebraska.



U.S. POULTRY BOOK

MONEY BACK GUARANTEE

FREIGHT PAID

FEEDING FOR EGGS

Whether you keep 12 or 1000
hens you want them to

Lay when Eggs are High

HOW TO FEED WHAT TO FEED

The profits in poultry are
in eggs—profits in eggs are
during the cold months and
not during the summer.

Feed Right and Your Hens Will Lay

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For fifty cents (stamps ac-
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our booklet with Formulas
and Tables for Feeding and
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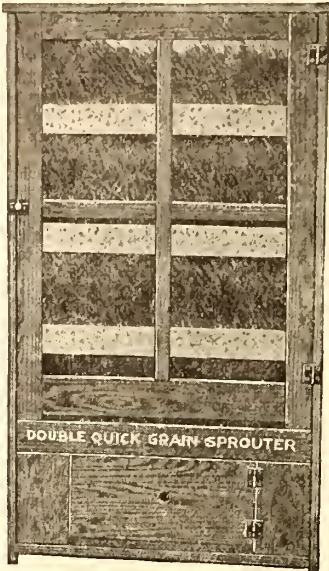
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THE PERPETUAL POULTRY SILO



Shows Oat Sprouts 8 Inches High
of 2 inches daily. Made in six sizes from a few hens to 1000. Send for complete Double Quick information.
CLOSE-TO-NATURE CO. - 20 Front Street - COLFAX, IOWA

This is the fourth season that readers have seen in
the poultry papers the following very familiar line:—

SPROUTED OATS — WINTER EGGS
and several thousand poultry keepers have im-
mensely increased their egg yield by the use of the
well known Double Quick Grain Sprouter—the
original—the first—the oldest sprouter and made
in the Largest Grain Sprouter Factory in the World.
We have supplied many of the large and well
known poultry plants in the United States, some
having ordered as many as three to five sprouter
after testing out their value.

Later—April 27—I am enclosing my check for two
more of your No. 5 Double Quick Sprouters. The one
I bought some weeks since is doing good work.—C. H.
Latham, Beauty and Utility Barred Rocks, Lancaster,
Mass.

October 7, 1912—On September 16th I ordered your
No. 5 Double Quick Sprouter sent to Maud L. Kaler,
Columbia City, Ind., and this one is proving so satis-
factory that she wants another of the same size and
therefore you will find draft in payment of this second
sprouter.—Milo R. Meredith, Indianapolis, Ind.

September 14, 1912—I ordered and received from you
last fall one of your 5-tray grain sprouters. This works
very satisfactorily. I want one for 1,500 hens. Will
you kindly advise me by return mail if you make a
larger size and the price of same. Later—September 23
—I enclose you my check for which please ship me
rush one of your No. 6 Grain Sprouters.—E. A. Palmer,
Providence, R. I.

Soon pays for itself. Makes two to four bushels of feed
from one of grain. Sprouts in 24 hours and forces growths

USE TWO AND THREE YEAR OLD HENS FOR BREEDERS.

Editor, Poultry Keeper:

I have just been reading the letter
in the September number of the Poul-
try Keeper from "E. S. S." about
trouble with infertile eggs. I think
the whole trouble was that his hens
were too young. I had the same
trouble last year. I had one
hundred fine White Leghorn pul-
lets to breed from. During the time
I was saving eggs for hatching, they
were laying from 75 per cent to 90
per cent. I often found as high as 70
infertile eggs in testing out a 200 egg
machine, and then there would be a
lot of dead germs show up in the sec-
ond testing. More of the chicks would
also die after breaking the shell, so
that by the time the hatch was com-
plete, I got about a 35 per cent hatch,
and not very good chicks at that. I
had two such hatches and then bought
enough eggs to fill my four incubators.
They were from two to three year old
hens and I made an 85 per cent hatch.
I used these same hens this year and
my hatch tested 95 per cent fertile and
I ran the birds all in one flock this
year with ten good cockerels. I find
that if the cockerels are kept together
for some time before they are put with
the hens they do not fight much if they
have plenty of room. I gave my birds
in an orchard of about one fourth
acre, with plenty of berry bushes and
as the cockerels had already settled
the question of "who was boss" they
got along very well.

I have a neighbor who started last
year with no experience in poultry
raising. He bought day-old chicks at
15 cents each and eggs at \$6 per 100
to the amount of \$500. He had

phenomenal success and raised 2000
very fine pullets. His March and
April pullets were laying at a profit
in August and September and have
kept it up all through the year. Last
spring he used his pullets for breeding,
after they had laid heavily all winter,
and got 800 chicks from 2000 eggs. He
made two more hatches without much
better success and he will be lucky if
he has 800 good pullets to go into the
laying house this fall.

D. Tancred, whose place is near
Seattle, is the largest and one of the
most successful poultrymen in the
Northwest. He claims that a fowl
must molt before she will become a
good breeder, and as he does not be-
lieve in keeping any old hens over
winter, he gets off a hatch about the
first of February just for breeders the
following year. Besides selling a great
many eggs for hatching, he hatches
about 100,000 chicks himself and his
stock is of such quality that the Peta-
luma people send to him for breeding
stock and those people down at Peta-
luma are some chicken men themselves.
I have stood on a hill just outside of
Petaluma and have seen 150,000 hens
at one look.

In closing I would say to "E. S. S."
to use those same Red hens next year
as breeders, along with some good,
husky cockerels and he will find them
all right on the job.

L. O. Hardenbrook.

(Editor's note:)

The fact that the eggs were from
pullets does not cover all of the trouble.
The editor of this paper has taken
twenty eggs from S. C. White Leg-
horn pullets, July and August Hatch
under an Orpington hen that could
not even fairly cover the eggs, and has

obtained a perfect hatch of strong chicks. This not only shows that it is possible to get a good hatch from pullet eggs, but that eggs can be hatched in nests that are full to overflowing. This hatch was during warm weather, however. Practically all writers say to use eggs from two to three year old hens, but is this really necessary? Possibly some other readers of Poultry Keeper would like to add their experience on "Pullets" versus Hens' eggs for hatching".

LIKES THE BUCKEYE REDS.

Hawks give me more trouble than anything else. If any of the readers of the Poultry Keeper will tell us how to get rid of them his name ought to go down in history.

I notice that an Ohio reader of Poultry Keeper wants to know more about Buckeyes. I have been breeding them for the past six years and find them well suited for the farm. They are healthy and good winter layers and will lay well through the summer. Regarding the writer's statement that the eggs showed poor fertility, I think the trouble was that the eggs set were from the same Red pullets that began laying before they were six months old, laying heavily through the fall and winter. My experience is that the eggs from pullets that have laid heavily through fall and winter, will not prove as satisfactory for hatching as eggs from hens that molt in the fall and which do not lay again until the last of January of some time in February. These hens go to work in the spring with renewed energy and their chicks will be stronger than those hatched from eggs coming from layers that have laid heavily during the months preceding the hatching season.

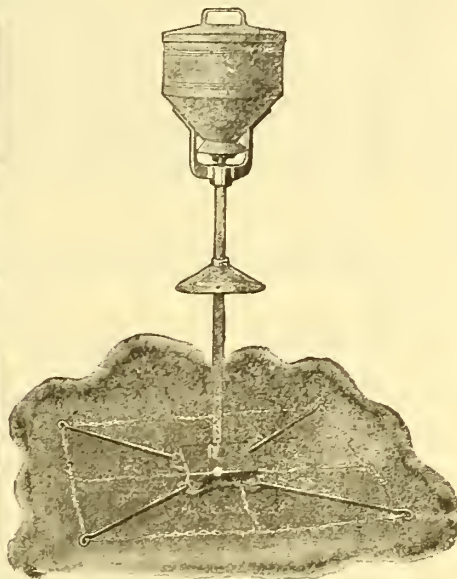
If any of the readers of the Poultry Keeper are dissatisfied with the breeds they have at present, I would urge them to join the ranks of Buckeye breeders, as I fully believe that in a short time they will develop into ardent advocates of the Buckeye Reds.
Mississippi. Helen Cleveland.

FERRIS LEGHORNS WIN.

Ferris improved White Leghorns are making a remarkable record at the leading shows this fall. For many years their laying qualities have been recognized as the best that careful selection and trapnesting could produce; but although Mr. Ferris has exhibited at two or three shows a year and has furnished winners for many of the largest shows every year for his customers, he has not exhibited extensively. This year, however, he has decided to exhibit at 20 or more of the leading shows and started off at the Iowa State Fair in August by winning 1st and 2nd cock, 1st cockerel, 1st and 3rd hen, and a Silver Cup for the best cockerel in the Mediterranean class. At the Maryland State Fair the 1st week in September another good winning was made; 1st and 2nd cock, 1st and 2nd hen and 1st pullet; while at the West Michigan State Fair the same week the winnings were 1st and

Keep Your Hens by the "O. K. Plan"

and you will save more than a fifth of the grain you now buy. That means 20 per cent additional profit from the flock. The Oakes common-sense grain and mash feeders feed the fowls just what they need when they are hungry, but they never over-eat. You cannot make a mistake and the hens won't make one if you use the "O. K. Plan" with your flock.



Rats Die of Starvation

in a hen house managed the "O. K. Way," because they cannot get at the grain in either the feeders or the everlasting steel grain bins.

Ask us to tell you

about the self-feeder illustrated here and the other labor and feed saving devices that go to make the "O. K. Plan" the only sure way to get winter eggs. Ask for catalog "A."

The Oakes Mfg. Co.

FACTORY AND HOME OFFICE, TIPTON, INDIANA.

Eastern Branch, 64 Cliff St., New York City.

Canadian Branch, 415 Symington Ave., Toronto.

2nd cock, 1st and 2nd cockerel, 1st and 2nd hen, 1st and 2nd pullet and 1st pen. The next week's winnings were: at West Virginia State Fair, 1st and 2nd cock, 2nd hen, 1st cockerel and 2nd pullet; and at the Kansas State Fair, 1st cockerel, 1st pullet, 2nd pen and 2nd sweepstakes.

If you are in need of either exhibition or laying stock, you will make no mistake if you write to Mr. Ferris. During the thirteen years he has been breeding White Leghorns he has furnished foundation and exhibition stock to thousands of breeders in every part of the country. This year he raised nearly 10,000 birds of better quality than any previous year. They are all large vigorous birds such as make the best layers and they have the type that makes them easy winners in stonk competition. A visit to the farm discloses hundreds and hundreds of exhibition birds with low sweeping tails, long bodies well up on legs and good in all details of shape, such as good combs, white earlobes, full breasts, concave backs, etc. Needless

to say all the birds are absolutely white there being no brassy birds at all. Several hundred cocks and hens are offered at low prices.

If you are interested in White Leghorns you should not fail to send for the fine 132 page catalog which tells all about Ferris Leghorns. This catalog is free to all our readers and contains illustrations, prices and full particulars. It is one of the most interesting and instructive catalogs published.

All stock is shipped on approval. Your money will be refunded if any birds are not satisfactory, and in addition to this liberal guarantee, all birds are insured for 30 days, and if they die or become ill, will be replaced free of charge. Every customer must be fully satisfied before the sale is considered closed.

Better write today and ask for the big 132 page catalog and get quotations on the eggs or stock you need. Just address a postal to George B. Ferris, 909 North Union Ave., Grand Rapids, Mich.

FEEDING FOR EGGS

Whether you keep 12 or 1000
hens you want them to

Lay When Eggs are High

HOW TO FEED WHAT TO FEED

The profits in poultry are in
eggs—profits in eggs are during
the cold months and not during
the summer.

FEED RIGHT —AND YOUR— Hens Will Lay

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For fifty cents (stamps ac-
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The most practical and helpful
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PROFIT POSSIBILITIES WITH CAPONS.

Although caponizing is not a difficult operation, it has been more or less neglected in the United States until quite recently. But with market demands for capons constantly increasing and an excellent opportunity thus afforded for securing better profits, more poultrymen are beginning to caponize their surplus cockerels instead of selling them for roasters at lower market prices.

Caponizing is the operation of unsexing a male bird and is most successfully practiced upon cockerels of the heavy American or Asiatic breeds when they are about three months old. Caponizing not only increases the size and weight of the fowl at killing time, but produces a tender juicy flesh sweeter and finer flavored than that of the ordinary fowl. This accounts for the increasing demand at a higher price per pound.

The reason for the greater weight and finer quality of the meat of a capon is that the same energy and vitality a male bird puts into fighting and breeding is used by the capon entirely for development of flesh and bone.

The capon is quieter than a cockerel and consumes less in proportion to his weight, making a lower production cost. It is possible to produce capons that will weigh in a few months just twice as much as they would have weighed in that time if

not caponized. For example, a Brahma cockerel should weigh from five to six pounds when nine months old. The same fowl if caponized could be made to weigh from ten to twelve pounds at the end of that time and the flesh would be superior. The capon will bring at least thirty cents a pound against the lower price of about fifteen cents a pound for the cockerel.

The same feed is used for capons as for fattening any fowl. They are quiet and gentle and do well in close confinement. The South Carolina Agricultural Experiment Station found that capons would hover young chicks and "mother" them better than hens.

The operation of caponizing when properly performed with a good set of modern instruments is not dangerous. The only loss is when the operator makes a "slip". The correct age to caponize a cockerel is just before he begins to develop sexually. It is important that the bird be in good condition and he should be allowed to fast from 24 to 36 hours before the operation.

An empty barrel turned bottom up makes a good operating table. Full instructions regarding the operation come with each set of caponizing instruments.

After the operation turn the bird loose, water and feed the same as usual.

Try caponizing all your surplus cockerels this season and you'll be surprised at the large profit you get from the same amount of feed and less care.

IMPORTANT AND PROFITABLE

Secure two new subscribers and take advantage of our special offer of three subscribers for \$1.00. This offer makes it easy for you to get your paper free for one year.

The reader can secure two subscribers at 50 cents each, send us \$1.00 and we will send Poultry Keeper one year to the one who has procured the new ones.

It is easy for one to secure two new subscribers in almost any locality. All it takes is a little energy and a few minutes, time.

POULTRY KEEPER, QUINCY, ILLINOIS:

Enclosed find \$1.00 for three subscriptions to Poultry Keeper for one year.

There are many interested in poultry raising who would subscribe for the Poultry Keeper if they understood the value of the paper. Others are securing their papers without expense to themselves under this offer. Are you willing to do the same?

Below is a subscription blank on which the names and postoffice addresses may be written. We urge an early effort to secure three names under this liberal offer. A dollar will reach us if sent in a letter.

NAME	POSTOFFICE	STATE
_____	_____	_____
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BEEF SCRAP, CHARCOAL, OYSTER SHELL FREE!

Sounds like a fake, but this is what users of the famous Nabob Laying Tonic get in effect.

Ordinarily hens must get their shell making material from their feed; out of the bran and alfalfa and the wheat and the corn.

In order to get enough organic lime to make egg shells, and bones for the embryo chick and the hen herself, she must digest a lot of food just to get the very small percentage of lime it contains, the unused protein, etc. being lost on the dropping boards.

If the laying hen had been fed Prescription No. 4 she would not have had to digest double the amount of feed in order to get the necessary amount of lime. Oyster shell contains only one part of available lime per thousand, and no hen on earth ever got her shells from oyster shell. It would be necessary to eat a ton of shells a year per hen to do it.

It simply means that the hen gets her lime from the beef scrap (rich in lime) and the vegetables and grain.

Just try this experiment: Cut out all beef scrap, all oyster shell and all charcoal and feed the regular amount of mash mixed with No. 4 according to directions and the ordinary grain feeds, and you will find that your birds have brighter combs, (because their livers are not overworked) better appetites, lay more eggs, and are in better health, and you will have your beef scrap, oyster shell and charcoal money in your pocket. The droppings will show far less protein wasted, and because the hen is not compelled to waste her energy digesting a great amount of food in order to get the small percentage of elements which they contain that are absolutely indispensable to her, she will molt better and more quickly, young chicks will grow far more rapidly by actual test, and the male birds will not show dark combs (liver complaint) nor will they become old and leggy at such an early age.

No. 4 is a scientific tonic containing no pepper, mustard or other injurious substances, but rich in organic lime, bone and shell making materials that make beef scrap, oyster shell and charcoal unnecessary.

5 lbs. of Prescription No. 4 contains as much organic lime and other bone and growth making materials as a ton of oyster shell and a 25 lb. sack of beef scrap combined. The Nabob Remedy Co., Box B, Gambier, Ohio, will send you 5 lbs. No. 4 for \$1 with the guarantee that if it does not do as they say it will, they will refund your money.

Prescription No. 4 makes all the food elements of your mash and grain feeds readily available. In this and its non-injurious properties it surpasses all other tonics known.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC. OF THE POULTRY KEEPER.

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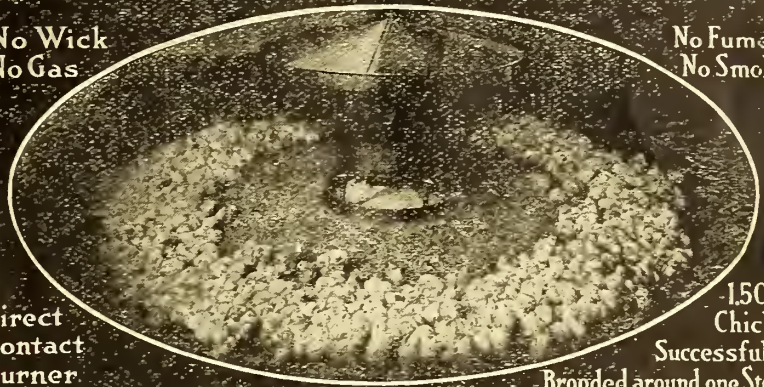
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Grand Rapids, Mich.
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Enclosed please find my check for \$29.50 in payment for Brooder Stove shipped me on the 7th. This is the second stove I have purchased from you this season, and of course the last one is purchased because the first one is doing the work. The stove works entirely satisfactorily and does all that you claimed it would do. I believe you have solved the bothersome problems in brooding. The Stove has entirely eliminated white Diarrhoea from which I suffered heavy losses, losing 50 per cent of my hatch. The losses with the stove have been very small. Very truly yours.

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Poultry Keeper Publishing Co.,
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Sworn to and subscribed to before me this 30th day of September, 1913.

August H. Wehmeyer, Notary Public.
My commission expires January 10, 1915

HOW TO GET MORE EGGS DURING WINTER MONTHS.

Many poultry raisers have an idea that the number of eggs produced depends entirely upon the quantity of food given the birds. They stuff their hens full of food without causing them to work for it or furnishing them grit to help digest it. As a result, the hens become drowsy, lazy and too fat to lay. In many cases the birds become crop-bound and die simply for lack of grit to help them digest the food in their crops.

Chickens have to grind their food in to you.

their gizzards before they get the benefit of it. The grit they get serves as teeth. Denying a bird grit is just as sensible as expecting a person to grind his food in his mouth without teeth. During the winter months when eggs are so valuable, and the cold and snow on the ground make it necessary to shut up the birds, the necessity for feeding a good grit is imperative. If this need is not met the owner is bound to suffer in loss of eggs if not in the loss of the birds themselves.

While grit plays such an important part in the digestion of food, a good grit, such as the Ohio Marble Company's "Pearl Grit," also provides other necessities absolutely essential to increased egg production. This includes calcium carbonate (lime) for egg shells; vitreous (glass) matter for the composition of feathers; also sulphur and carbohydrates which help to make the egg itself. A hen must have all these substances to make herself of greater value

"Pearl Grit" has a hard, sharp grinding surface but is readily susceptible to the process of assimilation. It is clean, white and nutritious. It not only imparts those egg-making qualities so necessary to laying hens, but also provides strength and feather-making materials enabling a speedy molt. "Pearl Grit" is also made in finer sizes for growing birds and chicks. It gives them exactly what they need for rapid development, and to make them good, sturdy layers.

We would suggest that any reader interested in increasing the egg production and health of his flock will do well to write the Ohio Marble Company of Piqua, Ohio, for their beautiful instructive booklet telling why "Pearl Grit" is such a practical, profitable food.

QUESTIONS and ANSWERS

BUCKEYES.

1. Are the Buckeyes considered good layers?

2. Are commercial beef scraps considered as good as green cut bone?

3. Would the Buckeyes be considered a general purpose fowl for beginners?

J. H. R.

1. Buckeyes are generally considered good layers. Laying is more of an individual or family than a breed trait and you will find both good and poor layers in all breeds.

2. Beef scrap is not quite as stimulating as green cut bone and can be safely fed in larger quantities. It depends considerably on the character of the bone secured which will prove the best. If fresh bone can be easily obtained at a price which will allow for the labor of cutting and still be as cheap or cheaper than beef scrap we should give it the preference.

3. Buckeyes are a general purpose breed and in general characteristics do not differ widely from Rhode Island Reds. The male is half a pound heavier and the female half a pound lighter than R. I. Reds and they have pea combs instead of single or rose combs. They are not as popular as Rhode Island Reds but are a good breed for the beginner.

LIMBERNECK.

What is limberneck and how do you cure it?
Missouri.
W. H. J.

Limberneck is a disease usually caused by eating decaying animal food. A dead rat or the carcass of any dead animal lying about the place may bring on an epidemic of it. Give each affected bird a piece of asafoetida the size of a pea and place a teaspoonful of hyposulphite of soda in each quart of their drinking water.

DROP DEAD SUDDENLY.

I have a bunch of White Leghorns, apparently vigorous, but occasionally one drops dead suddenly. Could it be poisoning, or are there other causes? W. M. G. California.

This may result from poisoning or several other causes. Usually it is the result of apoplexy, due to the rupture of one of the blood vessels of the brain, and may be caused by overfeeding, or too stimulating food or injuries. It may also result from violent exertion or straining in laying. Hens are often found dead on the nest or under the perches from this cause. There is no remedy as the bird dies before the trouble is discovered.

ABOUT BREEDS CAPONIZING.

1. What per cent of good thoroughbred Blue Andalusians will breed true to color?

2. Is it profitable to caponize the cockerels of small breeds?

3. Are white Orpingtons yellow or white skinned, and what color egg do they lay?
Indiana.
Mrs. I. S.

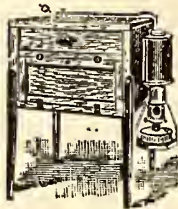
1. The Andalusians are very uncertain breeders and that has been one cause for



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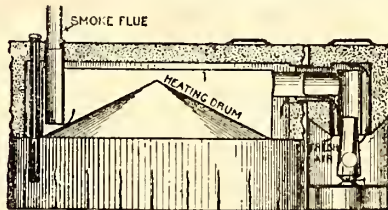
are sold to poultry raisers who must make a success of their work to live.

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their lack of popularity, as they are splendid layers of large eggs. With good foundation stock and careful mating you should get ten per cent of good specimens, as good or better than the breeders.
2. We do not think so. The best disposition that can be made of small cockerels is to get them to market as broilers

when weighing one and one-half pounds and at a less weight if your market will take them. Those who purchase capons want them to weigh eight or ten pounds.

3. White Orpingtons have white shanks and skin and lay a tinted egg. The color of the egg is not uniform.

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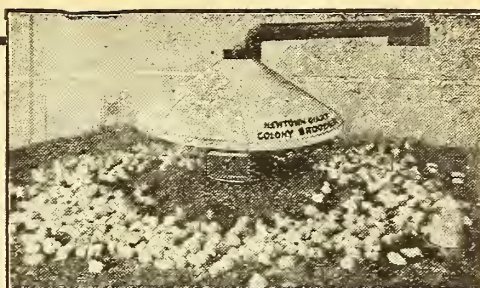
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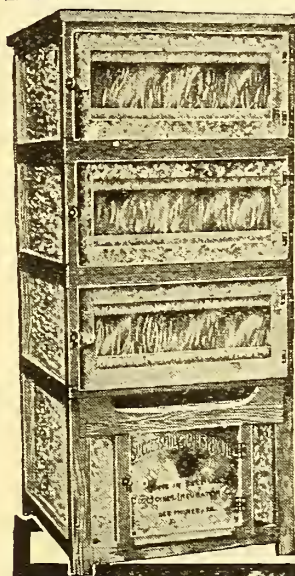
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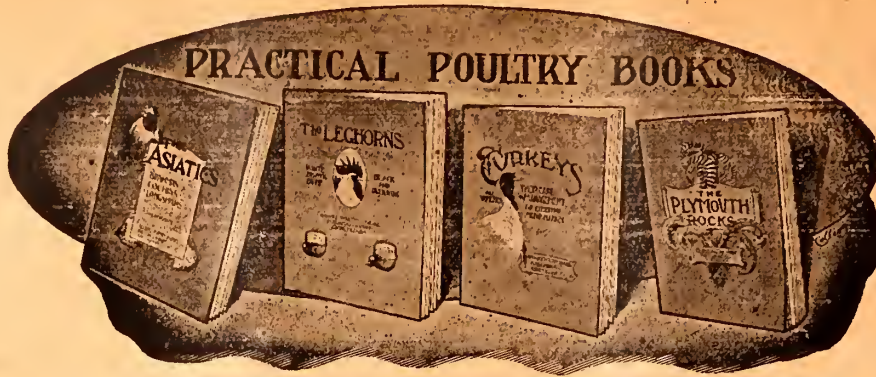
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VOL. XXX

DECEMBER, 1913

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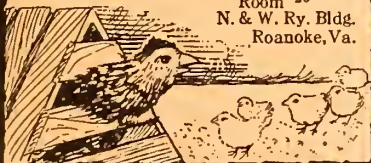
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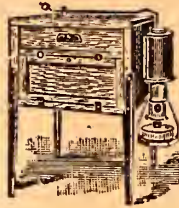
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Box 13 Council Bluffs, Ia.



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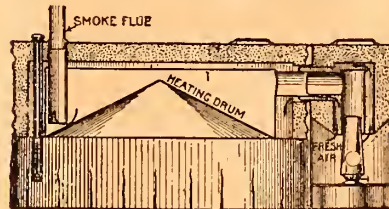
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80 per cent go to men who know; who have used my incubators in the past; who would use no others. You can't make a better selection.

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I have my farm so well stocked with egg bred Buff Wyandottes that I am going to offer P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$5; 100 eggs, \$12. Mention P. K. in ordering.

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DR. N. W. SANBORN, R. F. D. 24,

HOLDEN, MASS.

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Before selecting your Hover for 1914 we want you to write us for Circular showing how the Ideal Hover is constructed, also showing it in actual use on the State Farm at Dayton, Ohio, where seventeen were used last June with excellent results. We will also send you Circular of the Queen Incubator which we sell. It tells all about our Special Combination Offer of the Queen and the Ideal Hover, and if you will mention this paper when you write us we will include a copy of "How to Raise 90% of Your Chicks." Write us today. Dealers wanted to handle the Ideal Hover. NEW CARLISLE MFG. CO., New Carlisle, O., Successors The Duplex Incubator Co., Fremont City, O.



THE



POULTRY



JOURNAL FOR
EVERYONE
INTERESTED

KEEPER

IN MAKING
POULTRY
PAY

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No. 9.

DISEASE AND HEALTH AS RELATING TO POULTRY KEEPING.

Dr. N. W. Sanborn, Holden, Mass.

I WONDER why so few of us pay attention to meeting conditions that are liable to give ill health in the flock? Too often we lock the barn door after the horse is stolen. Having given over twenty years to the study of poultry and their diseases, I get a lot of letters relating to these matters. Men who have kept hens for five years, owning hundreds of them, do not recognize chicken pox when it breaks out in their flock and fail to realize that certain conditions will be followed by outbreaks of roup or catarrh. Weakened stock and diseased birds upset the best laid plans.

Feeds and Feeding.

There are many things to consider when we come to prepare our feeds and pass them out to the flock. The balanced ration, everything considered, is helpful in maintaining health. I do not mean by this that a certain formula according to the chemist will give certain results. I mean that the common, well balanced mash and scratch feed will do good when fed to our hens and chicks. Do not understand me as saying that cotton seed meal will be just as safe and good as linseed, or that it will take the place of beef and fish scrap. Seldom is it advisable to use cottonseed meal in our feeding of chicks or fowls. Cows will digest it up to a certain and fixed point, horses do well on it up to a certain point when they go suddenly and fatally bad while hogs are likely to suffer from its use. I would advise that no cotton seed meal be used in the poultry plant. Linseed meal is rich, well worth the price it sells for, and fits into the feeding of the molting season. Fed in large quantities to birds with full plumage it tends to cause the coming of a new molt and upset your plans for the getting of eggs.

The dry mash is less likely to cause digestive trouble than is the wet mash. That is, the stock will get rid of the more slowly eaten food than when taken in quickly. The dry food is mixed, more or less with the moisture of mouth and throat and is in better condition

to be digested. Since the common use of the dry mash I hear much less of "bowel troubles" and "diarrhoeas". It was an object lesson to me when a neighbor, twenty-two years ago, fed his Leghorns with three hoppers of dry food. When they wanted corn it was in that special box in the shed. When they craved beef scrap it was always within reach. When "filling" was needed the hopper of wheat bran was handy. With these three foods before them, with free range, they outlaid any flock within a mile. Today we have a better balanced ration, get more eggs, but that man was the envy of his neighbors. Those little Leghorns of his were just real egg machines, laying in December as well as in the month of August. We always knew that we could get eggs at his house if we needed a few to complete our orders.

Fowls maintain better health if given daily feeds of some live, green, vegetable food. All through the growing season you have such products as grass and clover, beets and cabbage, lettuce and weeds. Through the winter months you can draw on the bins of mangels, turnips and apples, or turn to the use of sprouted oats. In the absence of all these, I would urge the constant use of cut clover, alfalfa or hay of any sort. The last three foods are better than nothing but not equal to the live foods that I have given. In the autumn of the year, even in late summer, there may be surplus sweet corn that can be fed moderately. Through seven months of the year, the free range flock has a fine chance to select its green food. Our yarded pens need the variety that we can give them from garden and field. The green foods, or the dried grass and clover, also have the part of acting as "fillers" for the digestive system. Bulk is needed as well as suitable material to maintain life and provide a surplus for eggs. The hen on the range gets such a variety of food and so much green food, that she gets the full quantity needed to do her best work. The yarded hens, the shut-in

hens of winter, need to be given food that is bulky and yet not too nourishing. Bran, cut clover and corn fodder make good feeds for both these purposes. If you will feed these to your flock you need not fear having many cases of crop-bound next spring. It is the hens that do not get plenty of filling material in your plan of ration that fill up on the long dead grass when let out of the houses in March. Almost anything is better than nothing. Watch your layers and see how much of the litter they will consume if nothing better is furnished. Even dead leaves will be eaten by the shut-in layers this winter. It is better to give a filling that has a food value than to leave the stock to pick up whatever is within their reach.

Avoid commercial feeds and mashes that are padded with oat hulls. The hull of the oat is almost beyond hope of being digested, even when ground finely, and is one of the causes of impaction of the crop, the intestines and the gizzard.

I have seen hens that had been without food for a day, suddenly die when given a full feed of whole oats. One such cock that I opened was impacted with whole oats from the gizzard up to the crop. Let the feed of whole oats be either a small one, or else mix the oats with wheat or cracked corn.

Spices and Condiments.

Well-fed poultry need no more spice or condiments than you would use on your own food. Black pepper, ginger, salt, in small and moderate amounts are helpful. Beyond this point they do more harm than good. While a little is useful, too much is harmful. A mid-winter dry mash is improved by the addition of one teaspoonful of black pepper or ginger to the bushel of ground grain. One half pound salt is plenty for one hundred pounds of mash. If your pullets do not lay as they should in winter try the adding of a little more of beef scrap, oil meal

X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants its except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

or dried milk, instead of putting in heavy doses of spice or drugs.

Litter.

Litter is a help to health and a prevention of some of the diseases of poultry. Plenty of litter with moderate feeding, means more exercise and better health. The farmer's flock, in the old days, with the bare board floor, gave few eggs and many dead hens in March and April. They did not get the needed exercise, overate on corn and corn meal, became too fat and broke down early in the spring. The busy, hustling hen will take care of some surplus food if she has to work for her living. Litter of some sort is so easy to find that there is no excuse for its absence in your poultry house. Look into my pens to-day, and you will find a mixture of leaves, corn fodder, wheat straw and barn chaff. In this litter goes all the whole and cracked grain given the poultry. They cannot gobble it down but must take it with some degree of slowness. Fed in mid-afternoon they have time to get a full crop, have work to keep them from indigestion, and find stray grains to hunt for when off the roost the next morning. If to the hand feeding you add one of the self feeding grain hoppers you have constant exercise and yet plenty to eat. No hen need go to the roost hungry as the hopper can always be worked by the birds that are still in need of food. The last hen off the roost in the morning and the first to go on the roost at night is likely to be the poor layer as well as of doubtful health. The larger the hen the more likely she is to take on fat and become lazy unless she is obliged to work for part of her food.

Housing.

We are beginning to realize that a large part of the disease and illness of the past years was due to filthy conditions of the house. Not that it was caused entirely by the droppings, but also by impure air of the house. There are three ways to get catarrh into your flock. First, to get it from another bird that is infected. Second, from the breathing and re-breathing, of the breath of the hens on the roost. Thirdly, from over feeding of heating foods.

No one will doubt the truth of my first statement, as poultrymen for many years, long ago, accepted this according to their experiences. The second and third statements are still rejected by a few owners of hens but the number is less than it was five years ago. No matter whether true or not, you will want to give your stock as good air at night as by day, and feed your layers a moderate amount of a balanced ration.

The open front, the fresh air house, has cut down the number of the cases of roup and catarrh. This is a fact that few will care to deny. Those of us who have lived through the periods of close and open housing just know that we see less than ten per cent as many cases of roup, between the period of the eighties and the last ten years.

Some folks that have persisted in maintaining the shut-in roosting clos-

et, even in the open front house, still get their full number of swelled heads and closed nostrils in their young stock. More and more are these curtained front roosting spaces being run wide open, with decided improvement in health and profit in eggs.

Indigestion will often start what is thought to be head colds. The weather has been fine, the housing correct, no ill birds brought on the plant, yet colds break out. The careless feeder gets more autumn colds than the man who handles his stock along modern feeding lines.

Look at the report of the health of the five hundred layers at the Storrs Egg Contest the past twelve months. It has been fine along all diseases of head and throat. How did they handle their birds? Just this way. A six foot roost for every five layers. An open front house where each layer got over ten square feet of floor. A balanced ration that has worked out so well that it is to be used at both this same College and the North American Contest the coming twelve months. In starting off the new contest the first of last month every bird was given permanganate of potash in the drinking water. Why? To destroy catarrh germs that may be present in some of their stock as it came from the owners. It was thought best to take no chances, giving all the same chance to get and remain well. Whether increasing the number of hens from five to ten will add to the catarrh cases the coming year will be interesting. There is open front enough for the added number, there is floor space in abundance, but it is likely that an added roost will be needed for night space while at rest.

Quarantine.

You will have less illness if you will practice some system of quarantine. We are all likely to bring disease into the flock if we are careless in this matter. Returning birds from the shows are dangerous in as much as they may bring back disease from other stock at the show, or from infested coops and cages. There is some danger of disease in the buying of new stock. Unless the breeder is more careful than the average poultryman he may let birds come to you that are not right. No bird coming on your plant should be put with other stock until quarantined for twelve days, and even fourteen days is none too much to make sure that chicken pox is absent.

Every ill bird needs to be put apart from the others. At the first sign of disease, or as soon as you wonder if the hen is going to be ill, that member of your flock needs to get into the hospital. This may be wasted effort in some cases but it is well worth following in every case.

Too many flocks are not paying their cost, are proving failures because of lack of care on the part of the owner. It is up to you and me to do better work with our poultry in the future. Let us not be slow to adopt the modern teaching of the experiment stations, especially when they have

been proven correct by practical men of our acquaintance.

MY UPS AND DOWNS WITH INCUBATORS AND BROODERS.

About four years ago I made up my mind I would try the poultry raising game if for nothing more than pastime. I accordingly purchased 40 Baby chicks from a breeder. It was largely at his instigation that I undertook the venture. I had no regular brooder or broody hens to confide the chicks to so I hastily constructed a brooder, viz: took a box about 14 in. wide by about 36 long, 14 in. deep. Near one end of this box I cut a circular hole 8 in. in diameter. Over the opening I placed a 3 gallon can filled with water. I set the box up on props about 12 in. from the floor in an upstairs room, placed a lamp under box so the heat from the flames would be directly under the bottom of the can, tacked a piece of blanket across the end of box near can, slit the bottom of it so the chicks could pass in and out over the top I laid a storm sash. I secured a bulletin from the United States Department of Agriculture and outside of losing about half the chicks I got along very nicely.

However, in June of the same year I borrowed a 120 egg incubator from a friend. I ordered 90 eggs from a breeder and placed them in the machine. I secured one chick which died right after pipping the shell. I immediately wrote the breeder and asked him to refund the money as his eggs were in my estimation no good. However I guess I wrote him too quickly, anyhow he figured out that I did not let the eggs stand on end long enough to settle before placing in the machine. However, the next season he sent me free another batch of eggs from which by handling them right I secured a good hatch.

By this time my friends were beginning to say uncomplimentary things to me about my ability as an incubator operator. I had only about one-fourth acre of ground to practice on and I was just about ready to give up my bunch of young chicks which I bought seemed to be all wings. They had great long feathers which reached the ground, I learned later it was because of lack of exercise. I should have made them dig their feet out of litter or let them have free range. However, that same year about July 10th I purchased a small incubator second hand. I decided to try one of them the same season and set 50 eggs securing 46 chicks of which I raised 44 to maturity. The little experience I had thus gained enabled me to substantially improve my hatching and brooding. I made my own brooders that season but I found this year that patented brooders or hovers are by far the best.

After that things went along nicely. The past year I netted \$3.00 a piece on hens and pullets kept over. I had a few setbacks the next spring on securing fertile eggs. I laid 40 to the pullets, but now I find that pullets eggs hatch equally as well as old

hens. It was the feed. I have been able to secure good success by feeding the layers of hatching eggs the following rations: grain, 2 parts oats; 1 part wheat; ½ part cracked corn scattered in the litter. Dry mash in the hopper is made up of 1 part bran; 1 part middlings; 1 part alfalfa meal; ½ part gluten: 1-4 part of oil meal; 1-4 part powdered charcoal and about 1-5 of the whole beef scraps. I also supply green food.

Now in relation to handling incubators, storing or rather keeping the hatching eggs, etc. Most every incubator manufacturer covers this point thoroughly in his instructions and I find it pays to follow them closely. However, I find one point which I think very important that as far as I can reason and that is setting the heat at the beginning of a hatch.

The usual instructions tell us to have the damper open at 100 to 101 degrees before putting in the eggs. They never mention a word about the lamp. I always try out my machine before putting in the eggs with as low a flame as possible, one that will keep the inside temperature about 100 to 101 without disturbing the damper. Of course I first see that the damper opens at a little over 101 if needs be. It is an assured fact if we put the eggs in a machine with the damper balancing on 101 to 102 or just a little open at the time of putting in the eggs it will close as soon as the eggs are put in and will stay closed until the eggs are warmed up to 101 or 102 or whatever temperature the damper opens at, nevertheless, if the lamp is turned up fairly high it may heat up

the pipes to a point where they will leave off a heat of 110 degrees or greater, the thermostat is powerless to act because the eggs have not warmed up as yet consequently are receiving a heat of 110 degrees or whatever it happens to be which warms them up too quickly. An old hen does not leave off more heat than 102 to 103 degrees on the eggs at any time regardless of their temperature. This fact I think should be watched very closely as it is at a time when eggs should not be exposed to extremes of heat.

Outside of this, I cannot add much to the volume of valuable printed instructions sent out with machines. However, read them and follow them closely and use good common sense and reason and the results will be satisfactory.

Wisconsin.

W. P. Walsh.

THE SANITARY POULTRY YARDS.

Poultry raising has advanced to the state where it must meet the problem of every great industry.

In the old days when all the chickens were raised in the farmyard and had the run of practically the entire farm, death among the flock was a rare thing. But with our modern, driving, American way of doing things we cannot afford to let the flock run. We no longer let the hen hide her nest and spend most of her energy developing leg muscles. We want eggs, and fat heavy birds for the market.

All of this had led to concentration of the whole business of poultry culture. On a fifty foot lot we now raise more and more profitable poultry than our forefathers raised on a hundred acre farm. And just as the growth of the

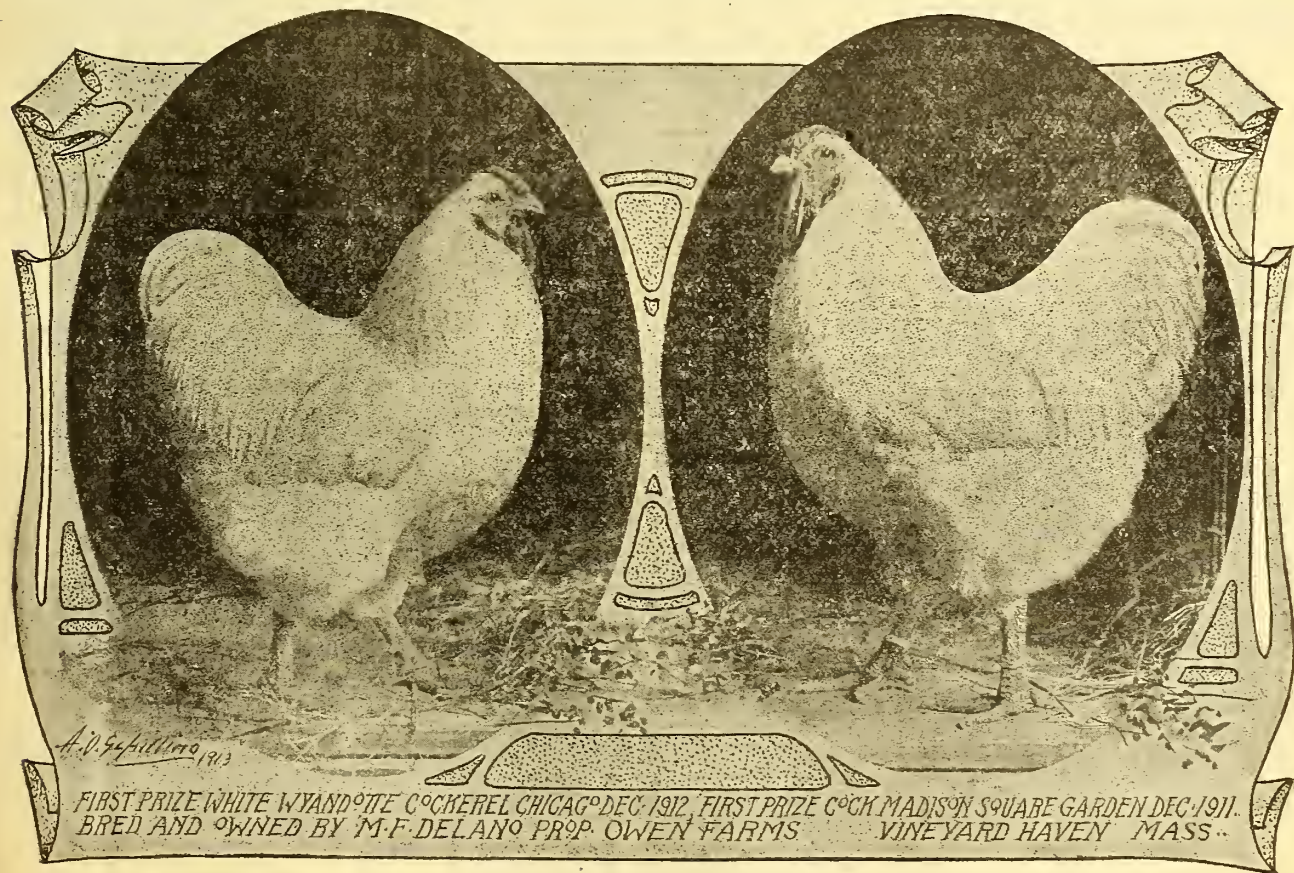
modern city has raised up the problem of sanitation among humans, the whole world of poultrymen is now interested in the sanitary poultry yard. Poultry must be kept sanitary if it is to make profits. To further this end and to carry it out to the last degree, the Kentucky Stamping Company in Louisville, Kentucky, has put on the market a line of specially made poultry ware called Kentuco."

The articles of the "Kentuco" line are especially sanitary because are first shaped, formed and finished before galvanizing. They are made strong and sturdy and the heavy coat of galvanizing put on after making, closes up every little crack, making the drinking fountain, or whatever the particular piece of ware may be, exceptionally strong and easy to clean and keep clean.

"Kentuco" line has met with the most hearty reception in the hands of poultrymen who are after top notch poultry profits. They find that it proves the idea that health in the poultry yard welcomes wealth in their bank book. Even if a bird may not be lost by death, it may not prove to be a profit maker if its health is impaired by contaminated food.

If you are raising chickens to make money, it will pay you to get some of the literature on "Kentuco" ware. It is pleasing to note that this extraordinarily built poultry ware costs no more than the articles in other lines intended for the same purpose.

Therefore, it behooves you to get in touch with the Kentucky Stamping Co., 110 N. 15th St., Louisville, Ky., if you want to get the most for your money.



\$2.53 PER YEAR PROFIT FOR EACH HEN.

I started last November 26 with 8 hens. February 26 I bought four pullets and 1 cockerel. September 25 I bought one hen. October 16 I sold all on account of moving some distance. The hens averaged 9 3-4 hens for the 10 2-3 months and averaged 152 eggs each for the time. While this is not high, it is good. They were all pure S. C. W. Leghorns.

I gathered 1482 eggs that sold in the local markets for 30c until May, and 28c the rest of the time, making a total for eggs, \$36.00. Feed cost \$11.38 leaving a net profit of \$24.62; or an average net profit per hen of \$2.53, and they fed the cockerel also for 7 2-3 months. I did not figure the price of the poultry, for I had all stock on hand with no fatalities, showing just what the egg record was where all feeds are bought on the retail markets, and selling on the same markets.

I kept the poultry in an open-front house, 6x12, and allowed the run of a park 10x12 covered with 2 inch mesh wire; had lawn clippings every day in summer and sprouted oats every day in winter. A dry mash was before them all the time consisting of 50 lbs. bran, 25 lbs. middlings, 25 lbs. corn meal, 3 lbs. salt, fed in a self feeder. I usually use a good grade of beef scrap, but did not have it on hand, so used the blood meal instead.

There are two things that must absolutely be kept down if a profit is to be realized and they are lice and feed bills. I keep the droppings boards clean, dust the perches with some good insect powder once a week in the summer and once a month in the winter, also put Black Flag or some other insect powder in the nests twice a week in the summer early in the morning so the fumes will be utilized at once by the hens; besides all this, I dust the hens twice in the summer, it is a job, but \$2.53 net profit a hen pays. My way is not the only way; but I give it as a way that brings the high net profits, hoping it may be of benefit to someone. Ready mixed feeds are excellent; but I put the ingredients where the hens can do their own mixing and save the high cost of the experts.

Most men say to feed sprouted oats two or three times a week; but I feed it liberally every day in the winter, (and summer too if I do not have free range or other substitutes) and find no ill results after I have gradually worked them up to it. I have kept as high as 250 Leghorns running at large on 2½ acres and fed them this way, and they never went over a four foot picket fence, so I take it for granted that the feed is just about satisfying or they would hunt for the parts lacking. Clean, bright straw is kept on the floors all the time to scratch in, and the grain is always put in it.

I always put out the morning grain feed in the straw at night after all have gone to roost, so they can go to work as soon as they get up and not have to wait on me, I think this is important.

In the spring I will start in again on a large scale, so I may be heard from later on. I have never cleared less than \$1.25 per head.

J. W. Bond.

West Virginia.

We have a special offer of "Poultry Keeper" for three years to any address in the United States, upon receipt of One Dollar, or we will send the paper for one year to three separate addresses. Either of these offers means one subscription free of charge. In sending in your own subscription, by making a little effort right in your own neighborhood, you can get two others to send in their subscriptions with you and get all three subscriptions for one dollar. This will be a material assistance to us and will be appreciated.

We hope that our interested readers will follow suit to Mr. Miller and investigate this new grain sprouter by writing to the Des Moines Incubator Co., 565 Third St., Des Moines, Ia., for their descriptive matter.

QUESTIONS and ANSWERS

AILING DUCK.

I have an Indian Runner duck that has been weak for the last few days, and will not eat. I have fine quarters for them with clean, fresh straw and they get good feed and fresh water. The others are all looking fine. This one has a frothed eye. Can the trouble be roup?

E. A. K.,

Missouri.

Ducks very seldom have roup. It is probably a cold in the head. It might be well to isolate the bird. Rub a little vaseline around the eye and into the nostrils and give a pepper pill twice a day. Take about as much cayenne pepper as will hold on the point of a penknife blade and mix it with soft bread or dough to make a pill.

SWOLLEN FOOT.

I have a turkey whose foot has been swelled to four or five times its natural size for about three months. I cut into it once but found no pus. Can you tell me what the ailment is and the treatment for same?

Mrs. W. C.

Ohio.

If the foot is hot and inflamed you can probably reduce the swelling with hot mustard water, but if the enlargement has become chronic and is hard there is no help for it. That is, it would cost more than the turkey is worth. After reducing the swelling, wipe dry and apply a liniment made by dissolving one-fourth pound saltpeter in a quart of strong vinegar. Apply this two or three times a day until cured. The enlargement probably came from an injury.

ROUP IN TURKEYS.

Please tell me whether or not there is any cure for roup or swelled head in turkeys.

E. G. S.

Washington.

Roup rarely affects turkeys that are not housed, pampered or over-fed. In some cases, housed, pampered, or over-fed. In some cases the confinement necessary to properly doctor roup will spoil a turkey, so the best plan is to kill and bury the first case. Immediate isolation should be enforced as soon as the disease, or any other disease attacks a flock of turkeys. The advertised roup remedies may be valuable. The following will be found a good treatment for all stages when used in connection with the nutritious soft feed: Sulphate of copper, quarter grain; Cayenne pepper, one grain; copalaba, three drops; Venetian turpentine, quarter section. In pill night and morning. Dissolve an ounce of sulphate of copper in two quarts rain water and wash out mouth and nostrils if required.

INCUBATING AND FEEDS.

1. Will the scent of tarred paper in an incubator room, injure a hatch?
2. Are barley, buckwheat and Kaffir Corn very essential in the grain ration for layers, other than furnishing a variety?
3. For what purpose are cotton seed meal, linseed meal, blood meal, oil meal and glutin meal fed to hens? What place do they fill in the ration, and is it important to feed them where meat scraps and bone meal are fed? What is the composition of oil meal and gluten meal.
4. What is a good grain ration and mash ration for breeders, as they should not be forced for eggs?

Subscriber.

1. No.
2. Not if there is a sufficient variety without them. We change our grain ration to meet the market, using such grains as are most easily obtained and cheapest when comparing their nutritive value. Buckwheat is: Ash, 5.6; protein, 35.9; fiber, 8.8; nitrogen costs as much as corn it is not economical and this is the case with Kaffir corn. Barley should be cheaper than corn to be economical.
3. To increase the protein content of the ration. They are concentrated and highly nitrogenous. Protein is a group of all the substances which contain nitrogen and consequently it is that portion of the feed

which builds up the broken tissues of the body and promotes growth. Laying is a growth of the hen's body and to perform this function she must have the proper food nutrients. The composition of oil meal is: Ash, 5.6; protein, 35.9; fiber, 8.8; nitrogen-free extract, 36.8; fat, 3 per cent. Gluten varies widely with the different brands but we are protected in buying as the guaranteed analysis is on every bag. The Buffalo gluten feed which is the most commonly used, carries about 23 per cent protein and 3 per cent fat. Some gluten meals carry as high as 34 per cent protein, but these are more expensive than gluten feed. It is not necessary to use any of these feeds if you can balance your ration without them, but it is usually more economical to do so.

4. A good scratch grain for winter feeding can be made by mixing four parts of cracked corn, three parts cracked wheat, one part oats. If you wish to use buckwheat or Kaffir corn reduce the corn one part and add one part of either of these grains. This is by weight. After March 1 reduce the quantity of corn making the wheat and corn equal. A good mash mixture, which can be fed either moist or dry, is made by mixing in the proportion of 100 lbs. bran, 100 lbs. white middlings, 100 lbs. corn meal, 100 lbs. gluten feed, 50 lbs. beef scrap, 25 lbs. bone meal. If you prefer you can use 100 lbs. ground oats in place of the gluten, in which case you should increase the beef scrap to 75 lbs. or you can add 100 lbs. ground oats to the mash as given and increase the beef scrap to 100 lbs. If whole oats cost 50 cents per bushel we should not use them in the scratch feed or mash.

ROUP.

What will cure chickens with eyes swelling and pus forming. I lose all my chickens, although I keep their quarters clean. Is it in the blood and can I get rid of it without disposing of all my stock?

Mrs. S. H. H...

Texas.

THE JOHNSON HEN FEVER IS CATCHING.

Following is in Answer to a Query About Them By a Man Just Back From a Personal Visit.

I am always full of enthusiasm over the possibilities of poultry. Naturally, I run into case after case of where poultry has been the main story of a small place and for that matter some big places too, but my enthusiasm is at boiling point just now. The reason is that I have been to Clay Center, Nebraska, lately, to see our old friends, the Johnsons, makers of the Old Trusty Incubators.

You can't get with the Johnsons, you can't see the Old Trusty factory you can't use the incubator or get a whiff of the kind of poultry raising spirit that centers around that place without collecting more enthusiasm than you can hold. Mine has reached the boiling point and I want to talk to my readers a little along those lines.

Take for instance, the average American farm home with the ordinary run of live stock, well kept building, and every acre of land possible giving all that could be expected in yield per acre. How could profits on such a farm be given a jump easier than with a few hundred chickens?

You do not have to give up anything else. No part of the farm work need be slighted. The chickens go right along and make profits that you just add to the profits you ordinarily expect from the farm.

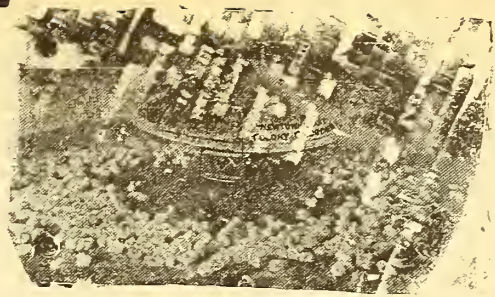
Many people have been able to do big things with chicken profits. Chickens have kept many a boy and girl in college. It was with the help of chickens that many a farm mortgage was lifted. And to think of how easily one can get this profitable end of the farm business started. "If you are in need of a little more income, put it up to the chickens to make it for you," says Johnson. And Johnson shows you how they can do it. He doesn't carry you away with extravagant statements. He has no claim about your making a fortune. He says make the chickens an active end of the farm business, not necessarily the whole of it.

On the way in from Clay Center, I read the Johnson book. I believe that anyone can learn more about poultry in one hour with that book than many poultry keepers discover in a life time.

Primarily, the interests of the John-

Coal-Burning Self-Regulating

Colony Houses are perfectly safe from fire with the Newtown Colony Brooder. 8 cents a day buys sufficient coal for brooding 1,000 to 1,500 chicks in cold weather.



Newtown Giant Colony Brooder

(Ask your dealer about it)

Fill coal magazine once in 48 hours in the severest weather. In mild weather it requires less frequent attention. Rake ashes once in 24 hours.

Heat automatically regulated by thermostat. Temperature always right. Built in two sizes to accommodate 300 to 1,500 chicks. Heat Deflector need not be raised to coal and shake the fire nor to remove ashes.

Ask your dealer to show you this economical, coal-burning, self-regulating Colony Brooder. or write direct for Colony Brooder Catalog, p. 8.

NEWTOWN GIANT INCUBATOR CORPORATION

New Address, Harrisonburg Virginia.

sons, surround the sale of the Old Trusty incubators and brooders, but their sales could never have reached the half million mark if they did not have that deep seated interest in the man and woman, anywhere, with a flock of chickens.

Make a success of the beginner is the Johnson idea. The thing that made the strongest impression on my mind was seeing the duplicate copies of letter after letter exchanged with the same parties, explaining some points on what birds to favor, how to keep the cost down, how to market at the best profit, etc.

M. M. Johnson, the inventor of the Old Trusty, may not have been the first to build an incubator, but he was the pioneer in making the incubator popular and practical on the farm. He proved that a man or woman can make money with chickens without a lot of fluddubs or spending a wad of money in accessories.

You see the Johnsons have raised chickens themselves all their lives and are doing it today. They know the practical side of chicken raising. And even though your incubator factory is undoubtedly the largest in the world, they never lose touch with the conditions that you may or may not meet with chickens. It makes no difference whether you go in for chicken raising on an extensive scale or just as a small part of your farming, the Johnsons are right at your elbow all the way with helpful suggestions.

You have the benefits of a lifetime's experience without spending a lifetime to get it. Neither do you spend money for it, for the Johnsons charge nothing for their advice or suggestions.

Possibilities with chickens are wonderful. There are poultry fanciers in great number. They are making money. They have a sound business. It's permanent.

But it's the farmer in general—the

crop grower, the producer of beef and dairy products that I am talking to.

Let chickens be a side-line if you please, but get more of them working for you. Suppose you now clear \$2,000 from crops, cattle, sheep, etc., let chickens make it \$3,000.

Get the Johnson idea working on your farm. Start a hatcher a going and let it help the general farm profits climb.

You don't need any preparation. Don't think that you have to wait until you can give it time. You could get enough fertile eggs tomorrow morning to fill a hundred egg hatcher. Look at it occasionally. You will never miss the time.

I believe that the thought has already come to you that fresh eggs are worth anywhere from 30c to 45c or 50c a dozen. They cost in the neighborhood of 1c apiece to produce.

But it isn't the eggs alone that make the profits. Suppose that you forget about the eggs. Start a hatch and in ten to twelve weeks you have meat for market. Suppose you let the chickens run loose all over the farm and make a clean up once or twice a year. Don't worry about their developing to be a good healthy bird. When the birds can roam all over the farm, eat and drink in a new place every day, it is mighty seldom that they have trouble. It is only when they are confined in a small yard, or basement that you want to look after their fountains, feeding troughs, hoppers and supply grit boxes, etc.

My tip to you is to get more chickens. No one is going to make you do it. Indeed, no one would make you dig gold, even if it was under your feet. The profits are there if you want them, and you can make them run as high as you please.

Even if you can not get any other member of the family interested, start on your own initiative. If you don't some one else may beat you to it. In



this I am reminded of a story of the farmer who was given some apple trees to plant. He said he was too busy and that nowadays people didn't wait for trees to grow up. Someone then asked his father. He said that life was fleeting, future generations would not appreciate them. Finally someone asked grandfather. He, of course, had nothing else to do, so he planted the trees. Grandfather lived to drink many barrels of cider from the apples that grew on those trees.

QUESTIONS AND ANSWERS.

Continued from page 294.

This is probably roup. Try some of the advertised roup remedies or use the treatment given under the read "Roup in Turkeys," in this department. Separate the sick birds as they infect the others. You can probably get rid of the disease but we should not use cured birds for breeding.

STALE BREAD FOR FEED.

Is stale bread good to feed to hens? If so, what is the best way to feed it?

J. M.

Indiana.

Stale bread will answer as a portion of the feed for hens, but it must have something more nutritious to go with it. In a soft mash is probably the best way to feed it. Make the body of the mash out of the soaked bread and add some corn meal,

beef scrap, etc., feed once a day and hard grain at the other feed.

YOU TELL.

I breed S. C. White Orpingtons, also Fawn and White Indian Runners. I have a large lot, a fraction over a half acre. About six weeks ago, I had it broken and put in rye and oats which will give my chickens and ducks plenty of green food. Now I would like to ask if you, or anyone, thinks it would be advisable to winter my ducks. I have gotten them through the molt and they are laying and I want to keep them laying if possible. There is no hen hatched that will come up to these ducks in laying. I use mill feed (bran and shorts.) I feed 13 ducks and 20 chickens and give them the same amount three times a day. I take about six or eight pints and to that add two handful of oyster shell and one of oil meal, also salt to season it. At times I add a pinch of baking soda and believe that cream of tartar is one of the finest things to keep poultry in good condition. Sulphur is no good for a fowl unless it has the roup. Only a small amount should be used, for if you use too much and the fowl happens to get wet, it is done for good.

J. W. S.

North Carolina

Of course, if you expect to raise ducks another year it will pay you to winter them, even if you do not get any eggs, but if the ducks are laying they will probably continue if well cared for. They will then be profitable if you can find a market for duck eggs. Duck eggs are in most demand

about Easter and in some sections can be sold to bakers at a good price at any season, and especially during the winter. In hot weather they deteriorate much faster than hens' eggs.

METHOD OF FEEDING.

I wish you would please answer if my method of housing and feeding my hens is correct or if you can suggest anything else which will benefit my flock. I have about 24 hens and the same number of pullets housed in an open-front house which is raised about two feet above the ground. The space is now all closed up for the winter except one side which is left open. I keep plenty of straw on the wooden floor for scratching and find all my birds busy excepting a few of the hens which are molting badly and which mope around eating very little. I am breeding S. C. Black Minorcas and my stock was bought from a breeder who has thoroughbred stock and good layers. I feed in the morning about two parts cracked corn, one part wheat and one part oats. Of this mixture I feed about four quarts, well raked into the litter. I have before my hens all the time, in hoppers, a mash consisting of 100 lbs. bran, 100 lbs. shorts, 100 lbs. corn meal, 100 lbs. alfalfa, 50 lbs. beef scraps and one lb salt. Grit oyster shell and charcoal are constantly kept before them, also plenty of fresh water. At noon, I feed sprouted oats and in the evening I feed the same grain mixture, a little more than they will clean up. About three times a week I feed them at noon, ground green bone, all they will eat. My hens are not

Continued on page 334.



"Twas a fortunate day for White Wyandottes when John S. Martin of Port Dover, Ont., began breeding them exclusively. Mr. Martin has always maintained that the White Wyandotte was the most valuable of all Standard varieties as a general purpose fowl, one that would prove a satisfactory table fowl and egg producer. He has declared himself in favor of the 1915 Standard description that calls for a longer body for Wyandottes. He has always bred this type and was not carried away when the short, round, snow-bill type was the race and fashion several years ago. J. H. Drevenstedt, the noted authority, in describing Wyandottes has stated "The outline of the hock must always show in the true Wyandotte." The reader's attention is called to the point in the above illustration of two of Mr. Martin's prize winners at the 1913 Boston Show. During Boston Show week Mr. Martin was "wreathed with smiles" and he had good reason to be. In one of the largest classes of White Wyandottes ever shown in America, his entries won 1st and 6th in a class of 25 cocks; 1st, 4th and 5th in a class of 25 hens; 1st, 3rd and 4th in a class of 51 cockerels; 1st, 3rd and 4th in a class of 50 pullets; 2nd, 3rd and 4th in a class of 13 pens. Arthur Duston, Judge.— Wm. C. Denny.

ALL RECORDS BROKEN IN THE SECOND EGG LAYING COMPETITION.

White Leghorn's Mark of 282 Eggs in a Year the Best Yet—Scores of Good Birds—Seventy Entered in the Contest Laid from 200 to 267.

Four pens laid over 1000 eggs per pen of five birds; twelve pens laid over 900 eggs, thirty-four pens laid over 800 eggs, as against twenty-six last year, 2685 more eggs were laid in the second than in the first year; seventy individuals laid over 200 each, twenty more than last year and an increase of 2 2-10 eggs average per individual entered in the second event over the first competition held under the auspices of the North American at Storrs agricultural experiment station, Connecticut Agricultural College, Storrs, Conn.

The record individual yield in the first event was made by a Rhode Island Red pullet from Kentucky, this pullet laying 254 eggs between November 1, 1911 and October 31, 1912; the world's record established in the second competition, was made by a Single Comb White Leghorn pullet between corresponding dates and reached the enormous total of 282 eggs.

In the case of the layers in the North American competitions the dates for recording a year's performance are arbitrarily set between November 1 and October 31 the year following, hence, if a layer started before November 1 she is not credited with eggs

produced before that date, nor is she credited with eggs laid after October 31.

Many of the individuals do not, of course, start in on the opening day, and quite a few after the closing date; therefore, the public, and especially breeders, should take into consideration the date when laying starts and its arbitrary ending on a fixed date.

Contrary to these arbitrary periods, some records have gone forth based on the lay for 365 days, rating the year from date of first egg, say, November 28, and continuing the record up to and including November 27 of the year following. Such a method could not be followed in egg laying competitions where more than one layer is employed for obvious reasons.

November 1 is about the time pullets should begin to lay marketable eggs; a few small eggs laid in October usually precede market egg production, therefore, egg laying competitions should begin on the dates fixed and followed in these competitions.

All the more credit is due the breeder who can and does produce pullets that lay well beginning November 1, and that continue to produce well up to that date on the following year, when the molt should be in the full.

So timing the hatching, rearing and maturity that on a fixed date a pullet lays almost to the hour, is skill and the high art of poultry culture for profit; producing a layer that begins on time and finishes on a date set, without molting, displays a knowledge of animal production out of the ord-

Individual Records.

Pen	No.
2 A. B. Hall, Plymouth Rocks	4 215
3 Woodside P. F., Ply. Rocks	3 206
10 Edgwood P. Farm, W. Ply Rocks	3 211
11 E. S. Hoopes, B Wyandottes	3 212
12 J. M. Jones, Co. L. R. Rocks	1 207
	2 206
15 Will Barron, W. Wyandottes	1 206
16 Edward Cam, W. Wyandottes	2 206
	3 246
	5 214
18 Beulah Farm, W. Wyandottes	2 238
19 T. J. McConnell, W. Wyandottes	1 247
20 E. H. Pohle, W. Wyandottes	2 204
23 Mrs. H. F. Haynes, W. Wyans	1 200
	5 219
25 W. E. Ross, W. Wyandottes	1 217
	3 224
29 G. P. Dearborn, R. I. Reds	3 203
32 Arthur Bailey, R. I. Reds	5 202
35 Colonial Farms, R. I. Reds	4 245
	5 248
44 Braeside P. Farm, W. Leghorns	1 219
	2 204
45 W. P. Canby, W. Leghorns	2 212
	4 202
46 Eglantine Farms, W. Leghorns	5 201
49 Ingleside Farms, Leghorns	3 221
	5 219
50 Ingleside Farms, Leghorns	2 225
	5 200
52 Jas. and G. Goodman, W. Leg	1 210
55 W. Leg. P. Yards, W. Leghorns	5 202
58 LeRoy E. Sands, W. Leghorns	1 221
61 Burton E. Moore, W. Leghorns	3 207
	5 211
62 O. E. Meyer, W. Leghorns	2 209
66 F. M. Peasley, W. Leghorns	1 210
69 W. L. Sleeper, W. Leghorns	1 214
	3 205
	5 223
70 Smith Bros., W. Leghorns	1 235
	2 201
72 Ballock & Burrows W. Leghorns	3 219
74 Marwood P. Farm, W. Leghorns	4 202
	5 215
75 R. A. Marsdon, W. Leghorns	2 204
	5 211
76 Frank Houlmin, W. Leghorns	1 212
77 Tom Barron, W. Leghorns	1 220
	2 222



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Barred Rock—White Rock**



PITTSFIELD

Day-Old Chicks

For stamina, reaching maturity safely and being of sure profit to the owners, there is no strain of Barred and White Rock Day-Old Chicks in the whole of the United States equal to the Pittsfield strain.

Pittsfield chicks are pure bred—they have the blood—they come from worthy sires and hens that have a remarkable record for heavy egg production. Their livability is truly extraordinary.

The idea back of this Pittsfield business—the largest poultry concern in the world—is to produce utility birds that will make money for those who buy them.

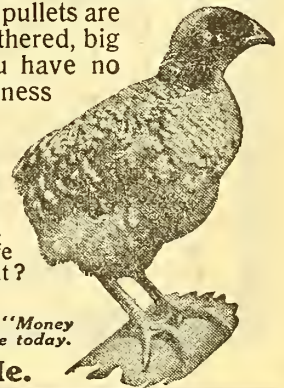
Because our capacity per year is *one million Day-Old Chicks* we can produce cheaper than any other poultry farm. Write now and prove the truth of this statement. It's none too early to order now—first come, first served—by ordering now you'll be sure of getting the desired number of chicks when you want them.

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Suitable alike for the beginner or the experienced poultry raiser who hasn't the facilities and time to raise his own chicks. We make a specialty of Eight-Weeks-Old Chicks. These pullets are firmly on their feet, well feathered, big framed and vigorous. You have no losses through rats, leg weakness and other causes.

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Don't fail to send for our new book, "Money Making Poultry." It's free—write today.

PITTSFIELD POULTRY FARM CO., 410 Main St., Pittsfield, Me.

	2	210
	4	282
	5	206
78 Ed. Cam, W. Leghorns	1	213
	2	256
	3	240
	3	240
	5	235
79 O. A. Foster, W. Leghorns	3	211
	5	253
81 Blue M. P. Farms, White Leg.....	5	201
82 F. A. Jones, W. Leghorns	2	207
	5	209
83 F. A. Keppel, W. Leghorns	3	215
83 J. J. Barclay, W. Leghorns	5	214
86 Chestnut Hill P. Farm	3	215
88 George H. Schmitz, B. Leghorns..	3	211
92 Mt. Orchard P. F., B. Orpingtons..	3	220
97 Rockwell & Co., W. Orpingtons..	2	208

79 Did 200 or Better.

Seventy layers produced over 200 eggs each is an increase of 40 per cent over the number of layers producing 200 eggs in the first year. When fifty pens showed individuals scoring 200 or more.

Such an increase in heavy yielding flocks is conclusive evidence of better breeding for egg production in all breeds and varieties represented in these competitions, an average of about twenty one of those included in the American Standard of Perfection. —Philadelphia North American Nov. 9, 1913.

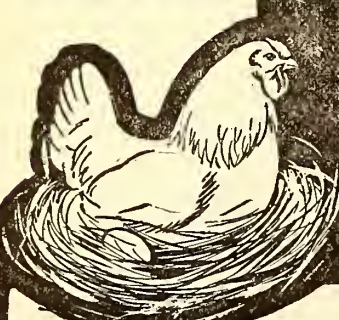
On page 326 of this issue of Poultry Keeper, Mr. Maurice F. Delano, owner of the Owen Farms, 127 William St., Vineyard Haven, Mass., announces a special sale of breeders in trio and pen lots. These prices include all of Mr. Delano's varieties; Buff Orpingtons, White Orpingtons, White Rocks, White Wyandottes and S. C. Reds. These are the big varieties so popular in all of the leading shows and the Owen Farms have been headquarters for strictly

first class show stock for many years past. Mr. Delano's new catalog is just off the press and the pictures shown in it of some of his fine birds will make any one anxious to have some of this quality stock. Readers of the Poultry Keeper are urged to write Mr. Delano for a copy of his catalogue and those needing stock will not make a mistake if they take advantage of this special offer on breeding birds. All birds are guaranteed to be strictly satisfactory or money refunded.

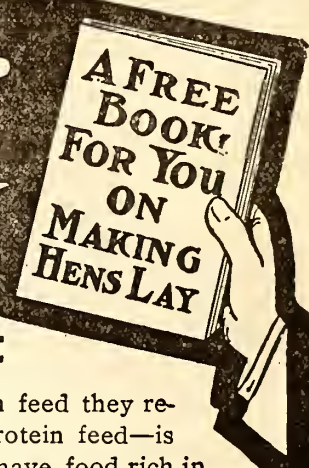
"Success With Poultry" is worth more than all other poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount(\$1.00) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

CAUTION

Any Bone Cutter claiming to be Mann's without F. W. Mann Co. cast on its surface, is an imitation. If made in Milford, Mass., it is Genuine.



Make Your Hens Lay



When Eggs Are Worth Most

HENS relish juicy bugs and worms because these supply the protein feed they require to make eggs. The craving for meat and bone food—protein feed—is simply nature working out the egg-laying proclivity. Hens must have food rich in protein or egg-making elements, or it will be impossible for them to lay.

Our little book tells you all about the how and why of this. It makes you master of egg-getting. It's a book that opens up to you the real possibilities with poultry.

It's simply a matter of knowing what food to supply and how to prepare it. It is now established beyond all doubt that raw, green bone, with adhering meat and gristle, cut fine, is the ideal egg-producing food. Its cost is a mere trifle and its preparation is easy with a

Mann's Latest Model Bone Cutter

Sold On 10 Days' Free Trial—No Money Down

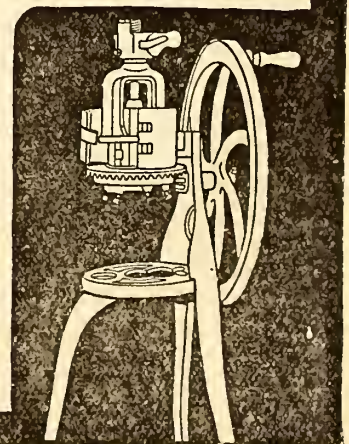
It turns easily and rapidly, cutting green bone, with adhering meat and gristle, wasting nothing.

Its self-governing feed automatically adapts the cutting to your strength, so that anyone can use it.

Its open, hinged cylinder is easily cleaned, and it takes in large bones. It is strong, durable, and requires few repairs. We want you to try one.

We will send you a Mann's Latest Model Bone Cutter on **10 Days' Free Trial**—no money down. If satisfied after the trial, buy it. If not, return it at our expense.

You want our good books, at any rate, send for them. We'll forward by return mail.



F. W. Mann Co., Box 57, Milford, Mass.

WINTER EGGS.

Cheap wintering of fowls generally means a poor egg-record, and yet of all seasons of the year, winter is the time we need the eggs most. Experience differs widely in keeping good layers in winter, and it may be that local conditions are often responsible for losses or great gains. However, after a varied experience I ascertained for my own satisfaction that any one of the half dozen best breeds will give excellent results if properly cared for and given the right food and surroundings. Instead of coddling the fowls in the winter and giving them a resting period, I found it was far more profitable to force them straight through the winter.

With a flock of fifty fowls I obtained the following record one winter: October, 750 eggs; November, 701 eggs; December, 650; January, 501; February 410; March, 521; making a total of six months of 3,533 eggs, or nearly 300 dozen, which at 40 cent per dozen, would have returned gross receipts of about \$120. This record I considered very high. One winter, when I tried to carry the fowls over as cheaply as possible, I secured less than 1200 eggs in the six months. The difference in the cost of keeping them amounted to less than 20 per cent. Therefore, I have learned to force the winter layers, and if young pullets are ready for laying in the fall I make them give a good account of themselves.

For winter use a flock of fifty is large enough. More than that I found caused crowding, and invariably induced disease, accidents or other troubles. I was fortunate in being able to winter them in a sheltered barn cellar. This place was clean and warm, and an equable temperature could be kept in the coldest weather. The barn cellar was lighted on four sides by double windows, and the sun streamed through on pleasant days, so that the fowls could bask in its rays without going outside. They had the freedom of the orchard and yard when the weather was fit, but they always returned to the barn cellar at night. The cellar itself was large enough to give them space for exercising. This is an important factor in wintering layers, for without exercise it is impossible to secure a good egg record. The fault with the average conventional chicken house is that it makes a good roosting place at night, but a poor playground for the day. We have so many days in winter when it is too cold and stormy for the chickens to go outside to exercise that we can hardly expect great things from them unless they are provided with an indoor playground. After all, they are very much like human beings, and when too closely confined they grow weak and languid, and nature does not perform her functions satisfactorily. The sheltered barn cellar is therefore an ideal place for housing the fowls in winter. They enjoy the freedom of the run, and on the darkest, coldest days they will indicate their contentment by their cackling. I had a dust box 4x4 ft. in the barn cellar and to provide against contingen-

cies I laid in several barrels of clean dirt in the fall for changing the box occasionally. The laying hens enjoy a dust bath in winter more than anything else, and hardly an hour of the day passed that at least one or more would not wallow in the box. Such a bath cleans and refreshes the chickens and at the same time furnishes them with a little exercise.

I had thirty nests arranged on the south side of the cellar where the fowls would find it pleasant and comfortable. On the north side it was a trifle too cold on windy days, and I found the fowls always chose the nests with a southerly exposure. It is quite essential that we should give them comfortable surroundings. There were ten different grain-feed dishes, so that crowding at meal time would be reduced to a minimum. Clean water was provided at all times, and scrupulous care was exercised to keep both the feeding boxes and the watering pails clean and sanitary.

The feed was composed of five different kinds of grain mixed together to give variety, together with green bone, scrap meat, and all the odds and ends from the house. All the sour milk left over was carried to the barn cellar in a clean pail for the chickens. They nearly always devoured it greedily and seemed to ask for more. On a few of the very coldest days we feed them warm mash, but that was an exception. They were fed liberally with egg-producing feed from the first to the last. We did not resort to the patent foods, but depended upon nature's methods, and sought to add variety as far as possible. Clover hay chopped, heated and mixed with warm mash, proved a dainty diet for them. Straw spread on the floor, with some whole grain mixed with it, proved of value occasionally, for they appeared to enjoy scratching in the straw for the dinner.

I tried to average between four and five ounces of grain of all kinds, whole or ground, for each hen, dividing the ration into morning and evening feedings, with whole grain in the morning and ground grain and mash in the evening. The morning feed consisted of two or three ounces of mixed oats, preferably hulled, cracked corn, a little millet, an equal amount of wheat, and the same of barley, buckwheat or rye. The ingredients were changed a little from week to week to give variety. In the evening about two ounces of ground or cracked corn, steamed and mixed with chopped hay, was fed, or a warm mash of wheat middlings, and mixed with chopped hay, was fed, oats. I tried to make the grain ration for each hen per day average four ounces, but some would eat more and some less. This did not include green food, vegetables and scraps from the table, which were always fed in the morning in sufficient quantity for the hens to clean it all up. Ground green bone was fed twice a week, mixed with the grain diet. Also once or twice a week I sifted charcoal out of the stove wood ashes, and after crushing it fine, mixed it with the mashed food until it turned it black. This helps to regulate

the chickens' digestion and tends to harden the egg shells. Oyster shells are also thrown on the floor occasionally.—Exchange.

WHITE LEGHORNS FOR CITY LAYERS.

Editor, Poultry Keeper:

After reading the October copy of your journal and noting your request for short articles on poultry and your offer of a subscription to the Poultry Keeper for one year, I thought it worth while to try.

I began with Buff Orpingtons two years ago and had good success but as I am on a city lot 40x110 ft., I came to the conclusion, after one year's trial, that White Leghorns would suit my purpose: because White Leghorns are not sitters and they lay the year 'round a big white egg. I can get just as much for eggs for hatching as I can from Buff Orpingtons and besides Leghorns are laying eggs when Orpingtons are wanting to sit.

Last fall I sold off half my Orpingtons and bought 13 White Leghorn hens and the male bird I raised myself from a sitting of prize birds.

I find by breeding 13 hens to 1 male I get 15 per cent pullets and 5 or 6 hens to 1 male, I get 75 per cent cockerels. I wish some one else would try it and let me know.

As fast as my Orpingtons wanted to sit the chicks from that pen after the sitters were removed would turn out to be cockerels, but it is not so with my Leghorns. The Leghorns kept right at it and my one pen of 13 supplied quite a few customers and I am raising 40 myself. My customers report 75 per cent pullets. My pullets were hatched July 1st and are now 3½ months old and weigh 3½ lbs. each. They go around singing and act as if I would begin getting eggs within another month. My Orpingtons always laid at 5 months.

I had some trouble on the start with white diarrhoea but I just simply stumbled on a good remedy and have never had any trouble since the first hatch. I have not had a sick chick nor a sick hen for over a year.

I have a coop in my back yard 12x36, open front, summer and winter and last winter my 84 hens laid 104 dozen eggs a month for December, January and February.

I bought the White Leghorns January 16 and they began laying January 21. They have averaged 9 eggs per day since then. They laid 230 eggs in April, netting me \$6.35.

C. M. Dutcher.

Michigan

RAT POISON.

The following directions for making rat poison may be of some benefit. Take about a teaspoonful of molasses and pour around on boards or anything that is handy and shake a little concentrated lye in the molasses and in a few days all the rats will have disappeared.

North Carolina. J. W. Skinner.

POULTRY KEEPER

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A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
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Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

DECEMBER 1913

No. 9

Poultry need green food as much now as later in the winter. Even though you have a limited amount of roots on hand it is better to begin to feed them now. Whenever the supply of cabbage, mangels or turnips give out you always have dried beet pulp to call on. This dried beet pulp is the waste product in the making of sugar from sugar beets. The small pieces of beet are dried, bagged, and sold for cow and poultry food. We found one farmer who is doing splendid work in the dairy line who sells his mangel beets and takes the money to buy dried beet pulp. He tells us that he gets a bigger yield of milk from ten dollars worth of the beet pulp than from ten dollars in cattle beets. Whether this to poultry we do not know. The fresh, moist mangel wurzels, would seem to be better adapted to the hen's diet than the commercial product known as "dried beet pulp." The splendid egg record at the Storrs Conn., Egg Contest the past two years has been made while dried beet pulp was being fed. One pound of the beet pulp will take up five pounds of water—soaked for an hour before feeding—and is liked by hens and cows. We have known a few poultry keepers who put this dried beet pulp in the dry mash. This can be done but will require additional drinking water to swell the pulp when in the crop.

More and more the Agricultural colleges and stations are advising the use of permanganate of potash to prevent and cure colds and roup. It is a drug that is dissolved in the drinking water until it takes a slightly red color. While we do not advise the constant drugging of poultry there are times when this remedy is worth remembering. Colds and roup will come in your flock at times—through no fault of yours—and need to be met promptly. Divide the well from the ill and begin quickly to use the permanganate. Feed lightly so far as meat scrap is concerned until there are signs of improvement in the irritation of the nostrils and head.

Seldom is an egg laid that is not free from decay germs when dropped by the hens. Germs are introduced in the handling or keeping. The fresh laid egg has a coating that shuts out germ life. Break this coating by washing an egg and you open up a way of entrance for those germs. Clean, unwashed eggs keep much longer than the other kind. If farmers would provide better nests, gather the eggs more often and get them to the consumer more quickly we should hear less of spoiled eggs and losses. We have known of a few cases where eggs laid one day were found to be bad the next day. This seemed to be due to several days retention in the egg passage of the hen where heat and moisture would start up germ life and cause a spoiled egg.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting some one else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

It is none too early to consider the fertility of the eggs you will produce in March. Breeding stock will be in better condition to give the sort of eggs you want if you will not push them for December eggs. Breeding stock need fair feeding through the winter, less animal food than if you were feeding for table eggs, and an unlimited amount of exercise through deep litter. Yearling hens will make your best birds to give the eggs for incubation while early hatched pullets that have molted in October will come next. Do not depend on June hatched chicks to give you hatching eggs much before the middle of April. These late hatched pullets may be your best layers—from a utility standpoint—but are to be handled as such through their first year. Breed from hens—not pullets—if you can do so.

The egg laying contest at the Conn. State Agricultural College started off on its third year on November first. The number of layers in each pen was increased from five birds to ten birds. Most of the pens are made up of pullets, few hens being noticed. The experiment station is to do some feed work in this connection, having eleven pens that will be fed differently from the birds in the regular contest. We notice that these special pens are made up of five pens of White Leghorns, five of White Plymouth Rocks and one of Buff Wyandottes. This year the reserve layers are to be housed under the same conditions as those in the competition, get the same feed and be trapnested throughout the year. This will add to the value of the work and give the men who are sending stock much more for their money than last year. The birds, this year, are far the best yet seen at Storrs. We were pleased to see that more care was given in the selection of the pens. Hardly a fowl was sent that would not be old enough to lay within six weeks. Last week there were a few pullets so young that it was three months before they laid their first eggs.

Did you attend your local show last winter? Do you know that it takes hard work to run one of these poultry exhibitions? Why not encourage these busy men who are working for your good? Whether you went last winter, or not, go this time. We have yet to see the poultryman who is alive to his calling who cannot learn something at a small show. Better still will be the sending of a bird or two in addition to your attendance. If it is in time ask the management to offer prizes for the best dozen table eggs, best pair broilers and roasters. Have them interest both the fancier and the practical henman. Do all you can to make the local show a success. At least get into it for a single day.

The center of the problem of winter eggs is the mash. Without a well balanced feed you will not get eggs in cold weather. Fed either dry or wet the mash is well worth considering with care.

There is danger of using too much clover or alfalfa in the feed. Either of these has considerable indigestible fibre that must be taken into account. Then they are bulky, when wet, and should be used in moderation. The mash should not contain over one-tenth clover or alfalfa, and it is likely that a twelfth would be nearer right. Where you have plenty of alfalfa or clover, and consider it not costly, it would be well to feed it from its own hopper, or wire rack, cut or uncut. In winter the danger is that your layers will not get sufficient food in the short hours of cold weather. A concentrated ration, with access to plenty of cut hay, and mature stock, should give you eggs in December and January.

Are You a Double-Profit Poultryman? Or Are All Your Eggs In One Basket?



Double Profits come from poultry fitted into the mixed farm—berries and broilers, eggs and apples, capons and calves.

Double Profits come from direct selling, the poultryman getting both the producer's and the retailer's profits.

Double Profits come from growing all your poultry feeds and selling them to your hens—getting the profit on the feeds as well as on the poultry produce.

You will find the **practice of producing and the business of selling for Double Profits** discussed in every issue of *The Country Gentleman*, the Weekly of Efficient Farming on a Business Basis.

Along with good poultry keeping must go good farming for the average man. Only the expert few can trust all their eggs to the one basket as a specialty. Most men will do better with the three-legged stool of poultry, truck and fruit—and there are other paying combinations.

In the Issue of December 6th:

Old Farms Made New: The story of actual cases where the Department of Agriculture experts have replanned fields, revised rotations, and introduced business system on failing farms and turned them into profit makers. The principles will apply to both large and small places—the five-acre poultry farm and the thousand-acre wheat ranch.

Women Who Farm usually succeed by combining poultry with fruits, or flowers, or vegetables, or bees. Personal stories tell the tale, and these you find in nearly every issue.

Fresh Fowl—or Frozen: Whether you sell live or dressed fowls or eggs you need to know how cold storage helps you market. The Government expert chemists tell the story of chilled fowls and eggs.

Pecans—A Tree Crop of Tomorrow: It fits on the poultry farm, too, along with the fruits and vegetables. Dr. Smith, the author, an authority on tree crops, has just returned from an 18,000-mile trip through the century-old nut groves of Southern Europe and North Africa.

Other Features That Will Help You

Progressive Agriculture: Boiled down items on what the Government is doing for farmers.

Everyman's Garden: The timely methods that will make things grow in any garden, big or little.

Commercial Poultry Keeping: The essentials of egg and fowl farming to turn a profit.

Everyday Farm Practice: The things which the stockman, the fruitgrower and the general farmer need to know at the time they need it.

The Countrywoman's Questions: Styles of the day, recipes and cooking helps, household shortcuts, care of the children and ideas for social work.

And Other Things in Season.

If Farming is Your Business There's no Paper in the World You Need so Much as

The COUNTRY GENTLEMAN

Your Grandfather Read It Your Father Read It Are YOU Reading It?

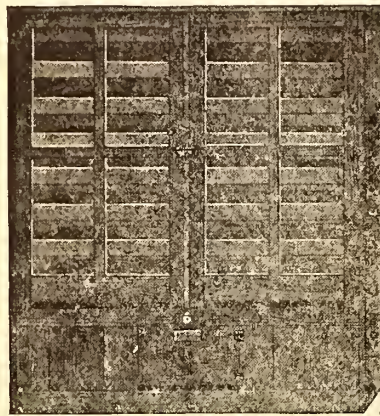
Five Cents the Copy, of all Newsdealers. \$1.50 the Year, by Mail.

THE CURTIS PUBLISHING COMPANY, INDEPENDENCE SQUARE, PHILADELPHIA, PA.

DOUBLE QUICK GRAIN SPROUTER

THE PERPETUAL POULTRY SILO--Grows Green Feed While You Wait
The First, the Original, the Pioneer of All Grain Sprouters. Built in six sizes, from $\frac{1}{4}$ bu. to 8 bu., for a few hens to 1,000

The Double Quick originates and initiates—others imitate and appropriate. Fully 100 Double Quicks to every half dozen of all other kinds combined. Now in its fourth year—in use in every state and territory in the U. S.; in Canada and Mexico; in eight foreign countries; thousands have tested its value; many large poultry plants use from one to five.



"On Sept. 16, I ordered your No. 5, Double Quick Sprouter shipped to Maude L. Kater, Columbia City, Ind. and this one is proving so satisfactory that she wants another one of the same size and therefore you will find draft in payment of this second sprouter."—Milo R. Meredith, Indianapolis, Ind.

"I ordered and received from you last fall one of your 5-tray Grain Sprouters. This works very satisfactory. I want one for 1,500 hens. I enclosed my check for your No. 6 Grain Sprouter."—E. A. Palmer, Providence, R. I.

"I am enclosing my check for two more of your No. 5, Double Quick Sprouters. The one I bought some weeks since, is doing fine work."—C. H. Latham, Beauty and Utility Barred Rocks, Lancaster, Mass.

Close-to-Nature Co.

20 Front St.
 Colfax, Iowa

FEED FOR EGG PRODUCTION.

Commercially speaking a hen is a mill or machine in which you feed certain grains and foods to produce the finished product, the egg.

We can not feed corn into a mill and receive wheat flour, so if we wish eggs we must feed what produces the egg. Analysis shows that a fresh egg contains about 66 per cent water, 12 per cent ash or mineral matter, 11 per cent protein or muscle forming food and 9 per cent fat.

The feeding of a balanced ration means a combination of foods so that there shall be the proper proportion of each of the nutrients, which, when transformed in the animal, will furnish all the requirements for heat, replace worn out tissue, make new growth and reproduce all the animal products.

It has been found that 100 pounds live weight in full laying will average to require in a day as follows:

Hens 3 to 5 pounds: dry matter, 5.5; ash .3; protein, 1; fat, 4.6; ratio; 1:4.6.

Hens 5 to 8 pounds: dry matter, 3.3; ash, .2; protein, .65; fat, 2.25; ratio, 1:4.2.

In order that hens will consume the largest amount of balanced ration, all the ingredients must be palatable and wholesome and contain a good variety which should not be changed too often as hens are creatures of habit, and do not take kindly to sudden or radical changes. Nature's way of feeding is little and often, therefore, the art of feeding consists in satisfying their needs completely in such a way that they will be obliged to exercise enough to maintain good health.

Good health depends upon good circulation of the blood which is largely dependent upon exercise. Hunger is the only guide to digestive process. Feeding to induce exercise gives activity to the body, increases respiration thus purifying the blood and strength-

ening the body, producing physical vigor, to stand up under the heavy production; when fowls are active the reproductive organs are busy

Range Better Than Small Yard.

Although hens can be kept profitably in small yards, yet large fields are much better. In an experiment conducted at Cornell where 70 hens were kept in a small yard and 70 in a large field, both lots fed the same ration, those with the larger run laid 1,015 more eggs in a year on less feed. Green food, although containing about 90 per cent water is one of the necessities for heavy egg production, acting as a stimulant to appetite and an aid to digestion. In an experiment where two flocks of 100 hens each were fed exactly alike, except that one flock had no green food for a year, the other having plenty, the latter laid 2,413 more eggs in the year or over two dozen per hen.

Vegetable protein, although essential, does not take the place of animal protein, therefore, it is necessary that animal food be supplied either in the form of meat scraps or milk. As a dozen eggs contain one pint of water, you can readily see why it should be kept before them at all times. Grit and shell should be accessible, oyster shell being the cheapest way to furnish the lime of which there is one pound in every seven dozen eggs.

It has been found that the best results are obtained where two-thirds of the ration is whole, or cracked grain and one-third ground feed, the latter fed dry, so they will only eat a small amount at a time.

The hopper system prevents indigestion, gives all a chance, overcomes the poor judgment of a poor feeder. To produce the greatest appetite, the most eggs and the strongest hens, they must not be given absolute freedom at all times to the feed hopper.

Sedentary humans can not eat and digest as much as active humans. Hens

are the same. They must come hungry to the next feeding.

Whole grain should not be fed in hoppers except to young stock on free range.

The fowls should eat about one-half as much mash by weight as whole grain. Regulate the proportion of grain and ground feed by giving a light feeding of grain in the morning and about all they will consume at the afternoon feeding (in time to find grain before dark). In the case of pullets or fowls in heavy laying, restrict both night and morning feeding to induce heavy eating of dry mash, especially in the case of the hens. This ration should be supplemented with beets, cabbage, sprouted oats, green clover or other succulent food, unless running on grass covered range. Grit, cracked oyster shell and charcoal should be accessible at all times. Green food should not be fed in a frozen condition. All feed and litter used should be strictly sweet, clean and free from mustiness, mold or decay. Serious losses frequently occur from disease, due to the fowls taking into their bodies, through their intestinal tract or lungs, the spores of the fungus causing molds.—Exchange.

SELECTING THE BREEDING TURKEYS.

As the demand for turkeys during the holidays has far exceeded the supply for many years, it may be taken for granted that turkey prices will continue to roost high around Thanksgiving and Christmas. Roast Turkey is a popular delicacy and it will continue such as long as the American people maintain their identity, no matter what the cost. In these days the cost of an article of luxury doesn't cut much figure as long as that article best suits the taste of the consumer. So, unless the cost of production increases materially turkey growers will

continue to realize large profits. Certainly the field is an open one for all farmers who care to enter it.

The fact is generally appreciated, however, that turkey raising is a distinct and separate business from that of raising chickens; the nature of the turkey is so different from that of the chicken that it requires different management altogether. The turkey still retains many of its wild habits. Then of late years, serious diseases have played sad havoc with the business in many parts of the country. Blackhead, particularly, has carried off many thousands, compelling some of the largest growers to quit the business. Blackhead seems most prevalent however, in those sections where turkeys have been raised for a number of years; the farmer who has never had turkeys on his farm is not likely to suffer, provided he starts with perfectly healthy stock.

When diseases can be avoided, the cost of raising a turkey is less than that of raising a chicken, while the former weighs more and sells for more per pound. The fact that turkeys will from the time they are eight weeks old until winter sets in, obtain the greater part of their living from the bugs, grasshoppers, waste grain and weed seeds picked up in their wanderings over the farm, insures their maintenance throughout the summer at a low cost to the grower.

Breeding stock should always be selected from the flock in the fall, before any have been marketed, at which time the choicest specimens can be picked out. Those selected probably would bring a little more money than some of those marketed, but they are also worth more as breeders than the poor ones. Strong, active healthy birds—those that have never been afflicted with a serious disease—are wanted if the future turkey crops are to prove profitable. If the beginner wishes to start operations with stock rather than with eggs, the fall is the best time to obtain such stock; the birds will then have ample time to become acquainted with their surroundings. The old turkey raiser should separate his breeders from those that are to be marketed before fattening commences, as breeding stock is easily injured by becoming everfat. If necessary to confine any of them during the fattening period, let it be the breeders.

While it is desirable to have fine, uniform, well-fitted breeders of a good breed, a start can be made with sound and healthy mongrels or crosses then working towards an ideal. Many people neglect to obtain stock before spring, and at that season breeding turkeys of any kind are usually so scarce that there is not much chance to obtain choice stock, and the beginner generally finds it best to purchase eggs rather than stock. Turkey raisers who have more eggs in the spring than they wish to set themselves can always find a ready sale for the surplus; indeed many breeders make a specialty of selling eggs for hatching and find it profitable, as a sitting of eggs from pure-bred stock, sells for from \$2 to \$5.

Get More Eggs Now

You ought to make the most profit out of your hens now, because egg prices are at their highest. But hens should have tonics during the winter to keep them vigorous and their egg organs active.

So sure am I that Dr. Hess Poultry Pan-a-ce-a will condition your hens, prevent Roup, tone up their dormant egg organs and compel them to lay, that I have told your dealer to supply you with enough to feed your whole flock and if Pan-a-ce-a does not do as I claim, return the empty packages and get your money back. Pan-a-ce-a costs but 1c a day for 30 fowl. 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West.

GILBERT HESS,
Doctor of
Veterinary Science
Doctor of
Medicine

Dr. HESS & CLARK
Ashland
Ohio

Dr. Hess Poultry PAN-A-CE-A

Up to their fifth year turkeys are profitable as breeders, although it is a good plan to change gobblers every year, especially if some of the young females are retained for breeding. Hens are not fully matured until two years old and they are at their best during the next two or three years. During the mating season the proper proportion in which to divide the sexes is from six to ten hens with one gobbler, although successful hatches are often obtained when a larger number of females are allowed to each male. When turkeys are properly mated the eggs are usually very fertile.

The breeding stock should receive good care during the winter months. Without proper care and attention, as well as suitable quarters, turkeys will not go through winter in good health, and consequently, will not be in such good condition for the breeding season, and that means poor success with the young. Young turkeys bred from healthy stock are hard enough to raise, without the extra handicap of none too healthy parentage.

Turkeys do not want damp, stuffy quarters in winter. A well lighted open shed or loft, fitted up so as to prevent direct drafts but having good ventilation at all times makes a good place. Turkeys can stand a great deal of cold, but they cannot stand close, foul-smelling quarters. Fix up some broad perches a couple of feet from the floor; provide troughs for grit and water and, in real cold weather, put some straw or other litter on the floor. Feed corn and other grains regularly and during severe weather give an occasional warm mash.—Exchange.

FATTENING GEESE.

The methods of fattening geese vary. As a rule the fowls which have previously enjoyed their liberty are placed

in a roomy shed, preferably one littered with straw, to undergo about four week's special feeding. Generally, they are fed twice a day, once on soft food and once on hard, morning and evening.

The morning mash consists of equal parts of barley meal and sharps mixed with water, or better still, if the best results are to be achieved, skim-milk. In the evening some good sound barley or wheat, preferably used alternately, is given, the grains being steeped in water a few hours prior to feeding to make them more digestible.

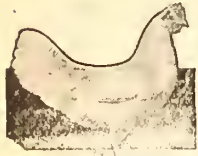
If it is desired to put on flesh rapidly corn meal is sometimes added to the soft mash, but only for the first two weeks. If its use is prolonged it is apt to impart a somewhat unpleasant flavor to the flesh.

In feeding the soft food the geese should only be permitted to eat until they turn from the feeding troughs, after which any food remaining should be removed.

Chopped vegetables should be freely given between times. Grit, also fresh water (as much as they will drink) are essential from start to finish. Geese fattened in this manner should make rapid headway and turn the scale at a good marketable weight when ready for killing.—Exchange.

Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 15th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

Ferris Leghorns for Winter Eggs.



If you aren't getting a good egg yield now when eggs are high, it is time to change your methods or your stock. In most cases where winter eggs are hard to get the stock is to blame. No amount of care will make hens produce winter eggs when they have never been bred for eggs. If you have the wrong stock, change now before it is too late. **FERRIS IMPROVED WHITE LEGHORNS** have been scientifically bred for eggs for thirteen years and the **LAYING INSTINCT IS BRED IN THE BONE.** We trapnest all our breeding pens and breed from no hens that lay less than 160 eggs a year. We select for size, health, vigor and can furnish you the right kind of stock for egg production—and at low prices, too.

25 First Prizes at 8 Big Shows. This fall and winter Ferris Leghorns have won 25 first prizes at 8 leading shows in all parts of the country—the greatest record ever made by any White Leghorn breeder. Here is the list for September and October: Iowa State Fair, three firsts and silver cup for best cockerel in Mediterranean class; Maryland State Fair, three firsts and two seconds; West Michigan State Fair, 5 firsts and 4 seconds; Kansas State Fair, 2 firsts and 2 seconds; Alabama State Fair, 4 firsts and 3 seconds; Georgia State Fair, 4 firsts and 3 seconds; Mississippi State Fair, 2 firsts and special for best cockerel in show.

We are also showing at several other large shows but have not received list of winnings when this ad was printed. We will show at several more big shows during December and January. Write for complete list of winnings, and let us prove to you that Ferris Leghorns will win for you in strongest competitions.

Prices are reasonable too. We have thousands to select from and can furnish good breeding pullets and hens at \$2.50, \$3.50 and \$5.00, cocks and cockerels at \$5.00, \$7.00 and \$10.00. Exhibition birds of finest type—the large, long bodied kind, with extra low tails, good heads and perfect color. Just the kind you need to win and breed winners. Write now and let us quote you prices.

All stock is sold on a positive guarantee to please you or money refunded. Keep them three days, compare them with others and if they don't suit you in every way, send them back at our expense. We also ship C. O. D. if desired, in which case you need only send enough to pay express one way. All stock is insured for 30 days—we stand the loss if any die.

Eggs and Day-Old Chicks.

We are now booking orders for spring delivery. Thousands of fine hens in our bred-to-lay matings and 15 of the best exhibition matings that have ever been mated. Prices are remarkably reasonable and we replace all infertile eggs free, and guarantee safe arrival of chicks any distance. We ship 5000 chicks a week.

Get this Catalog Today.

Read the complete story of Ferris White Leghorns in the 132 page free catalog which we will be glad to send you. Learn how we develop laying qualities so that records of 160 to 200 per year are common, how we improved exhibition qualities until today Ferris Leghorns sweep everything wherever they are shown; how we feed, house and manage our stock. Fully describes all grades of stock, eggs and chicks and will enable you to get started right at small cost. Mail a postal today, the catalog will reach you by return mail.

George B. Ferris, Ferris Leghorn Farm, 909 Union Ave., Grand Rapids, Mich.



56 BREEDS Chickens, Ducks, Geese and Turkeys. Hardy, northern raised, pure bred, of finest plumage. Fowls, eggs and incubators at lowest prices. America's greatest poultry farm. Send 4c for large, fine 19th Annual Catalog and Poultry Book. **R. F. NEUBERT CO., BOX 842 MANKATO, MINN.**

SOMETHING NEW! A Grain Sprouter Made In Sections!



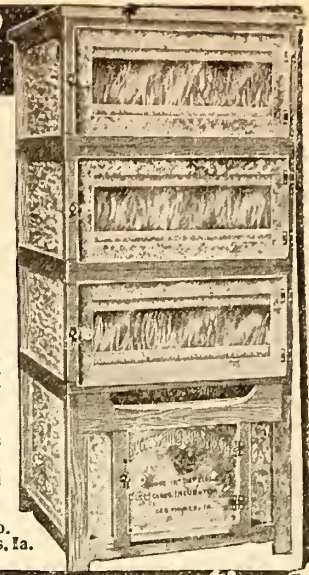
Doubles Your Egg Yield

Constructed of steel. Double steel walls. Made in capacities of from 50 to 600 hens. Fits the needs of both little and big poultry raisers. Grows as your needs grow. A brand new idea in grain sprouters. Positively fire proof. Completely safe in every detail. No wood to rot. Lasts practically forever.

"Successful" Sectional Grain Sprouter

will enable you to get three bushels fresh, succulent, egg-making green food from one bushel of oats, wheat or rye. It sprouts grain in 24 hours. Then gives an inch of crisp green sprouts every day. With it you can make your winter chicks grow faster—get them ready for market sooner—when prices are highest. You can make your hens lay more—100% more eggs—lay when egg prices are highest. It's a wonder! Can't warp, shrink or swell as wooden sprouters do. Has large glass doors and metal trays. It will make money for you. Send today for Free Book.

Des Moines Incubator Co. 565 Third St., Des Moines, Ia.



WHERE A BACK LOT FLOCK PAID.

Editor, Poultry Keeper:

Being a reader of Poultry Keeper and just a beginner in the poultry business for profit, perhaps some of you will take time to read a few lines from me. I am always glad when Poultry Keeper comes and do enjoy the letters and all of the good advice which it affords. I have always kept chickens of any old kind in any old way and of course they never got much feed except what they could pick up, for chickens were considered almost worthless for we, like many others thought they would soon eat their heads off if they were fed much. We never thought hens would lay until late spring, but I have found that by keeping good early-hatched pullets and giving them a little care they will lay in winter. I think they should begin laying before cold weather for best results. I have this fall some nice pullets that have begun laying and they have not had expert care either, just luke warm water to drink instead of ice. Corn and wheat is most all the grain fed with a wet mash once a day. Dry mash is before them most of the time and grit and charcoal all the time in home made hoppers.

The hover is poorly built but has open front with litter on the sand floor and droppings board under roost. Hens are let out on nice days but are kept in the house on stormy days. I have no oyster shells yet and the green food is just from the garden. With anyone on the farm there can be more green food had cheaper. I aim to add oyster shell, some other small grains and a better dry mash for I am convinced that they will soon pay for the extra feed and care with winter eggs.

I have done most of the work myself fixing the house for the hens and have found it to be a pleasure. It does not take so much time after all. One thing, we have all of our feed to buy but on the farm where it is raised the hens can be fed cheaper and they will pay for the extra feed too. While

prices are not very good here I have since the first of January sold chickens and eggs enough to buy an incubator and brooder, a nice pen of pure bred birds and some other spending money and have enough left to feed the chickens this winter and all of this was done on a back lot with not more than fifty hens. I had good luck with the incubator and raising the chicks too.

Last spring I made a permanent pen and kept them in it till they were six weeks old and the pen being small had to feed them green food, but next spring I will make movable runs that can be moved to new patches of green food every few days.

I would advise all to go slowly until they are sure or they will have too much fixed wrong. Get your incubator this fall, set it early next spring and follow directions closely. Get some eggs from pure bred stock if you haven't the stock and get your order in early.

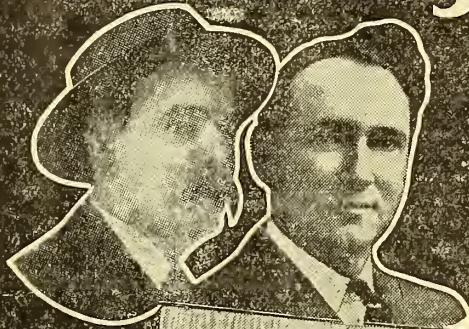
I would like to work up a trade so I could send eggs to customers and get better prices than we get here. Wish some of the experienced ones would write on this subject. If anyone has a bird with the roup take a piece of fat as large as it can swallow, dip the meat in coal oil and sprinkle it with black pepper and give it to the bird and I think you will find it to be a cure.
Missouri. Mrs. G.

The editor of Poultry Keeper has recently received copies of two letters, one from the Portland Seed Co., of Portland, Oregon, and the other from Cugley & Mullen, of Philadelphia, both showing successful sales of "Magic" Egg Tester and ordering increased lots for their coming season's trade. These testers have been advertised in our columns for several years past and the hand that points the way to successful hatches is a familiar one to Poultry Keeper readers. The manufacturers are greatly pleased at the growth of the sales of Magic Testers and hope to push their sale so that they will be known in every hamlet where hatching is done.

NOW READY!

Johnson's Big 1914 Poultry Book Free

Write For it Today



YOU will never get right down to the foundation of making money from chickens—in a small or big way—until you read this book by the Johnson family. The Johnsons have half a million customers, all successful, all making poultry profits—and all started by reading earlier editions of this plain, simple, straightforward book. It is more than a catalog. It is an education of the right kind—simple, sincere and practical. **This 1914 edition, just off the press, is the most helpful, interesting and entertaining of the lot.**

The most
Interesting
Poultry
Book Ever
Written



The Johnsons consider it a favor for you to let them send the book. They know you will get the right idea of the poultry business and the Johnson business from this book. And they know that will help them somehow sooner or later.

Old Trusty Incubators

Still Less Than \$10, Freight Prepaid
East of Rockies, or allowed that far if you live beyond.

The Johnsons have thousands of Old Trusties ahead right now ready for the big rush. They will make one hundred thousand this year and there will be a ready buyer for every one. The Old Trusty customers are sending them thousands upon thousands of more customers every year. And the price is right to insure quick sales for this great output. The Old Trusty factory is the largest in the world making incubators and brooders exclusively.

Send Your Name

Clip coupon below to remind you and send it in, or, if more convenient, write a letter or just a postal. Any way to get your name to the Johnsons, so they can send you by return mail a copy of the handsomely covered book, stored full of the information, the suggestions, the practical money-making pointers you need. Half a million others have proved the value of this book to them—why not you?

See pictures and letters from customers. The book is free, comes to you postpaid. And the Johnsons don't want you to feel under any obligation to buy. They are different—do business differently. Write and see. Address

The M. M. Johnson Co.
Clay Center,
Neb.

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The M. M. Johnson Co., Clay Center, Neb.
Please send me the New Old Trusty Catalog FREE.

Name..... Town..... State..... R. F. D.....

FOR POULTRY

BROWN FENCE

NEW BARGAIN BOOK FREE

Costs half as much as common chicken netting. Lasts 5 times as long. No top or bottom boards necessary—big No. 91-2 wires support Brown Poultry Fence perfectly. **Use Half as Many Posts** Bottom wires spaced 1 inch apart—chick tight and rabbit proof as well as stock strong and rust proof. Double galvanized. Sold direct from factory, freight prepaid. Write for money-saving bargain book showing 150 styles of fence and gates for every purpose. Samples also mailed free to test.

THE BROWN FENCE & WIRE CO.
Dept. 57 Cleveland, Ohio

WE PAY FREIGHT

DIRECT FROM FACTORY



Hens Need Green Bone

Greatest of all egg-making foods. Supply it fresh, get it low priced. Cut it at home with a **STANDARD Bone Cutter** (Greatly improved this year)

The cutter that handles bone in all conditions and doesn't break down. The favorite everywhere. It always makes good. Its easy turning, strength and nice work in cutting bones across the grain please every user. 12 sizes for hand and power, costing from \$6.75 to \$135. Send for free book.

STANDARD BONE CUTTER CO., Millford, Mass.

Sent on Free Trial

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Success With Poultry\$1.00
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Any other 50c Poultry Paper.. .50

All for\$1.25

This is one of the best offers ever made to poultry readers. It gives the best practical book on money-making poultry and two poultry papers at a greatly reduced rate. Address.

Poultry Keeper Pub. Co.
QUINCY, ILLINOIS.

A MILLION HENS USE WELLCOME'S FAMOUS

"Ideal" Trap Nest

SHOWS WHICH HEN LAID THE EGG.
No Watching! No Freight!

PLANS TRAPS, RECORD SHEETS.

Write NOW for prices and proof.

F. O. Wellcome
BOX C, YARMOUTH, MAINE.

GOOD SHOWING OF A SMALL FLOCK.

Editor, Poultry Keeper:

I am a clerk in a shoe department and a reader of Poultry Keeper, and I keep a few good Barred Rocks in my back lots both for profit and for pleasure. I expect at some time to make it a business, but think it best to learn all I can from a small flock before trying to handle a thousand. I get much good from the articles in your paper, and hope later to contribute something that will be a help to other beginners.

At the beginning of the year of 1913 I had on hand 32 hens and pullets, five cockerels and one cock. These I mated in three pens and after mating and selling old cock and two cockerels, I valued the flock at \$51.75.

Below is a statement of the business of this flock for the first five months of the year January 1st to June 1, 1913.

Feed	\$25.15
Advertising	8.95
Expense	5.05
Eggs bought for hatching	5.00
Cockerel bought	10.65
Money refunded on order	3.64
Eggs sold on market	\$ 3.39
Eggs sold for hatching.....	66.10
Stock sold	30.00
Eggs and stock used for table	12.78

\$112.27 \$58.44

Net profit five months\$53.83

On \$4.20 spent for advertising in classified ads in regular poultry paper I sold \$29.30 worth of stock and eggs and could have sold more if I had had it to sell, so I say advertising pays if you have the stock to back it, but let's swat the grafter.

V. M. Ravenscroft.

Kansas.

DOES IT PAY TO TRAP NEST?

I live on a small farm of only one and seven-tenths acres and keep from one hundred and fifty to three hundred hens and raise about that many young birds each year. I keep two cows to have milk for them as the milk for the chickens is worth just about what it costs to feed the cows. When I have milk, all goes well. When I do not, sickness breaks out among my birds and they will not grow or lay.

This being my first year to trap-nest I will give the records for the hens that have finished their full year's work. Hen No. 1 began laying October 11th, 1912, and laid 251 eggs in 365 days. Hen No. 2 began laying October 28th, and has laid 193 eggs with still 14 days in which to finish her year's work. One hen died and the other three being later hatched will not finish their full year's work until January, and that is too far off to tell what they will do, although they will have made a fair record if they do not lay any more.

Trap-nests tell a lot about hens that it is not possible to ascertain any other way. It is surprising how well some hens' eggs will hatch and how poorly

others show. I think it has paid me well for the cost of the nests and the care it has taken to tend them, but the 251 egg hen is worth it all.

Being a lover of what I think the prettiest birds on earth and good layers—the Houdans, I shall try to develop one of the best strains in the South, and having been a breeder of Houdans for the past eight years I think I know the Houdans pretty well. They are excellent layers and when it comes to broilers they are hard to beat. I have had them to weigh two pounds in two months, and this is about as good as broilers from most of the big breeds. What a person likes best, is generally what does the best for us, as we will give it better care. If you like the Houdans get them. If not, there are lots of other good breeds. If a breed does not suit you, do not condemn it, for it may be just what some one else wants. We will have plenty to do to manage our own affairs and let the other fellows alone.

M. B. Richardson.

North Carolina.

MONEY MAKING POULTRY.

To really get the bed-rock facts on making money from chickens, one should read the 1914 catalog written by the Johnson family. It's a new issue of the book that has been the means of getting hundreds of thousands of people interested in the profit making possibilities of poultry.

It explains most interestingly how half a million or more owners of Old Trusty Incubators are making profits.

When it is remembered that the Johnson family made a life study and work of raising chickens themselves, one can realize the basic facts their book must contain.

The 1914 issue is now ready to mail—fresh from the press. To anyone interested in making poultry profits we suggest writing the Johnsons for a copy.

Read any chapter in the book and you will carry away some idea you can make money with.

If there is anything you want to know about chickens, ask the Johnsons. The book itself is the most profitable chat on chicken raising that we believe was ever written..

It's mailed free—postage paid—to anyone who writes for it, addressing Johnson, the Incubator Man, Clay Center, Neb.

MONEY IN SICK CHICKENS.

"OCULUM" for years, at our hospital HAS CURED sick fowls sent us, express, collect, for cure which had Roup, Cholera, White Diarrhoea, Canker, Black-head, Sorehead, Gapes and Leg Weakness. We keep the sick and well together, they drink from an old coal-hod (never has been scalded) and no damage done. We buy, locally sick fowls, cure and sell them.

"THE OCULUM WAY" means healthy fowls, prime roosters, few sitting hens, strong chickens and minimum labor.

At your dealers, bottle, fifty cents or dollar. If skeptical, 12 cents (postage) brings either size on trial, pay balance, if satisfactory. Testimonials from all parts of the United States free. Agents Wanted. Address:

"OCULUM," Box S., Salem Virginia.
No Watching! No Freight!

PLANNING FOR WINTER EGGS.

While autumn is only begun, it is none too early to begin to get ready for winter. Indeed, we have been planning and getting things in proper shape for some time past. Where poultry is kept, there is always plenty to do. But most of the work is light and easy, compared with some other occupations.

If poultry houses need repairing or new ones are to be built, now is the time to do it in case the work has not already been done.

Everything should be attended to while the weather is good. We keep our poultry houses free from vermin and as clean as possible at all times but before winter sets in they are given a complete overhauling, every year. This means cleaning the floors, nest boxes and roosts, whitewashing walls and so forth. If roofs have become leaky in places, these are attended to, for nothing is more disagreeable about a poultry house than a roof that won't turn rain or snow.

We have heard a great deal about open-front poultry houses during the past few years. Some of the people who advocate this style of house claim that they are suitable for cold climates when the mercury falls to zero and even to 20 degrees below. Here in Ohio it seldom gets that cold, but it frequently goes to zero and even lower sometimes. When it does, we consider an open-front house nothing more or less than a nuisance.

Winter before last a neighbor had a fine lot of hens frozen to death in one of these "new fangled" open-front poultry houses. But it was wrongly built. Roosts were too close to the front. We imagined that we could improve upon this house, or rather, construct a house that would prove more satisfactory, by having the roosts farther back and putting a heavy burlap curtain in front of the roosts instead of muslin over the netting front, as this neighbor had arranged his house.

Last winter was less severe than the previous winter, but the open-front house proved to be a flat failure. The flock that was put in this house in the fall did fairly well until the cold weather set in, but not nearly as well as those that roosted in the other houses. A hen can be mighty uncomfortable in an open-front or "open-door" poultry house before the mercury goes down to zero.

Some houses are so poorly built that, in winter, they are never free from cold drafts. The fowls that roost in such houses are not much less comfortable than those that roost in open-front houses. We tried this kind of a house with a few hens, as an experiment. To make a "long story short," the poor things' heads froze stiff (that is their combs and wattles), and, of course, they stopped laying at once.

We doctored sore heads for nearly a week; worked early and late, trying to make those hens comfortable, and after boarding up the front of the house, succeeded in getting the ones that were not badly frozen back in

Get Humphrey's "Golden Egg" —Tells How to Cut Feed Bills in Half— HOW TO DOUBLE YOUR EGG YIELD

Do you expect to get as many eggs from your hens this winter as you did in the summer? If not, why not?

Did you ever satisfactorily figure why hens do not generally lay in winter time?

It's not because of the cold. Whoever got cold under a feather bed? Hens are protected against cold.

It's not because they are of a mean and ugly disposition.

No, it is just because under ordinary winter circumstances they cannot lay.

The food a hen ordinarily gets does not force her to lay. The supply of insects, grasshoppers, worms she gets in summer time is gone; she gets nothing to replace it.

Give your hens the right food and they will lay as many eggs in winter as in summer.

Fresh cut raw bone prepared in a Humphrey Bone Cutter is the one right food.

"The Golden Egg" tells how to do this—fascinating facts told in a simple,

truthful way. It shows clearly why Humphrey's Green Bone Cutter doubles the egg yield.

"Feed is the foundation of egg production." High-priced food cannot pay out. You may get a few eggs, but the profit is "eaten up."

Corn and other high-priced food will not give you winter eggs. It will eat up your egg profit.

A piece of raw bone the size of a turnip will feed 10 to 20 hens and cost you—perhaps nothing—at the most 2 or 3 cents.

The Humphrey Green Bone Cutter will make your hens lay in winter, will get you the eggs.

"The Golden Egg" will be sent to your address, free, just write me how many hens you have. Write today.



laying condition in a little less than a month.

Just now we are putting up a number of colony houses for the young stock. The houses are made of piano boxes. They are cheap and yet substantial. The back is removed from each box, then two boxes are placed about two feet apart, so as to leave room for a door at one end and a small window at the other. Roosts are arranged, with dropping boards, along one side. The dropping boards are stationary, while the roosts are movable. The boards taken from the boxes are used for filling space in the floors; also above and below windows, etc.

Every house is arranged with fine mesh netting over the window and door inside, to be used for ventilating purposes in mild weather. The window is removable. Under the roof, in the center of each house, is a small ventilator to be used in cold weather. Roof, sides and floor are covered with patent roofing material which will help to keep out cold winter winds. The roofing material is put on outside, except on the floor, which, of course, must be covered on the inside.

As the houses are set upon blocks, some extra floor covering is needed. In summer we expect to use these houses for chicks. Then this covering (tarred paper) will be used on some of the floors) will be removed and fresh paper or some other suit-

able covering put on. In some cases litter from the barn floor may be used. But we have found it a great help in keeping floors clean in coops and houses where young poultry is kept, to first cover the floor with heavy paper. These colony houses as soon as they are finished, will be used as permanent quarters this winter for the pullets. Hens are so abusive that young pullets do better when housed by themselves. They will probably have to be confined in the houses for a few days until they learn where to roost.

Both hens and pullets are given the best of care during the fall months. Hens are molting and they must be well fed. We feed plenty of corn and wheat; and besides they are supplied every day with all the skimmed milk or buttermilk they will take. Pullets must be kept growing and hens must be helped through the molt, so as to be ready to begin laying before cold weather arrives. Plenty of green food can yet be found by the fowls in the fields.—Exchange.

DON'T SUBSCRIBE

To any poultry papers, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and periodicals and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

I WONDER WHY?

Why do so many poultry keepers ask for the truth and then dispute and reject it merely because it does not happen to agree with their own notions?

Why should anybody expect that any breeder will be likely to buy advertising space and circulars, write letters to inquirers and invest in shipping coops in order to sell his good stock at one dollar each when his local market will pay from eighty cents to a dollar and a quarter each for his culls for table use?

Why do some publishers gauge the quality of an advertiser's goods by the amount of money he promptly pays for ad space?

Why is it that all successful and experienced poultrymen do not keep the one "best breed"—if there really is such a breed?

Why is not the egg record of an honest breeder whose success depends upon the good will and patronage of the buying public fully as "authentic" as is the high egg record of a state institution whose success depends upon the good will and support of an appropriation granting legislature?

Why is it that those who possess the least knowledge of values are the ones who most frequently depend wholly upon their own untrained judgments when purchasing stock or supplies?

Why should anyone want to "cure"

a sick bird that will be worth but little even if it is "cured" and nothing at all if it isn't?

Why do so many poultry keepers have more faith in the superstitions of ignorance than in the proven facts of science?

Why is it that self-conceit is such a tremendously powerful factor in life in this supposedly enlightened age?

Why is it that we always think that "the price is too high" when it happens to be more than we are willing or able to pay? In that connection, why is it that so many say "able" when "willing" would be the correct word?

Why is it that the ten-millionth big double yolked egg should be such a curiosity that is written up for the hen column of every Weekly Bugle?

Why is it that eggs are never too high in price when we have them to sell and are always too high when we have to buy them?

Why is it that so many poultry keepers who create a demand for some worthless thing or scheme by continually and persistently asking for it, kick so like fury after they get it?

Why is it that years after some poultry problem has been thoroughly worked out by competent and faithful research and experiment, and the truth made known and established, so many people insist that the whole expensive and tedious operation be repeated for their benefit—to save them the onerous mental task of believing that cre-

ation does not date from the birth of their interest in things?

Why is it that people who enclose a stamp in a letter—some do you know—nearly always stick it on the letter instead of putting it loose and saying "stamp enclosed" in the letter? Government is now making postage stamps of paper and without teeth so they cannot gnaw their way out of the envelope.

Why is it that I am wondering why? It is a rainy day.

F. O. Wellcome.

Have you tried "Oculum" for roup and colds? Now is the time when you can doubtless find several of your best birds in the throes of colds and swelled heads and a little of the right kind of attention at the start will save many a good bird. Better still, inoculate yours birds with Oculum and they will be immune from these troubles. It is a matter of only a second or two of time for each bird. Write the manufacturers for the literature and prices.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

Successful Lessons in Poultry Raising FREE

NOW you chicken raisers have something to send for that is REAL NEWS. Hurry up and get these Poultry lessons before you hatch once.

Let Gilcrest, the successful man, start you right—keep you going right—and help you cash in on the profits this season that you hope to make, can make and deserve to make raising chickens if you start right. Just write Gilcrest a postal.



J. S. GILCREST
President
Life Member American
Poultry Association

These Poultry Lessons Are Really Worth \$25 or More

—but Gilcrest is glad to send them free to every man, woman or child who purchases a Successful Incubator or Brooder. A regular, simple, practical course of advice—in printed form by Mr. Gilcrest—on how to raise poultry most profitably. Beginners need these lessons which will save them failures—loss of money, time and trouble—besides showing them how to equal results with old timers. Write today for this lesson offer and

Send Me Your Name on a Postal

Write early. Get ready now. That don't cost a cent. If you decide not to buy of Gilcrest you won't be under any obligations. His business grows by the long time friends he makes. He wants you for a friend—he wants to help you. If you buy nothing of him now he knows you will some day when you learn all the facts about this World's Best Incubators and the way he helps you to make you most "Successful" with them. Write—then decide. You don't want to miss this chance. Flud out by writing us a postal.

SUCCESSFUL Incubators and Brooders

This announcement isn't put here to make claims—exaggerated statements—or to sell you an incubator and then not stay with you and show you how to make money with it. Time enough to give you direct factory prices this year on many sizes from \$6.75 and up when we get together and you see what Successful Incubators and Brooders and Gilcrest can do for you working with you on his Successful Lessons in Poultry Raising to suit your needs and experience. First price—simplicity—dependability—time saving—big hatches—big broods raised—cash in your hand profits are what you want to know.

But Gilcrest gives you, besides what others do, the personal attention and advice in his free lessons that no other maker ever has or ever can the way he can and will. Get these lessons—before you start—when you start—while you are hatching—how to make the biggest hatches and raise biggest broods—how to get biggest prices and sell for cash your whole year's output.

Successful Grain Sprouter—made in sections—supplies your chicks the year round with green food that makes 'em lay—just when egg prices are highest.

Gilcrest has mighty attractive poultry, too—high grade stock and eggs of all leading varieties—land and water fowls.

NOTE:—Our famous little booklet—"Proper Care and Feeding of Chicks, Ducks and Turkeys" is worth its weight in gold. Sent for 10 cents. But our big catalog is FREE. Send for it.

J. S. GILCREST, Pres. and Gen'l Mgr.

Des Moines Incubator Company, 47 Second Street, Des Moines, Iowa




\$6.75
Only 6 And Up

Cyphers Company's Free Service

POULTRY FOODS AND FEEDING

CYPHERS READY MIXED FOODS
NON TOXIC THEM FOR BEST RESULTS




CHICK FOOD... LAYING FOWL...
DRESSING FOOD... BROODER FOOD...
PULVERIZED WHEAT... CRACKED CORN...
CRACKED WHEAT... CRACKED CORN...
CRACKED WHEAT... CRACKED CORN...

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BEST METHODS OF BROODING

A General Treatise on Successful Brooding of Chickens in Artificial Incubators



HOW TO USE TO BEST ADVANTAGE
CONTRAST WITH THE WINTER...
CONTRAST WITH THE WINTER...
CONTRAST WITH THE WINTER...
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BULLETINS
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Dry Feeding by the Hopper Method

BULLETINS
"CYPHERS COMPANY SERVICE" DEPARTMENT

Sanitary Conditions For Poultry

PREPARED BY
CYPHERS INCUBATOR COMPANY
BUFFALO, N. Y., U.S.A.

IS your name on the Cyphers Company's mailing list? Have you found the way to secure the latest, most reliable poultry information? We want the name and address of every man and woman in America who is seriously interested in the poultry industry. We want to get in touch with the businesslike people who are in earnest in their desire to make the most of their chances in this money-making field.

Cyphers Company Free Personal-Letter Service

We want to send you your choice of the below listed Cyphers Company Bulletins—issued for the benefit of Cyphers Company customers. Any three of these Bulletins will be sent you absolutely free on request. They contain a gold mine of reliable, down-to-the-minute poultry information.

- No. 1—Winter Eggs and How to Get Them.
- No. 2—Dry Feeding by the Hopper Method.
- No. 3—Sanitary Conditions for Poultry.
- No. 4—Back-Yard Poultry Keeping.
- No. 5—Green Food for Poultry.
- No. 6—Dryness Essential for Poultry Houses.
- No. 7—Common-Sense Feeding of Fowls.
- No. 8—Important Don'ts for Beginners to Memorize.
- No. 9—Proper Brooding of Chicks.
- No. 10—Proper Feeding of Chicks.
- No. 11—Handling of Incubator to Get Best Results.
- No. 12—Marketing Eggs at a Profit.
- No. 13—White Diarrhoea of Chicks.
- No. 14—Poultry Raising for Profit on the Farm.
- No. 15—Poultry Houses, Their Proper Construction.
- No. 16—Special Fattening of Fowls.
- No. 17—Selection and Care of Breeding Stock.
- No. 18—Line Breeding and Trap Nesting.
- No. 19—Best Markets for Table Poultry.
- No. 20—Where to Start in Poultry Business.
- No. 21—Common Diseases of Fowls and Chicks.
- No. 22—Common Mistakes in Poultry Keeping.
- No. 23—Combining Poultry and Fruit Growing.
- No. 24—Common Poultry Pests.

Whatever poultry problem is on your mind, whatever advice you desire, let us be your counselors. We will gladly write you a letter on any subject pertaining to the poultry industry, giving you the benefit of the combined experience of the several poultry experts in our "Helps Over Hard Places" Department. It matters not whether you are a Cyphers Company customer. This advice or assistance is gladly extended. We want everyone to know

that the Cyphers Company is in business for the greater success of poultry keepers. Its SUCCESS, in the long run, depends upon the progress of the industry, upon the success of ITS CUSTOMERS. We want to see every chicken raiser avoiding pitfalls—and making money. That's why we have established this Free Personal-Letter Department. And that also is why we have collected and published our truly great book of

\$1,000 Prize Reports of Successful Poultry Growers

No poultry book like this has ever before been published. There's not a word of theory in it. Just plain, "brass tack" day-by-day experiences of successful people in the poultry business from nearly every state in the Union. In this book you will find reports from people whose problems were identical with your own—who succeeded in overcoming just the obstacles that may be in your path. Their experi-

ences—their way of winning success will be of direct personal value to you. A free copy of this book will be mailed to any address, domestic or foreign, on receipt of 10 cents in U. S. stamps to cover cost of mailing. The contents alone cost us \$1,000.00 in prize money. Number of pages, 176; size of pages, 7½x10 inches; fully illustrated from photographs and original drawings.

Get Your Free Copy of "Poultry Foods and Feeding"

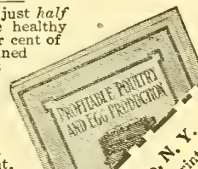
52 pages packed tight with the sort of everyday, usable information that every poultry keeper greatly needs. Begins with the first day the chick is out of the shell and continues through step-by-step to complete preparation for market. No matter how successful your hatch, it is the proper feeding and rearing that will turn your poultry investment and efforts into profit-dollars. As in all Cyphers Company literature, the

statements and advice in this book are founded upon results actually proved out on the Cyphers Company \$75,000.00 Experiment and Demonstration All-Purpose Poultry Farm, where literally thousands of standard-bred fowls are marketed every year. "Poultry Foods and Feeding" is published for free distribution to all persons seriously interested in the poultry business. Your copy awaits your request. Also write today for

"Best Methods of Brooding"—Free Successful incubation is just half the battle! To produce healthy virile chicks, to rear them in safe surroundings—to market as nearly 100 per cent of your hatch as is possible, you need to know the bedrock brooding facts contained in this valuable free book. There isn't a waste word in all its 52 pages. Just the practical knowledge and experience of poultry experts, boiled down—the very essence of the things you need to know in profitable chick raising. Write for your copy of "Best Methods of Brooding" today.

Get the Cyphers Company 244-Page Catalogue Also

This compendium of Poultry Facts and Inspiration pictures and describes Cyphers Incubators and Brooders—the World's Standard Poultry Equipment. Used on more Government Experiment Stations, at more State Agricultural Colleges, by more leading successful poultry growers than all other makes combined. Get the FACTS—that's our proof. The Cyphers Company 244-page catalogue (size of pages 7 1/2 x 10 inches) also illustrates and tells about over 100 Standard Poultry Specialties—everything you really need in poultry raising. Contains illustrations from photographs taken of actual hatching tests made in every land, proving that Cyphers is the World's Best under all conditions. Please use coupon herewith, and address, right now.



Sample Results in England

Cyphers, the "Standard Hatcher of the World," In Mid-Winter Continuous Hatching

Read the following June 8, 1913, statement made by Conrad Ford of Hillside, Hollingborne, Kent, England. 3063 chicks from 3483 eggs—surely a mid-winter showing to be proud of:

"I take pleasure in saying that after three seasons' use I am entirely satisfied with my Standard Cyphers Incubator. I could desire nothing better as successful hatchers of fine, strong chicks. They are easily adjusted and do their work with ABSOLUTE RELIABILITY IN EVERY WAY. From eggs collected in freezing weather I have secured hatches of over 90 per cent—308 chicks from 340 eggs. My hatches through the past season have been so uniformly good that I think you will be glad to see a record of them, which is as follows:

Date Set	Fertile Eggs	Chicks Hatched
Dec. 8	360	326
" 12	355	310
" 16	345	290
" 21	338	303
" 24	345	296
Jan. 9	350	315
" 9	343	305
" 13	357	312
" 17	350	307
" 20	340	299
Total Fertile Eggs, 3483		Total Chicks, 3063

"I consider these results wonderfully good for the time of year, and am glad to give full credit to the Cyphers incubator. A lady friend operating a No. 3 size Cyphers under my instruction has just brought off a hatch of 233 chicks—her first attempt.—CONRAD FORD."

Cyphers Incubator Co.

Dept. 23 Buffalo, N. Y.
New York, N. Y., 41 Barclay Street. Boston, Mass., 12-14 Canal Street. Chicago, Ill., 329-331 Plymouth Court. Kansas City, Mo., 317-319 Southwest Boulevard. Oakland, Cal., 2127 Broadway. London, Eng., 121-123 Finsbury Pavement.

CYPHERS INCUBATOR CO., Dept. 23, Buffalo, N. Y.
Gentlemen:—Please mail to address below copies of free printed matter as follows:
Also send me 17¢ postage \$1,000.00 Prize Contest Book, for which I enclose 10c in stamps.
Name _____ Address _____

POULTRY FENCE
 22 1/2 Cents a rod for 48-inch fence.
 22 1/2 Fewer posts and no base board or top rail required. Buy from the factory direct. Other styles of Poultry, Park and Lawn Fencing. Large Catalog free. Write today Box 229 Kitzelman Bros, Muncie, Ind.

25% MORE WINTER EGGS
 Can be obtained by using the **Crescent Fire and Frost Proof Poultry Water Fountain**
 Write for circular
F. Conrad & Son, Ft. Atkinson, Wis.

\$60 PER HEN PER YEAR
 SEND POST CARD TODAY for free 56 page book free, "The Why and How of the Miller System." Test our idea far enough to form an opinion. Show our guarantee to your lawyer. Miller System Company, 52 7th, Binghamton, N. Y.

WHITEWASHING
 and disinfecting with the new **"Kant-Klog" Sprayer**
 gives twice the results with same labor and fluid. Also for spraying trees, vines, vegetables, etc. Agents Wanted. Booklet free. **Rochester Spray Pump Co., 202 Broadway, Rochester, N. Y.**

Save Work, Time, Money
 By using our low down steel wheel wagon
Electric Handy Wagons
 saves high lifting, lighten draft, don't rut roads. Spokes don't loosen—wheels don't dry out or rot. Write for free book on Wagons and Wheels. **Electric Wheel Co., 45 Elm Street, Quincy, Ill.**

Feed Pearl Grit
 Serves a double purpose. It grinds the bird's food, thus aiding digestion and also furnishes shell and egg-making material. It **Makes Hens Lay**
 It furnishes strength and feather making material enabling hens to moult and lay at the same time. Send for our new valuable poultry booklet giving prices. **The Ohio Marble Co., 135 Cleveland St., Piqua, O.**

Build Own Incubator Easy
 My big Free Book of Plans and Instructions makes all simple as A B C. Shows how my patented Lamps, Regulators, Thermometers, Tanks, Egg Trays etc. save money and worry. Thousands enthusiastic. Write now for big Free Book. If M. Sheer, Dept. 8 Quincy, Ill.

KILL RATS & MICE SCIENTIFICALLY
 with **Pasteur Laboratories Rat Virus**
 NOT A POISON
 HARMLESS TO POULTRY, DOMESTIC ANIMALS & MAN
PASTEUR LABORATORIES OF AMERICA
 NEW YORK 366 W. 1ST. CHICAGO 4435 DEARBORN ST. Room 866.

Plain truth is, you will have no Mousey hens if you paint the inside of your henhouse with **AYEMARIUS CARBOLINEUM (Registered)**
 once a year. It is guaranteed. Write for circulars and testimonials. **Carbolineum Wood Preserving Co., Dept. 54, Milwaukee, Wis.**

TEST YOUR EGGS
SEE THAT "XX"?
 4TH YEAR POINTS THE WAY START RIGHT YOU END RIGHT
 before you set them under hens or put them in the incubator. Whether you buy or sell eggs for hatching discard every one that does not pass the Magic Egg Tester. Don't try to hatch weak eggs—it kills the profits. Regulates moisture in the egg chamber perfectly. Demonstrated at poultry shows everywhere. This is positively the only way to tell which eggs won't hatch before you begin to incubate them at all. Read on:
No electricity. No candling. No light. No expense
 to use. White or brown shells—no difference. Rapid and positive. Use for one year at our risk, and if not satisfied, cost refunded. Price \$2.00 each, by mail postpaid. Prompt attention. **Magic Egg Tester Works, Dept. E, Buffalo, N. Y. and Bridgeburg, Canada.**

BLUE ORPINGTONS.
 I wish to call your readers' attention to the Blue Orpingtons which were originated in England only a few years ago by crossing different varieties of Orpingtons, thereby starting with the desired size and type which makes them easy to breed true, and as I see them now there it going to be a fortune in them for some and permit me to say that they are becoming very popular in America. Most all large breeders are preparing to meet the demand in this variety.

Being importers, we are in a position to know that they are coming right to the front, judging from the number of inquiries coming to hand for imported stock we believe they will be in the very front rank in a very short time, and it is said that they will be admitted to the Standard of Perfection in 1915. We certainly hope they will be for they deserve it as they breed very true to color, size and type, are prolific layers and quick maters and for city fanciers there are no other breeds to compare with them as they have dark plumage and will not show dust and soot like the light varieties. They are also easy to keep in close quarters.

If there is anyone who desires a new variety that will make good we would recommend the Blue Orpingtons. A fancier in England said that there is going to be more money in Blue Orpingtons than any breed yet known and I believe he knew wherof he spoke, as we have received good prices for this variety. Among the highest priced ones was a magnificent pen that we sold a short time ago for \$1,500. This is an excellent pen and will win anywhere. Later we will furnish a cut of this pen so the Poultry Keeper readers may form some idea as to the quality, size and type of these birds and will also give the name and address of the party who has the birds.

If any one wishes to start with this variety now we don't advise any one to get a pen under \$100 and up as they are very high at present and cheaper pens will not be satisfactory. Every time we go to the best breeders after our stock, whether it be Blue, Buff, Black or White Orpingtons. We very seldom have to import any Whites as we have wonderfully good birds of this variety and for size and color they can not be surpassed. If you think yours are far superior meet us at the shows this fall and winter. We are willing to back up our statement. We will give winnings on our White and Blue

Orpingtons in later issues.
 Before I close this letter I want to say, if you have not the room for the Blue Orpingtons and have another variety or even if you have the room but are compelled to pen two different colored varieties side by side we urge you to hold to your breed or keep only one kind, as a black or colored variety and a white variety will mix even if they are not allowed to get together. We do not ask you to take our statement for this but give it a trial, pen a pen of white birds right beside a pen of colored ones and watch the results. There will be off-colored feathers in the majority of your white birds and if you have sold eggs from this pen you will have some dissatisfied customers. We know this to be a fact as we have had experience along this line.
Garvey McKee.
 Watertown, Tennessee.



PROFIT IN CAPONS.
 The wise farmer, looking to profit sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue. of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75 we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

BROODING THE CHICKS.

The subject of poultry culture is so broad and so inclusive that one is puzzled as to which phase of the subject to start with. The fertile egg—hatching—culling—the laying house—and so on ad infinitum—are subjects of importance to everyone who is interested in the work. These are only a few of the many things that interest us all and which confront us sometime in our poultry work. But whatever branch of the poultry industry may be our specialty, the breeding of the chicks is a very vital matter.

The hatching of eggs is comparatively simple, for most any hen or any reasonably good incubator will hatch a fertile egg. It is of the utmost importance, however, that the egg be well bred and well fed, but that is another broad subject. The brooding of the chicks is where nine out of ten of us fail. We hatch our eggs, but do we keep our chickens growing every hour until matured. We don't do it, not the majority of us. Brooding is a part of poultry work that is slighted. We think, "If I only get a hatch I am all right." You are not all right and the chicks are far from all right if you think this way. Brooding is a science, just as poultry culture is a profession, and both must be learned in the school of experience.

I am not an advocate of the fireless brooder and it is from the humane side of the question mostly that I write. This, however, includes the financial side, because a chick well brooded is of much greater value than one carelessly brooded. If we can give forty minutes out of every sixty to fireless brooding we may have fair success, but unless constant attention is given, the little chicks suffer, and by the time they should be mature, they are a second-class production. Chicks in fireless brooders may be comfortable when first put in, but left there alone at night, soon get chilled. Then they begin to move, those on the outside trying to get near the center where there is more heat, and this constant motion is kept up all night. By morning their plumage is roughened, they are weak from loss of sleep and it is not until the middle of the day that they brighten up. A continuation of his treatment leaves them in a very poor condition.

If one has twenty-five or thirty chickens and broods them in a warm room in a fireless brooder, it is not so bad, but given one or two hundred chickens, putting from twenty-five to fifty in each brooder, the necessary attention cannot be given by the ordinary poultry keeper and although many may do this and raise their chickens they will have an inferior grade of poultry at the end of the season. On large poultry plants where fireless brooders are used to a great extent, attendants for the brooders are provided.

Take any kind of an animal from a baby to a chicken, and study the natural way of rearing, and you will find in every instance that heat is provided in some way. It is not only the nat-

ural and humane way, but by all means the most profitable way. Think of twenty-five little chickens left to themselves in a cold brooder, on a bed of straw, depending upon the warmth of their bodies to keep from being chilled and then think of the same chickens under hens or in heated brooders, and consider which you would prefer to buy if offered for sale at six weeks old!

Heated brooders are more expensive to start with than fireless ones but the first cost is small compared with the loss of vitality in your chickens. Start with fewer chicks, but chicks hatched from eggs produced by careful selection and wise mating, and well brooded and at the end of the year you will be further ahead, everything considered, than if you had more chickens carelessly reared and selected. Get a good foundation, then with reasonable attention your chickens will always be strong and vigorous and able to combat diseases that may through any cause threaten them. Your house is then "buildd on a rock."

Everyone wants to hurry in this business, but from experience, I want to emphatically say, don't.

M. E. D.

Illinois.

TAKE OUT THE ROOSTING CLOSET

A number of the experiment stations, particularly that of Maine, have advocated the use of a roosting closet or more particularly a canvas curtain in front of the roosts in poultry houses. This curtain, together with the back wall of the house and the droppings board under the roosts, formed a closet in which the birds were shut up at night during cold weather. Poultry

experts at first believed that this was essential in order to conserve the body heat of the birds during the cold nights when the temperature might go well below zero. Experience, however, has shown that the roosting closet is of no advantage. Actual test by the Orono farm of the Maine Experiment Station shows that the roosting closet is of no advantage, even in the severe climate of our farthest northeastern state. On the contrary it was found that the birds certainly thrive better without the roost curtain than with it—they are not so susceptible to colds. The air in a roosting closet when opened in the morning is bad on account of the lack of oxygen and an excess of carbon dioxide, ammoniacal vapors and other exhalations from the bodies of the birds.

During the winter of 1910-11 the closets were taken out of the poultry houses on the Orono farm and although the weather was unusually severe, the temperature occasionally dropping to 30 degrees below zero, the mortality among the fowls was exceptionally high. The roost curtains will not again be used by the Maine poultry raisers.—Exchange.

We would like to get a number of suitable short articles of about five hundred words each to use in our coming issues. If you are not now a subscriber or if you are now on our list, and will send us a suitable article on any subject relating to poultry, we will enter or extend your subscription for one year. Hatching and brooding will soon be in order and articles on these subjects will be especially timely. When sending in your article, clip this memo, and send with it, so that your subscription may be properly entered.

AN incubator is only as good as its thermometer. The very best machine will fail if its thermometer is unreliable. The poultryman must be certain that the temperature is what the thermometer says it is. Avoid failure — see that your next incubator is equipped with a "Tycos".

"Tycos" Thermometers Are Absolutely Accurate.

If your dealer does not handle the genuine "Tycos" write to us.

PRICES

Tycos Incubator Thermometer	\$0.75
Tycos Brooder Thermometer . . . . .	.75
Tycos Certified Incubator Thermometer	1.50
Tycos Incubator Hygrometer	1.50
Tycos Electric Lighted Incubator Thermometer	2.50
Tycos Electric Alarm Thermometer	5.00

Write for free booklet "Thermometer Facts Worth Knowing"

TAYLOR INSTRUMENT COMPANIES, 116 Ames St., ROCHESTER, N.Y.

THE KIND OF A HATCH YOU WILL GET WITH A "Tycos"

EARLY LAYING RED PULLETS.

I had a flock of 90 S. C. Reds hatched March 17, 1913. On July 2nd when just three and one-half months old one of the pullets laid a small but perfect egg. Isn't this young for the large breeds to lay?

The birds were all confined together in a small brooder house and yard at the time and had been given just ordinary farm care. They had chick feed to start on and a wet mash of bran, middlings and corn meal twice a day with cracked corn and oats usually at night and dry bran and oyster shells in hoppers before them with milk and water to drink.

I separated the cockerels at once, turned the pullets out on range and did not get another egg until July 21, but after that they laid one or more every day. The 40 pullets laid 23 eggs in July, 196 in August, 467 in September, or a total of 700 eggs up to October 2 at which time they were laying from 12 to 20 a day. I then sold part and moved the rest into winter quarters with other pullets so lost all records but a few are still laying (Nov.) and those I kept have not molted yet. They are fine, large birds with red combs and have been much admired.

Has anyone else had such an experience with Reds laying so young? If so won't you tell us about it in the Poultry Keeper and whether they will make good winter layers or be good to breed from next spring.

I have kept Reds for years, but never had them begin laying before the middle of August or about September before.

A. L. Adams.

Pennsylvania.

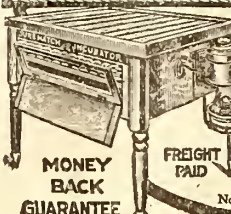
BUFF WYANDOTTE CLUB.

In the mail election for officers of the American Buff Wyandotte Club the following were elected: president, Arthur H. Meyers, 169 Columbia Heights, Brooklyn, N. Y.; Canadian vice-president, F. P. Spry, 144 Dundas St., Toronto, Ont., Can.; eastern vice-president, C. E. Coffin, Olneyville Sta., Providence, R. I.; western vice-president, F. L. Waterman, Barrington, Ill.; Southern vice-president, J. W. Power, Maryville, Ky.; members of executive committee, Gerald Williams, Northfield, Ohio; S. A. Howland, Granville, N. Y.; W. L. Springs, Winston-Salem, N. C.; secretary-treasurer, J. E. Willmarth, Amityville, N. Y.

The 1914 catalog of the American Buff Wyandotte Club will go to press in January. For several years past this club has been issuing the handsomest specialty club catalog and we expect to keep up the record. Those who join now can have their names listed in the new catalog. Give us a chance to show you how it will pay you to become a member of the American Buff Wyandotte Club. Write at once for full information and application blanks.

J. E. Willmarth, secretary.
Amityville, N. Y.

SURE HATCH



MONEY BACK GUARANTEE

60 DAYS FREE TRIAL

MY NEW SYSTEM OF HOT WATER HEATING MAKES MY MACHINE THE MOST DEPENDABLE ON THE MARKET.

Hot water heat is the very best heating system known. It distributes a gentle warmth evenly; does not absorb the atmospheric moisture like the dry hot air in other incubators. Nearly every square inch of the interior surface of the Sure Hatch is covered by direct application of heat all the time. Heat, moisture and ventilation are regulated automatically. That's why

I GUARANTEE THE SURE HATCH TO BE A SUCCESSFUL HATCHER

and will let you take it home and try it 30, 60 or 90 days at my risk. I'll ship it to you freight paid, the day I get your order.

The Sure Hatch is strongly built of California Redwood; is triple walled; thoroughly insulated; has double doors; roomy chick nursery. It's so well built that I grandly bet it with a 5 year guarantee for durability. My big Free Illustrated catalog tells you all about this machine. Write for it today and get

My Low, Direct-to-You Factory Prices

The Sure Hatch Brooders are of the same high-grade construction. Raise the chicks better than the hen. Cost very little.

FRANK HAMMOND, President and Manager
Sure Hatch Incubator Co., Box 2, Fremont, Neb.



J. F. SIEMS, Patentee

Over 600,000 People Have Tested My Great Hatcher!

They know from experience that in simplicity, ease of management and certainty of results, no incubator in the world equals it. The actual, living hens control everything. It's the incubator that can't make mistakes—and you can't make mistakes in operating it.

As Proof Read the Following:

"Your Incubator speaks for itself. I got 507 chicks from 540 untested eggs."—G. E. Bengtson, Falun, Kansas.

"It beats them all."—Edgar Douglas, Westville, Mo.

"All you claim for it."—W. H. Merrill, New Albany, Ind.

"No Bother, No Worry."—Mrs. A. B. Gorton, Coffeyville, Kans.

"Worthy of all the praise."—E. Dunston, Winona, Miss.

"The greatest success of the age."—W. Walker, Linden Heights, Ohio.

"I hatched 225 chicks from 240 eggs."—E. A. Barton, Grandburg, Texas.

NATURAL HEN INCUBATOR 200 Egg Size \$3

Costs Only

Artificial incubators cost four times this amount and do not give half such satisfactory results. Remember the Government is behind my machine—fully covered by patents. No freight to pay. Agents Wanted. Send today for our FREE Catalog with Special Introductory Offer and make success sure.

NATURAL HEN INCUBATOR CO., 1349 Constance St., Dept. 1, Los Angeles, Cal.

"I certainly would have been foolish to pay \$15 or \$20 for a machine not so good as the Reliance, when the Reliance will hatch as many chicks as any incubator made. I had 3 hatches this Summer and hatched every fertile egg. My neighbors are greatly pleased. You will hear from me again."—F. W. Schaub, Columbia, Pa.

Wouldn't You Be Foolish to Pay \$15 for an Incubator When We Sell the RELIANCE for only \$5.75?

Not one of the higher priced incubators is a bit better than the 150-egg Reliance. Dozens of them are not nearly so good. Here's where the difference lies. It costs more money to sell high-priced machines. More money for advertising, more money for 2- and 3-color catalogs, more money for large stenographic forces to handle correspondence to close a sale, more money for postage and more money to manufacture, for where others build only a few thousand machines, we make thirty to forty thousand, and in putting out this large number, we effect savings in manufacture which we also give to you.

You can't buy a better 150-egg incubator than the Reliance at \$5.75, or a better 70-egg incubator than the Reliance at \$3.90. If you pay more, you are paying the cost of selling the machine to yourself.



150-Egg Size, \$5.75; With 150-Chick Brooder, \$8.25. 70-Egg Size, \$3.90; With 70-Chick Brooder, \$6.50.

\$5.75 WORTH \$15.00

Reliance Incubators and Brooders

sell themselves. The sale of one leads to another and another. Repeat orders come every day; orders from recommendations number hundreds each week; for there's no incubator like the Reliance for results. Read the letter from Mr. Schaub, Columbia, Pa., at the top of ad. That's what all write us.

Chickens hatched in the Reliance grow like mushrooms, live to produce and make big money for their owners. Our incubators are not cheaply made, either. Side walls and top are made of three thicknesses—could can't get in, heat can't get out. Equipped with best regulator, thermometer, egg tester, lamp, egg trays. Beautiful finish, handsome steel legs. The Reliance makes chicken raising pay big profits. No

losses; no repair bills; no extras to buy; no waste of oil.

RELIANCE 150-Egg, price \$5.75 — with \$3.00 brooder, \$8.25 — guaranteed.

RELIANCE 70-Egg, price \$3.90 — with \$3.00 brooder, \$6.50 — guaranteed.

Better order direct from ad—NOW—before rush comes in. You are safe in sending money, as results are guaranteed or money refunded. If you want particulars, write for our literature. We send just a plain circular, but it's filled with Reliance Incubator facts and reasons why we can sell better than a \$15.00 hatcher for only \$3.90 and \$5.75. Send your order for immediate shipment, and start quick. Or write at once to

RELIANCE INCUBATOR CO., Dept. E, Freeport, Ill.
Manufacturers of Bargain Grain Sprouters, Incubators, Brooders



Mr. Geo. W. Black, Ind.



Wm. C. Schott, Iowa



Mrs. Laura J. Clark, Illinois



Mrs. Alta Hamlyn, Ind.



Mr. F. E. Bennett, Ohio



Mrs. F. H. Osman, Ohio



Mrs. M. J. Clifton, Oklahoma

Let me put **You** in this **World's Champion Class**

Winners of Eight World's Championships with Belle City Hatching Outfits

Join the Money Making Champion Poultry Raisers

I Want Your Photo Here



Jim Rohan, Pres.

Mrs. Alta Hamlyn, of Indiana, joins the Belle City's list of World's Champions. She scored TWO 100% perfect hatches with her Belle City Incubator in Successful Farming's 1913 contest. Mrs. Hamlyn says: "I can hatch every fertile egg in my Belle City." William C. Schott, of Iowa, shares the 1913 honors, his 100% perfect hatch, 140 chicks from 140 eggs, winning another World's Championship for the Belle City in Successful Farming's 1913 Contest. Mr. Schott writes: "The Belle City is the best incubator made—has given much more satisfaction than high-priced machines."

These two additions to the six world's championships already won, make Belle City now the Eight-Times World's Champion Hatching Outfit.

No other incubator made—not even the highest priced—approaches this amazing record. These eight championships were not "luck." Thousands of other Belle City hatching outfits not entered in contests are scoring 90% to 100% perfect hatches right along. I have the letters from the owners to prove it.

Now is the time to go into the poultry business for all that it is worth. Chickens are bringing almost any price you choose to ask for them. Eggs are high priced everywhere, and still soaring! Why take chances on ordinary incubators when the Belle City offers you the biggest winnings at the lowest price ever made on an incubator. Think how much bigger success you can make with

This is the "Tycos" Cup won by my Belle City Incubator in the World's Championship Contest for best hatches, beating incubators costing two to five times more.



You get an exact duplicate of the 8-Times World's Champion Belle City Hatchers. I guarantee to send you an exact duplicate of prize winning championship Belle City Incubators—a machine capable of doing the same work if my simple instructions are followed.

Back of the machine I send you my Personal Ten Year Money Back Guarantee. You cannot lose, I take all the risk. Money awaits the man who supplies the chickens and eggs this year. The **Most** money awaits the Belle City users. Write me!

Belle City Now 8-Times World's Champion Hatching Outfit

than with any other. I have just got out a catalog giving hundreds of the most remarkable successes ever made in the poultry business—made with Belle City Hatching Outfits. These hundreds were taken at random from the many thousands on file in my

office. Owners of Belle City Outfits give these amazing records in their own words and sign them. Anybody is welcome to look at the originals. Get in the army of poultry money makers with a Belle City hatching outfit. Do it now.

A Postal Brings You the Belle City Book

In addition to the records of 90% to 100% hatches, it tells you how the Eight-Times World's Champion Belle City hatching outfit is made—illustrates it in actual colors. Shows that it has everything worth having in and on an incubator, yet it is the lowest priced.

right; I use the "Tycos." I also supply egg-tester, Edw. Miller sun hinge turner, funnel, everything you need, including valuable instruction book on operation, hatching and care of chicks.

The catalogue tells you all about my famous 140-Chick Belle City Brooder—the only double walled, hot water, top heat brooder made, guaranteed to raise largest percentage of chicks every time—a fitting companion to my World's Championship Belle City Incubator.



Freight Prepaid

East of Rockies — Allowed that far to points beyond. 10 Year Guarantee

1, 2, or 3 Months' Home Test

We Ship Quick from St. Paul, Kansas City, Buffalo or Racine.

Raises Biggest Percentage of Chicks

Brooder equipped with wire runway not shown in cut. Note hot water top heat system.

I Go Into the Price Question

Show you why I can send you my Belle City hatching outfit at half or less than half what others cost you! You buy direct from me. You pay no agents' or dealers' profits. I have to make thousands and thousands of my Belle City outfits to supply the demand. 276,000 are now in use. This big volume enables me to cut my profit down lower than anybody else can afford to take—and I prepay the freight to all points East of the Rockies and allow it that far to points beyond.

If you're in a hurry—if you don't want to wait for all this proof—you can order direct from this advertisement. I tell you how my machines are made and give you my money-back guarantee. The editor of this paper, or any bank or express company, will tell you your money is perfectly safe and I'll do just as I say I will. I ask you to send only \$7.50 for my 140-egg 8-time World's Champion Belle City Incubator—the best you can buy at any price, or \$4.85 for the 140-chick Belle City Brooder. You can order both together, if you wish, and save more money at my unheard-of low combination price—send only \$11.50 when both are ordered together.

Don't turn this page without either writing to me or else tearing out this corner as a reminder. Whether you order or not you get all my valuable World's Championship hatching facts absolutely free! But be sure to write me today. Just say, "Send World's Championship Hatching Facts," or order now and save delay. I guarantee to ship machines same day as your order is received. Satisfaction guaranteed. Address Jim Rohan, President

Belle City Incubator Co., Box 145, Racine, Wis.

SUCCESS WITH POULTRY

Contains MORE AND BETTER
Practical, Reliable Information
on the general subject of

Poultry for Profit

Than any other book published.
It treats of every branch of

Practical Money Making Poultry

And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

**HOW TO GET STARTED
LEADING STANDARD
BREEDS**

**CHARACTERISTICS OF
BREEDS**

PRACTICAL POULTRY HOUSES (Plans)

**FOWLS: CARE AND FEEDING
INCUBATOR CELLARS
BROILERS AND BROILER
RAISING**

**CARE OF BROODER CHICKS
PEKIN DUCKS FOR PROFIT
FOWLS: CARE AND FEEDING
MODEL BROODING HOUSES
(Plans)**

**CARE OF ADULT FOWLS
FEEDING FOR EGGS**

A HEN CATECHISM

FEEDING YOUNG CHICKENS

CARE OF GROWING STOCK

ARTIFICIAL INCUBATION

5000 DUCKS WITH STANDARD-BRED POULTRY

PROFITABLE EGG FARMING

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**CAPONS AND CAPONIZING
POULTRY AND FRUIT COMBINED**

DISEASES OF POULTRY

The publisher's price of "Success with Poultry" is \$1. We will send it postpaid and Poultry Keeper one full year for price of book alone, \$1. If already a subscriber, we will extend your subscription one year and send the book to any address you furnish. If taken alone the price of "Success with Poultry" is \$1. Address Poultry Keeper Publishing Co., Quincy, Illinois.



A Boston Winner.
Crusader III

Broke all Records at Boston

Boston has always been conceded to be America's greatest White Wyandotte Show but it remained for MARTIN'S REGALS in January last to break all previous records by a good big margin. In a class of 215 of the best White Wyandottes ever gotten together and shown by twenty-two exhibitors they won as follows:

COCKS—First and Sixth.

HENS—First, Fourth and Fifth.

COCKERELS—First, Third and Fourth.

PULLETS—First Third and Fourth.

PENS—Second, Third and Fourth.

First Display with a score of 72 points which was 12 more than my 21 competitors combined.

\$100 Challenge Cup and practically all the other specials.

Such winnings as these place the Regals far in advance of all competitors, and the type I have always advocated is the best suited for heavy egg production and general usefulness.

2000—COCKS, HENS, COCKERELS and PULLETS for Sale 2000

SPECIAL—100 Exhibition Cockerels and 200 beautiful Pullets ready now to win the blue ribbon for you.

100 well matured cockerels from my heavy laying Dorcas line \$10, \$15, \$20 and \$25 each. Dorcas pullets \$5, \$8 and \$10 each.

Stay White utility cockerels \$3 and \$5 each.

Send four cents for the Regal White Wyandotte Book.

Free Illustrated Catalogue and Sale List

John S. Martin Box 403 Port Dover, Can.

PREPARING CHICKENS FOR THE SHOW ROOM.

In a short time the birds will be shipped to the various poultry shows throughout the country to compete for prizes. All the birds will be judged by their appearance. When in competition in the show room no credit will be given by the judges for how they appear at home in the yards. But, they will be compared as they are in the show room and prizes will be awarded as the birds appear at that time. Therefore it is of great importance to prepare them for the show and also to take great care in cooping and shipping them to the shows.

There are a few pointers that if it would be lost. Many times an followed correctly many mean the winning of a premium where otherwise award is given over another bird on a very minor difference.

Selecting a bird for the Show.

The more nearly mature the birds, the better, other points being equal. Get as near to the weight as possible with good strength and vigor. They should be in prime condition as to flesh. This will be taken care of by nature if fowls have proper care in feeding. They should be healthy and scaly legs should be avoided.

Preparing for the Show

In preparing birds for the show room it is not necessary to wash dark colored birds, but white birds are greatly improved in appearance by washing about four days before the show. After they are washed great care should be taken to keep them clean. A good way is to put them in a pen with plenty of straw.

To wash them, three tubs are used. The first tub should be filled half full of warm water about 100 degrees, the second with luke warm water and the last tub which is used for rinsing purposes should be full of water from which the chill had been taken.

The fowl is put under the water in the first tub and completely soaked. The head may also be held under a moment or two. The bird is then placed on a clean table and thorough-

ly soaped with good white Ivory soap. The plumage is now ready to be scrubbed which is done gently with a small brush or sponge. Great care should be taken that scrubbing is done only the way the feathers grow.

The bird is then rinsed in the second tub, great care being taken to remove all soap or the feathers will not web out nicely. The legs should be scrubbed well before removing from second tub.

The third and last tub is now used for the final rinsing. Some breeders use bluing in this tub. If used, care should be taken not to get too much or it will stain the feathers of the bird. About one-half as much as used in washing clothes will be about right. The feathers are dried as much as possible by hand then rubbed well with towels, taking care to rub only the way the feathers grow. The bird is now ready for the final drying. This should be done as quickly as possible. A room should be well heated and the bird placed therein. There are several good ways to dry birds.

After the bird has become thoroughly dry, great care should be taken in keeping it clean. Chaff in the coop is a good way.

It is not necessary to wash colored birds. Their appearance can be greatly improved by going over them with a silk handkerchief. Their legs should be washed the same as the white birds. After being washed, they should be trained to coops, same as in show room. They should handled gently and often and speaking to them as often as possible before they are shipped. This will make them pose better when the judge is looking them over.

Sometimes the combs are rubbed with oil to brighten them up. For this purpose sweet oil and alcohol mixed equal parts may be used, or glycerine is also a good oil to brighten the combs.

Shipping the Birds.

After the birds have been properly prepared for the show, it is very important that they be shipped in proper coops so the plumage will not be broken or spoiled while on the road.

Male birds should be put alone in a coop. It is a good plan to ship hens the same way, yet for convenience two or three may be put in a coop together. The coops should be large and roomy. The birds will keep their plumage in good condition if coops are large enough. The coops should be light so they may be handled easily and the express charges kept at a minimum.

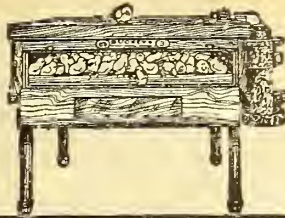
A good way is to place three or four inches of chaff in the bottom of the coop. A little grain may be put in but water should not be put in as this might spoil the plumage. To take the place of water some breeders use apples and vegetables such as beets or a piece of raw potato.

Pennsylvania. E. M. Mengel.

SUMMARY OF THE STORES, 1912-1913 EGG CONTEST.

Variety.	Eggs per pen.
Barred Rocks, 8 pens	638.5
White Rocks, 2 pens	861.5
Buff Rocks, 1 pen	731
Columbian Rocks, 2 pens	748
Silver Wyandottes, 1 pen	783
White Wyandottes, 11 pens	778.1
Buff Wyandottes, 2 pens	683.5
Columbian Wyandottes, 1 pen	755
S. C. Reds, 8 pens	812
R. C. Reds, 5 pens	685.2
Brown Leghorns, 1 pen	650
White Leghorns, 43 pens	853.1
Buff Leghorns, 3 pens	754.3
Black Minorcas, 1 pen	725
Andalusians, 1 pen	810
Aneonas, 1 pen	644
Buff Orpingtons, 2 pens	705.5
Black Orpingtons, 1 pen	390
White Orpingtons, 4 pens	610.5
W. L. Red Cornish, 1 pen	587
Buttercups, 1 pen	479
Total, 100 pens. Average	779.16 per pen.

The White Rocks make a very good showing and while the best individual pen was that of White Leghorns (record 1190 eggs), the two pens of White Rocks that were entered showed an average of 861.5 eggs each, and the forty-three pens of White Leghorns varied from 590 to 1190 eggs. (The eight pens of S. C. Reds and the one pen of Andalusians also showed exceptionally good records. The poorest record was that of the single pen of Black Orpingtons which was entered, which had a record of only 390 eggs. The only pens to average over 200 eggs each were three pens of White Leghorns, two pens coming from England and the other from Pennsylvania also one English pen of White Wyandottes. The great variance in the records of the White Leghorn pens shows that the breeders of other varieties should not be so backward about entering some of their birds in coming contests. It would be especially interesting if more of the leading fanciers who are in the front ranks with quality show stock would enter some of the birds and show that they can do. Many of the best show birds are line-bred or inbred and it would give a good test of the egg laying abilities of such birds as compared with the



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birds from egg farms where outcrossing is practiced to keep up vigor and egg production.

TURKEYS REQUIRE LARGE RANGE

Editor, Poultry Keeper:

In 1911 I bought a sitting of turkey eggs and set them under a hen. Seven hatched out, but only one lived to grow up. That one was a hen, so I bought a tom. This season the hen laid 13 eggs, then I let her sit on them. 10 hatched. I kept her and the young out in the orchard on the edge of an alfalfa field where no other chicks had been, except that the hen herself was raised there. The young ones did well as long as they stayed there, but when they were about half grown, the hen brought them home and after that they died one a day or so, till only one was left. That also is a hen.

Of course I shall try again next season, but I shall confine the old turkey hen out there until the young ones are grown. It seems that they can't grow up together with the rest of the poultry.

For feed I gave them cracked corn and wheat mixed, not very much. As they mostly live on grasshoppers and bugs. The alfalfa is full of such. There used to be lots of turkeys raised around here, but for the last 15 or 20 years turkey raising has not been successful. All the ground is either in crops or pasture and there is no place for the turkeys to go except around the barnyards among the chickens and that does not agree with them.

I have been raising turkeys with more or less success for 35 years, but even experience doesn't seem to help any more, but I will just try, try again.

I am also trying the Silver Campines. They are beauties. It is my first experience with them, but I hope they will do all that is claimed for them. I also have a nice bunch of Reds. I know they are good all-around fowls, for both winter and summer and for farmer and cityman.

Nebraska. Mrs. Anna Brodahl.

CONGDON'S Barred Rocks

BRED FOR Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants. INCUBATOR EGGS—\$5 per \$100; \$45 per 1,000.

Our farm consists of 145 acres of land all within the corporate limits of the village of Waterman and valued at \$200.00 per acre.

\$3,000 invested in Barred Rocks and buildings. Booklet free.

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We give you your selection of almost any variety and all it requires is a few hours work securing subscriptions to one of the best 25 cent Poultry Journals published. Here is an opportunity you can not afford to miss. Everyone interested in poultry will subscribe. One agent writes he secured enough subscriptions for a pair of birds in less than two hours time and that he was offered \$5.00 for them before he got them home. You can do as well. Write today for sample copy and full particulars. POULTRY POST, Dept. 26, GOSHEN, IND.

HENS ON THE HOME STRETCH.

The National Laying Contest Hens Have Only Fifteen More Days in Which to Complete Their Laying Record—Many Changes Taking Place Because Some Hens are Failing to Make Good at the Last Minute—The 300 Egg Hen in Sight.

Fifteen days yet remain to complete the year's record in the National Egg Laying Contest at Mountain Grove, Missouri. The droppings boards and floor of each house has a liberal supply of feathers covering them each morning as the hens are in full molt. Half of the hens are half naked and many have nothing protecting their bodies except pin feathers. We had nearly a foot of snow covering the ground the last week in October, and the temperature dropped to 20 to 23 degrees. The hens delayed putting on their winter cloaks until too late in the season, due chiefly, we think, to the very hot summer.

The English pen of S. C. White Leghorns will win the prize for the year by a safe margin. Two pens, one of Silver Wyandottes from Iowa and a pen of Buff Wyandottes from Missouri, have tied for second place at the end of eleven and one-half months. One of these two pens will be safely in

second place and the other certain of third. It will take the remaining days to decide the tie. Fourth place will be in doubt until the last.

There were 4652 eggs laid in October which makes the grand total 98,840 eggs. N. No. 26, Buff Wyandottes from Missouri won the silver cup for the best record in October. This is the third month this pen has made the best monthly record. One strange thing this month is the fact that Leghorns, Anconas and Minorcas have laid but very few eggs, and the highest ten pens for the month were all Wyandottes, Rhode Island Reds and Plymouth Rocks, all being American breeds.

The pens have averaged over 141 eggs each thus far. The leading pen has averaged 207 eggs per hen. The average made by each breed thus far is as follows:

	Eggs per hen
All Black Langshans average	.....159
All Black Minorcas average	.....158
All Anconas average	.....149
All Wyandottes average	.....148
All Leghorns average	.....147
All Rhode Island Reds average	.....137
All Orpingtons average	.....133
All Plymouth Rocks average	.....131

This is a very creditable record for the breeds considering the fact that the average farm hen lays only about 80 eggs per year.

Each variety has made the following average per hen:

Average eggs

All S. C. White Leghorns	.....170
All Silver Wyandottes	.....168
All Buff Wyandottes	.....165
All Black Langshans	.....159
All Black Minorcas	.....158
All White Wyandottes	.....149
All Barred Plymouth Rocks	.....146
All Anconas	.....149
All R. C. White Leghorns	.....145
All R. C. Rhode Island Reds	.....141
All White Orpingtons	.....139
All Buff Plymouth Rocks	.....138
All S. C. Reds	.....134
All Buff Orpingtons	.....133
All White Plymouth Rocks	.....129
All Black Orpingtons	.....127
All Buff Leghorns	.....125
All Partridge Wyandottes	.....111
All Partridge Plymouth Rocks	.....109

The ten highest pen records thus far are as follows:

Pen	Eggs.
2 S. C. White Leghorns, Eng.	.....2070
19 Silver Wyandottes, Iowa	.....1843
26 Buff Wyandottes, Missouri	.....1843
20 White Wyandottes, Arkansas	.....1736
8 S. C. White Leghorns, Cal.	.....1717
1 Anconas, Missouri	.....1710
10 R. C. White Leghorns, Mo.	.....1697
11 Black Minorcas, Iowa	.....1685
23 Silver Wyandottes, Illinois	.....1658
30 Buff Wyandottes, Vermont	.....1652

Fifty six hens have laid over 200 eggs each. The number of 200-egg hens will exceed those of last year, but none of the individuals will ap-

\$8.50 Buys 150-Egg Incubator And 150-Chick Brooder

Just Think of It!—Why Pay More?

Here is the Most Astounding Offer Ever Made for Chicken Raisers

Here is an offer you simply cannot afford to miss. This gives you everything you could want in a reliable hatcher at a price never quoted before for a machine fully guaranteed—shipped ready to use—no extras to buy. We charge only for actual cost of material and labor with one small profit, and depend upon enormous production.

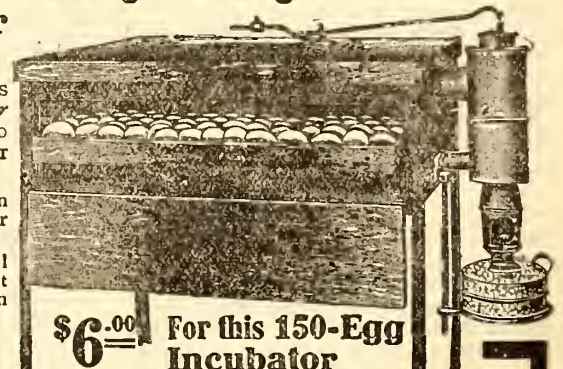
Low buying prices, our modern factory methods and our direct to you plan cuts the price. Stop! Think of what this means! Where else have you ever heard of such an offer?

The machine has the best regulator; dependable thermometer; strong, well built egg trays; all metal safety lamp with bowl stamped out of sheet steel; best lamp bracket; steel legs; best egg tester. Write for this wonderful proposition on

THE ROCKFORD

Incubator and Brooder

Incubator alone, \$6.00. Metal Brooder, \$3.00. Both Incubator and Brooder, \$8.50

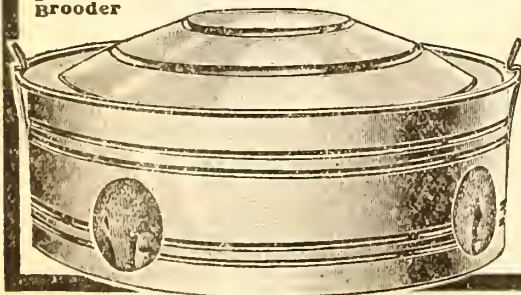


\$6.00 For this 150-Egg Incubator

It comes to you all set up (not in knock-down form). Just fasten the legs and lamp bracket and start the hatch.

Money-Back Guarantee

\$3.00 for this 150-Chick Brooder



You could not ask for better quality—to pay more is needless. It is heated with warm pure air. Foul or impure air is carried off. No chance for lamp fumes to enter egg chamber. All parts are heated evenly. Side walls and top are made of 1 inch lumber and lined with heavy deadening felt and again lined with 1/2 inch lumber inside. Heat cannot get out—cold cannot get in—fuel is saved.

The Brooder is water heated—fire proof and weather proof—easily handled.

Write at Once for Full Facts

Don't let anything keep you from this remarkable proposition. The quality is so good—the guarantee so strong and the price too low to let anybody miss it. We guarantee the incubator to satisfy you in batches and also guarantee the metal brooder to raise chicks to satisfy you or we return your money.

Write us at once so we can lay the whole proposition before you. Address—

The Rockford Incubator Co., Box 11 Rockford, Ill.

proach the high record of "Lady Showyou." The ten highest individuals thus far are as follows:

Hen.	Eggs.
62 S. C. White Leghorn, Eng.....	258
860 Buff Wyandotte, Vermont.....	255
600 Buff Wyandotte, Missouri.....	253
55 R. C. White Leghorn, Mo.....	252
61 S. C. White Leghorn, Eng.....	246
66 S. C. White Leghorn, Eng.....	243
77 Ancona, Missouri.....	236
3810 Silver Wyandotte, Iowa.....	229
2028 R. C. Red, Mo.....	227
64 S. C. White Leghorn, Eng.....	226

In the feeding test or experiment ten different rations and methods of feeding have been tried out. The rank of the various rations are given below. Each pen consisted of five S. C. White Leghorns and five Buff Orpingtons. The result is as follows:

Method	Eggs.
Maine method.....	1588
New York Method.....	1510
Norwich Feeder.....	1495
Canadian Method.....	1467
Confined to house.....	1462
Feed of all kinds.....	1397
Saylor Method.....	1394
Farmers Method.....	1377

Egg Farm Method
 Connecticut Method.....1226
The Three Hundred Egg Hen in Sight.

Is the three hundred egg hen a possibility? We believe that she is. The day is not far distant when this record will possibly be reached by some experiment station or some reliable egg laying contest. Some were inclined to question the record of "Lady Showyou" the 281 egg hen which was developed at this place in our last year's contest. But we are now told that Canada has a 282 Barred Plymouth Rock hen at the Guelph, Ont. Experiment Station. The contest at the Storrs, Conn., Experiment Station has just announced a 282 egg S. C. White Leghorn hen, and the Oregon Agricultural College reports a 291 egg hen. With such records as these coming from such reliable institutions, are we not rapidly approaching the day when someone is going to develop a 300 egg hen? In fact they may become quite common if the present practice of careful selection and systematic breeding is to continue. Only a few years ago we looked upon the 200 egg hen with suspicion, but to day there are thousands of them.

Our aim should not be especially for 300 egg hens, but our efforts should be along the line of obtaining a high average production from our flocks. By breeding from birds selected for constitutional vigor, breeding from high average producing females, and by mating these to bred-to-lay males, we are certain to see a marked increase in the number of eggs laid by the average farm hen. Egg laying contests and poultry experimental departments are doing wonders to increase the production and the profits from the average flock. May the click of the trap-net continue, may hens continue to break records, and we may continue to study the problems of feeding, breeding, housing, care and management, until we may see the day when the average hen will be sufficiently productive to insure her owner a reasonable profit. T. E. Quisenberry, director.

"The Rayo Is Especially Recommended to Beginners Because of Its Simplicity, Absolute Reliability and Perfect Results"

This Incubator Hatches!

Boosts Profits—Slashes Expense!



Reader, now that you've decided to buy an incubator, are you going to choose one on **promise or performance?**

Results are what count. The number of chicks hatched, the amount of oil used, the freedom from care and attention, and the assurance that the incubator will perform season after season, the same as the first time it was used.

Standing beside several types of machines, the "Rayo" has shown its superiority time and again. In one instance averaging 16 chicks more to a hatch with one-fifth the quantity of oil. This superiority of the

isn't just a matter of luck. The superiority is built into the machine and there isn't an old-style, lamp-on-the-side machine that will ever equal it. Besides saving dollar after dollar on oil and 15 to 20 chicks each hatch, the Rayo puts an end to all the fudgery of old-style machines.

The "Rayo" requires only one filling to a hatch. Eggs and thermometer can be seen through double glass top, which raises for airing, cleaning and turning eggs. Lamp under egg chamber gives perfect radiation. Double wafer thermostat acts on flame—produces exact heat needed—none thrown away. Automatic ventilator. Turn eggs semi-automatically without touching trays. Clean lamp without removing chimney or tank. Oil tank holds five quarts, a month's supply. Strong redwood case, covered with steel, enameled like mahogany, making it fireproof and handsome.

The Rayo's claims are based on actual facts. Hundreds of experienced poultrymen will have no other machine. Beginners sure of success. Low, direct, freight prepaid prices bring it within reach of all.

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Burns low grade kerosene or natural or artificial gas.

Duplex Combined Brooder Stove & Ventilator

Has double heating surface, which saves fuel. Brooder house is perfectly ventilated through the stove. There are no openings in the walls or ceilings to let pure and warm air escape and make dangerous draughts. The "DUPLIX" takes the foul air off the floor with the carbon dioxide from the breath and droppings of the chicks, which is a prime cause of White Diarrhea so terribly fatal in small chicks. The above two features are not found in any other stove which makes the "DUPLIX" the most efficient and economical brooding device on the market.

DUPLIX BROODER STOVES ARE MADE IN THREE SIZES and will care for colonies of 50 to 300; 100 to 800 and from 500 to 1500 and do it with less expense and labor than any other system ever offered.

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CRY-5-CO GRIT (PETRIFIED SHELL)
 95% Pure Carbonate of Lime.
 More eggs, harder shells, healthier hens.
 cost 1c per pound. Ask your dealer, look for trade-mark, write for booklet. W. A. REUTZ & CO., St. Louis, Mo.

Ideal Aluminum Leg Band
 To Mark Chickens
CHEAPEST AND BEST
 12 for 15c; 25-50c; 50-50c; 100-60c; 175-45c;
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LAND AND WATER FOWLS, all breeds and varieties.) Fine guaranteed stock, reasonable. Special price on show birds. Send for free catalog.
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 25 for 30c; 50, 35c; 75, 50c; 100, 65c; 200, 1.00. No stamps accepted.
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130-Egg Incubator and Brooder
 Freight Paid East of Rockies **\$10**
 Hot water; double walls; copper tank—best construction. Write for Free Catalog.
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 Oats Sprouter almost given away. Get our special offer No. 3. Don't miss this opportunity. Write
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 Prices will be made that must move them. Write me your wants. Specials at \$1.50, \$2, \$5 each. Satisfaction guaranteed. Progressive Farm, J. C. Beare, Fort Gage, Ill.

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 Simplest, surest hatcher ever built, 36 years experience. Earning \$1,000 profit easily every year for hundreds of others. Sold direct, guaranteed.
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DOLLARS IN HENS. Reduce cost of living. Produce your own Eggs and Poultry. No large space required. Our poultry magazines tells how. 4 mo. trial, 10c. Sample free. Poultry Post D-26. Goshen, Ind.

A NICE START FROM SIX PULLETS.

Editor, Poultry Keeper:

I send you an account of what I did one year with six White Wyandotte pullets. They were hatched the last of July and began laying the next 15th of February. With a small incubator and 4 of the hens I raised 208 chickens. The eggs which I did not need to set were sold and the young cockerels when broiler size. The eggs and broilers paid for all the feed for hens and chickens, and October 1st the hens had to their credit \$7.86. I have besides this, 75 nice pure bred pullets and 4 good cockerels. I believe they cannot be excelled as layers as 4 of mine laid 78 eggs in 22 days which I think is some laying. The total number laid from February 15th to October 1st was 733 eggs and two of the hens were set once and two were set twice and raised their chicks.

Mrs. Hattie M. Bailey.

Vermont.

SHIPPING BABY CHICKS AND EGGS BY PARCELS POST.

I have been shipping baby chicks for a few years and shall continue to do it although I do not like this part of the business, for it is an unnatural way. I refuse to send when it takes more than two days in transit as the long fast is weakening on the chicks.

The important part is the putting up and I wish especially to tell of the room required for twenty-five and fifty chicks, for I find by continual shipping that almost all boxes sold for twenty-five and fifty chick boxes are too small for these numbers, unless in winter weather and no one has any business shipping chicks then. Most of the boxes made are 12x6 floor space and five inches high, or seventy-two square inches floor space for twenty-five chicks. I have found that when twenty-five chicks are put into such compartments, even in April, some will smother and in one shipment of four hundred the compartments along one side had a large number of dead chicks in them. They were very likely kept near heater pipes. After this experience, I always put seventeen or less, if order did not come out even, in a twenty-five compartment and had no more trouble whatever. The boxes I used the year before were 13x7, giving a floor space of ninety-one square inches for the twenty-five chicks, and this is just about right. Whenever I make a box I make it fully this large and have no smothering.

The chicks should never be taken from the machine until fully developed. They must be lively and come to the doors, or the change in temperature may stop the development of the yolk and they will surely die. I lost one whole lot from shipping them too "green." I have fed them and find that they carry finely after feeding. I would urge all buyers to demand a box 13x7x4 1/2, or do not buy, for you can obtain them of some manufacturers.

Shipping Eggs by Parcels Post

I have sent a number shipments via parcel post but my opinion is that they do not do as well as when sent by express. The only box fit for it, I found, is either a wooden one with fillers, or the "Eyrie." The latter has strong fillers. I used a good box the

too weak. I wanted several sittings of eggs sent me by parcels post to test this way of shipping, but the breeders I bought of did not want to do it. I would not try to send more than two sittings. Fifty and one hundred lots in paper boxes are largely a failure. There is nothing like a twenty-four quart basket for forty-five and fifty eggs, and a light, thirty dozen crate for over one hundred. In these light crates I can pack the eggs so that almost none can be broken. I pack them using either fillers, so that the filler below and at the side of the egg is empty, and put sawdust in also, or wrapping each egg very large and putting twenty-five in a layer, or fifty in each end. When you pay god money for eggs, better pay a little more for safe carriage. Parcels post will be fully tried out the coming spring.

W. W. Kulp.

Pottstown, Pennsylvania.

FINDS THE REDS, ROCKS AND LEGHORNS ALL GOOD LAYERS.

Editor, Poultry Keeper:

Some time ago I said I would send a record of some of my R. C. Reds for the year 1912. I became sick and it was necessary to undergo an operation therefore my records are only for ten months.

- No. 6 laid 158 eggs beginning in Jan.
- No. 7 laid 202 eggs beginning in Dec.
- No. 8 laid 156 eggs beginning in Jan.
- No. 10 laid 195 eggs beginning in Jan.
- No. 11 laid 127 eggs beginning in Jan.
- No. 3 laid 160 eggs beginning in Jan.

These hens were raised and kept in a Philo system coop. I had two pens of Barred Rocks that did almost as well.

I have seventeen coops now and have a fine lot of young stock for this season's work. I have mated all of my pens that I expect to use for breeding to males from hens that laid 242 eggs and over. I have been keeping a pen of S. C. Brown Leghorns for the sole purpose of supplying my father-in-law with pullets of this breed. I have become so fond of them and they made such a wonderful record as layers that I bought a male bird from W. W. Kulp to mate with them and now have 45 pullets and a pen of ten hens. They certainly are alert and trim looking.

Mrs. Charles F. Goldsmith
 New York.

A Natural Poultry Land

Poultry do best in an open winter country. It is artificial to house birds 4 to 5 months in the year.

In the open air, with ample green feeds the year around, they lay better, grow faster and are more vigorous.

The Southeast is a natural poultry region. A growing season of 200 to 300 days annually (varying with locality) allows for a wide range of green foods the year round and reduces the cost of maintenance to a minimum.

If you intend starting in the poultry business and have but limited means, no section can offer you more certain success than the Southeast.

Land at \$15 an Acre up

prices varying with improvements and location, can be purchased in many sections near to good local markets. A Northern Florida poultryman sells his eggs the year around to a local hotel for 40 cents per dozen. Thus profitable home markets are assured. Small fruit growing in connection with the poultry business makes a profitable combination.

Send at once for the "Southern Field" magazine, lists of farms for sale and other information you may desire.

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 Room 81 Southern Railway Washington, D. C.

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 Ga. So. & Fla. Ry.

THE ADVICE AND EXPERIENCE OF A CITY BACK LOTTER.

My breed is Wyandottes and I chose the Buff variety because they look cleaner than the white in the city. My selection has been wise as the result of the Missouri Egg Contest is showing. The Buff Wyandotte in my estimation is the best all around bird. Last January and February my hens laid as many eggs as in April and May.

My house is a Dyer open front house. I have only wire netting on the open side and never use any curtains even in the coldest weather. Have never had a chicken with a cold since I started five years ago.

Have been buying either eggs or baby chicks each year and raise about 75 annually. Have never tried raising any chicks from my own eggs, which was the advice of this journal and others. I should have stuck to it but, no, I had to do it this year and here are my results. Mated about 15 of my 2 year old hens to a fine cockerel. The eggs hatched well. I use hens, sitting to or three at once. This is less bother than an incubator when you are only raising 75 to 100 chicks.

My troubles now began. I did not lose but one or two probably thanks to my good care, but they grew very slowly.

The entire lot of them don't seem to have that life and vigor that my chicks had in former years. My pullets are way back and my capons last year at this time were about twice as heavy as these are now. Never again! I should have stuck to this journal's advice.

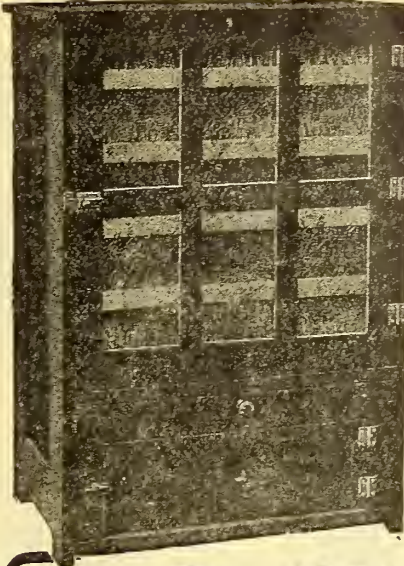
Chickens lay more eggs in confinement than on free range especially without a cock, but their eggs will never produce strong, healthy chicks. If you want to be successful with chickens on a city lot buy either baby chicks or eggs from hens that have been on free range. One more word about the rooster.

In the last few years many people have started with chickens on city lots, and have been rather successful but unless they caponize or kill off the roosters early in the summer, the city authorities will put a ban on keeping chickens. It almost came to this in our city last summer. In fact there are certain districts here now where the neighbors will not stand for it. The rooster is the cause of it all. The only way to take the crow out of him is to either caponize or kill him. As you will see from the foregoing he is no good to the city lotter anyway.

Herman Elick.

Illinois.

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. (costing ten cents per word for all four months, is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.



Increase Egg Yield This Winter, Save Money on Feed, Make Chicks Grow Rapidly, Strong

by installing an Ideal Grain Sprouter and feed your hens the green food that is absolutely necessary to insure prolific egg production.

Eggs are going higher in price every year, the demand is far exceeding the supply, and it looks like good times and plenty of money for the man who has one of our sprouters.

The IDEAL Grain Sprouter

- is the best machine for sprouting grain ever made;
- will produce sprouts over two inches long in 24 hours;
- sprouts any kind of grain better, in less time and without fuss or muss;
- produces three to four bushels of feed from one bushel of grain;
- pays for itself in a single month by saving in feed bills, increasing egg yield, supplying food that makes chicks grow strong and vigorous.

The "Ideal" is made in several sizes—for a few hens up to hundreds. Can be used in summer (without lamp) as it has proper arrangements for moisture and ventilation to produce quick results and crisp feed.

CONSTRUCTION
Made of best lumber—double walls, insulated with heavy deadening felt—inside lined with galvanized iron—frame of trays heavy galvanized iron—bottom of tray heavy wire netting—front of machine glass, which induces green sprouts. These sprouts require very small amount of artificial heat which is produced by the Ideal Safety Lamp, the fumes of which pass through ventilators.

Get Special Low Price Offer Today

Don't delay but write at once for special low price freight prepaid introductory offer, full particulars and description of this perfect grain sprouter. No poultry man should be without it. It is the Biggest Money Maker for the Poultryman since the Incubator was Invented.

Made by J. W. Miller Co., Manufacturers of Incubators, Brooders and Poultry Supplies, which is sufficient guarantee of its excellence.

J. W. MILLER COMPANY, Box 604 ROCKFORD, ILLINOIS

Feeding Question Solved

YOUR CHICKENS

WILL GIVE YOU

FERTILE EGGS IN ABUNDANCE

If fed H-P Egg Scratch and H-P Egg Mash. These High Protein Foods are Clean, Sound, Wholesome and rich in sweet, nutritious Egg-Making materials. They are balanced specially for Egg production, and will keep your laying hens healthy and profitable. Send postal for catalog and freight prepaid prices to,

KNOLLENBERG MILLING CO., Dept. A, QUINCY, ILL.

IMPORTANT AND PROFITABLE

Secure two new subscribers and take advantage of our special offer of three subscribers for \$1.00. This offer makes it easy for you to get your paper free for one year.

The reader can secure two subscribers at 50 cents each, send us \$1.00 and we will send Poultry Keeper one year to the one who has procured the new ones.

It is easy for one to secure two new subscribers in almost any locality. All it takes is a little energy and a few minutes, time.

There are many interested in poultry raising who would subscribe for the Poultry Keeper if they understood the value of the paper. Others are securing their papers without expense to themselves under this offer. Are you willing to do the same?

Below is a subscription blank on which the names and postoffice addresses may be written. We urge an early effort to secure three names under this liberal offer. A dollar will reach us if sent in a letter.

POULTRY KEEPER, QUINCY, ILLINOIS:

Enclosed find \$1.00 for three subscriptions to Poultry Keeper for one year.

NAME	POSTOFFICE	STATE

IMPROVING THE POULTRY FLOCKS.

Many of the farmers who have discarded the mongrel flocks that they kept a few years ago and adopted some one of the standard breeds instead, still fail to get the eggs that they should. Almost any hen will lay in warm weather, the natural laying time, but only selected and properly cared for flocks will produce eggs in any number during the long, cold Maine winter. The modern methods of feeding and housing may have been adopted and the hens may have been kept scrupulously clean and plenty of light and fresh air provided, and still the flock may not do as well as that of a neighbor who has adopted similar methods, and perhaps the same breed. When this is the case, as it often is, the farmer who is seeking the best possible results must look for and find the cause, and that is pretty sure to be the fault of the hens themselves. The strain may not have been a good one at the start, and if this is found to be the case the flock must be disposed of and a new one procured. But more often the trouble is with the individuals or some of them in the flock rather than with the strain, for breeders are honest as a rule, and when one is told that the stock he is buying is from a good laying strain this is usually to be relied on as true.

The selection may not have been well made at the start. The pullets may have been late hatched, or the mothers may have been forced for laying to the impairment of their constitutions, rendering them unfit for breeding purposes, conditions which must be avoided as much as possible. But the trouble is more likely to be that the flock was all that was claimed at the start, but has not been well mated in breeding time, and that the breeder has impaired his flock in this way. If the hens have been unnaturally stimulated to make them lay, and their eggs have been used for breeding the result is likely to be weak chickens, that, if they live to maturity will become stunted and imperfectly developed pullets and cockerels, at least a portion of them.

Then, the farmer has more pullets than he has room for, a neighbor comes along who knows more about selection than the neighbor does and wants to buy a few pullets. The farmer is glad to reduce his flock and receive a fair price for some of his pullets, the result being that his best pullets are taken away to improve another man's poultry yard. He kills off some of his hens, very likely his best ones, because they are large and will produce a fine lot of meat for the market, and augments his flock of layers with the weak and undeveloped pullets. He thinks they will continue to grow and make as good layers as their mothers were, but they will not. Then somebody wants to buy his best cocks and cockerels, and being unable to see why the others should not develop into just as good or better birds before the breeding season, he pockets the money offered and lets



Queen

“OUT of 120 eggs, my first hatch, I got 110 chicks; and the second hatch, out of 120 eggs I got 119 chicks.”
 Ida E. Canady, Darlington, Mo.

That's a Queen habit. It has the hatching faculty. I don't claim the Queen is a phenomenal incubator, but it is an honest, dependable hatcher, and comes as near hatching every fertile egg put into it as any incubator at any price.

28 Points of Excellence

Strong, Vigorous Chicks

The Queen is completely automatic and establishes right conditions of heat, air and moisture. Chicks come with the strength to live. You can succeed with the Queen. Hundreds of people are equaling Miss Canady's record. I want you to know about the 1914 Model Queen and its 28 Special Features. I want you to know its record and what you may expect from it. Write and let me mail you catalog. Sold on a most liberal plan. Satisfaction or money back.

Address

P. M. WICKSTRUM,
 Incubator Man,
 Box 2, Lincoln, Neb.



the male birds go, to the great detriment of his flock. This is all wrong and the sooner the farmer learns it, the better it is for him and his birds.

The eggs of only the early hatched hens which have developed quickly, laid early, and laid well all through the first year should be used early the second year for hatching. The birds which have been forced and which have worn themselves out by heavy laying will not be the mothers of strong healthy chickens and their eggs should never be used for hatching. This is most important and should be remembered. Eggs that are uniform in size and color, neither unusually large nor unusually small, that have been laid by hens that have never been forced, and that lay every other day, and no oftener, will produce chickens more likely to become heavy layers than the small eggs of the pullets which are hatching every day, and those who have the temptation to set the eggs of these prolific layers should overcome it, and never yield to it. The hens selected as mothers should be broad of back with legs wide apart, bright eyes, freedom from lice, and with every appearance of a strong constitution and good general health; characteristics that are highly essential when one is trying to improve his strain, as all should do every year.

Both cockerels and pullets hatched in this way are likely to possess all the qualifications necessary to stock

improvement, but such is not always the case, and for this reason the young flocks should be culled carefully and often before the birds go to the laying pens in the fall. Cockerels and pullets should be separated as soon as the sex can be determined, for best results, and the sexes reared in flocks by themselves, thus preventing the petty annoyances which often retard the growth of the pullets to the detriment of the stock.

There is a popular idea that cockerels reared from eggs laid by the same hens that laid the eggs from which the pullets developed are not safe for use in breeding, but this is only true in the rare cases in which cockerels and pullets are full brothers and sisters, and even then the results are often most satisfactory. It is well to introduce new blood into the flock every five or six years by buying one or more male birds elsewhere, but even then it is best to buy from the same reliable breeder from whom the original stock was procured. Line breeding is a successful method, but it should not be carried too far. The best way is to have two or more flocks at breeding time, alternating the carefully selected cockerels between the different pens. From one of the pens the cockerels for next year's breeding pens should be selected, the pullets that are to eventually become the breeders being selected from the other pens. In culling all birds that are under size,

of color or in any way defective should be promptly discarded and sent to market as soon as they may be profitably sold. Where there is a doubt in your mind as to the suitability of any individual bird for retention in the pens, the only safe way is to discard the bird.

This having been carefully done you will have a laying pen of which you may be justly proud, but even then there will be some birds in your flock which your friends who are well informed in regard to poultry will consider undesirable, and this will be true even though they may be good layers, or even phenomenally good in that respect. It is all right to keep these birds and use their eggs for commercial purposes, but when the time comes to make up the breeding pens there should be another careful selection, and many birds may then be safely discarded, and this should be continued until you are thoroughly convinced that every bird in the pens will be capable of producing strong and healthy well formed and well colored chickens. This matter of selection is extremely difficult with the inexperienced, and with such, it is best to consult some acquaintance who is more experienced than you, and who will be glad to give you the benefit of his experience and advice.

The future of the poultry industry in Maine as well as the world over, depends more largely than anything else upon the selection of the breeding pens, and of all things, that this never be neglected is most important. Special pains should be taken to become familiar with the good and bad points of every individual bird handled, and great care should be taken in selection of male birds, that they are especially strong on the points which are weakest in the hens, for thus in a large measure are overcome in the progeny, the defects of the parent stock.

The day has gone by when the hen is a hen, nothing more, and he who has the best selected lot of birds, whatever the breed may be, will profit most for his labor and pains, in dollars and cents, which is what most farmers, as well as others are working for.

H. L. Goodwin.

Maine.

AVOID THE DANGERS OF STALL FEEDING.

This is the timely warning we have noticed in all the agricultural papers of late—a warning issued by Dr. Gilbert Hess, one of the foremost veterinarians in the United States,

Dr. Hess backs up his warning with sound facts. He states that an animal taken off pasture and put on dry feed is very liable to get out of fix because corn, oats and hay do not contain the laxatives and tonics so abundantly supplied in grass.

The Doctor describes some of the many ailments that farm stock often suffer from during the winter months while on dry feed and closely confined. Some of your animals, he says, are sure to become constipated, others off

feed, rough in the hair, with paleness of the eyes, lips and nostrils, or the legs may stock, or dropsical swellings of the abdomen appear, or the urine may become yellow and thick, but the most common ailment of all, especially among hogs, is worms—worms. Our readers know full well that these ailments are often prevalent.

Dr. Hess advises the use of Dr. Hess Stock tonic while stock is on dry feed. He states positively that his scientific preparation (which by the way has been on the market over 21 years) will make stock healthy, expel worms and keep your animals fit and well. He gives a remarkable guaran-

tee to the effect that his dealer in your town will supply you with enough Dr. Hess Stock Tonic for all your stock, and if it does not do as he claims, he has authorized his dealer to return your money. No man, in our judgment, could offer more.

Dr. Hess is a fully qualified veterinary scientist as well as a doctor of human medicine and it is perfectly natural to assume that he knows the needs of farm stock and is fully capable of compounding tonics and correctives to meet those needs. In view of

liberal money-back guarantee, we urge our readers to put Dr. Hess Stock Tonic to the test.

SIMPLEX



No Wick
No Gas

No Flames
No Smoke

Direct
Contact
Burner

1500
Chicks
Successfully
Brooded around one Stove

BROODER STOVE

Here's the proof:

The "Simplex" Eliminates White Diarrhoea. Read this letter. It proves that we know what we are talking about when we say the Simplex will prevent White Diarrhoea.

Chicago, Illinois.
April 9, 1913.
Simplex Brooder Stove Co.,
Grand Rapids, Mich.
Gentlemen:

Enclosed please find my check for \$29.50 in payment for Brooder Stove shipped me on the 7th. This is the second stove I have purchased from you this season, and of course the last one is purchased because the first one is doing the work. The Stove works entirely satisfactory, and does all that you claimed it would do. I believe you have solved the bothersome problems in brooding. The Stove has entirely eliminated White Diarrhoea from which I suffer heavy losses, losing 50 per cent of my hatch.

The losses with the Stove have been very small.

Very truly yours,
Judge J. C. Everett.
Farm at Holland, Mich.

How Many of? Your Chicks Live?

With a Simplex Brooder Stove you can actually raise 20 per cent to 50 per cent more chicks than by any other method.

The Simplex Brooder Stove not only raises more chicks for you—it also raises 75 per cent of your operating expense and 90 per cent of your time and labor. Just think what this means to you in profits. The Simplex can be operated in almost any room. It is built and sold by experienced, practical poultrymen. Now is the time to investigate—get your Simplex Brooder Stove before winter arrives.

Upon request a catalogue will be sent, containing information to poultrymen, also letters from men who have tried the Simplex methods.

226 Fourth St., N. W. GRAND RAPIDS, MICH.
Sign your name and address below and catalogue and letters will be mailed.

Simplex Brooder Stove Co.
226 Fourth St. Grand Rapids, Michigan

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Send in list of the publications you wish and we will quote a reduced rate on the address.

Poultry Keeper Pub. Co.
QUINCY, ILLINOIS

Vegetable Beef Scrap!

A Boon to Poultry Raisers

Contains 50 per cent more available protein than commercial beef scrap. It saves feed because the protein is predigested. Can be made anytime, anywhere, by anyone. It is scientifically correct, containing all the elements of the egg. Greatest egg maker known. Formula; Full Directions; Practical Poultry, a 50c magazine, 1 year; The Poultry Doctor; and Profit Sharing Coupon whereby you may save from 5 per cent to 50 per cent on all your supplies. THE NABOB REMEDY CO., Box R, Gambier, Ohio.

PROFIT IN A FLOCK OF 60 WHITE LEGHORN PULLETS.

Editor, Poultry Keeper:

I always read with interest the experiences of others in the poultry business, and will give the egg record of my 60 White Leghorn pullets for the year of 1912.

	Eggs.
January	584
February	736
March	902
April	1087
May	1172
June	1145
July	1190
August	1059
September	856
October	488
November	398
December	588

Market price for eggs \$218.09
For feed and expenses 100.37

Profit, \$117.72

You will notice they averaged 170 eggs each, with a profit a little less than two dollars per pullet. In January 1913 I sold 10 and kept 50 of the Leghorns over. During the eight months to Sept. 1st, 1913, they laid 4638 eggs. As they had commenced molting, I disposed of them the 1st of September to make room for 165 head of young stock that I raised from 200 eggs hatched in an incubator. I fed a mixed ration of all kinds, also a mixed dry mash that I get from the experiment station.

Indiana. D. M. Barber.

THE BEGINNERS POULTRY PLANT

The fall of the year is the time when there is much work to be done on the poultry plant. It is time to get the birds housed in their new quarters. The pullets should by this time have been separated from the cockerels and if they were early hatched, should be laying now. These birds should be moved to their permanent quarters before they begin to lay, for otherwise they will stop laying for a while until accustomed to their new places.

First of all the winter quarters should be gone over thoroughly. The entire coop should be gone over. Take out all the movable fixtures and give them a good spraying with some louse killer, then paint them or put on a coat of white-wash. There are several different preparations used for painting roofs and fixtures which, if done well, will keep all lice and mites away from your birds.

Carbolic acid mixed with the white-wash will do wonders. The mites cannot stand the fumes of carbolic acid and will soon make their way from the

Clean and disinfect your brooders and and put in new dirt and on top of this oats or rye straw. This will also help to keep light colored birds clean. It is a wise plan to white-wash the interior of poultry houses.

Also be careful about the nests. Do you appreciate the fact that nests fastened to the wall are invitations for lice and mites? Have no other nests but on legs or hung on hooks as they do not come against the wall, and by all means have them removable if possible. Lice and mites will come and you must keep up a constant warfare against them. Remove nests and spray once a week with a good disinfectant. With a good sprayer and white-wash brush you can fight the enemy in good shape.

You will also need to lay in a supply of dust for dust baths. The best thing you can get is fine ash siftings. By adding to this some lice powder you will help your birds wonderfully to rid themselves of lice.

The time to gather green food is at hand. One of the best and cheapest green foods is oats sprouted. Put about three quarts of oats in a pail; fill with warm water and cover, and let stand in a warm place for 24 hours. Then put in boxes and spread a cloth over the tops and wet with luke-warm water two or three times a day. By the fifth to seventh day your oats will be sprouted to fit size for use. Mangels are also a good food for hens.

Clean and disinfect your brooders and get them in trim shape. Do not put them away uncleaned. There are good prospects ahead for the poultry man and if he would enjoy the best of it he should do all the work on the poultry plant when it is time for it. Never put off the work from day to day. "Do it now" should be the motto of every poultry fancier.

E. M. Mengel. Pennsylvania.

TWO DOLLARS A YEAR PROFIT.

Editor, Poultry Keeper:

I am sending a year's record for eight yearling hens and twenty-two pullets in a coop made by boarding up between two corn cribs, and lining the inside with a cheap tarred paper. This made a coop 14 by 16 ft. with a 4 by 7 foot opening covered with muslin in south side, and plenty of holes in the old shingle roof for fresh air. During January, February and March we had twenty-eight days ranging from zero to 30 below and there was not a hen that had her comb frozen. Several of the hens had the feathers that stick up where they put their heads, frozen stiff from the breath of the fowls, so that they looked as

Don't Feed Green Food!

Succulenta Tablets
 Do away with the bother by using
 They are better and cheaper and more relished by all fowl. Simply dissolve one tablet in one quart drinking water for fowl. Sample can (100 large tablets) by mail 50c. Can of 250 large tablets by mail \$1.00. **YOUR MONEY BACK IF NOT SATISFIED.** Drop postal for particulars to The Succulenta Co., P. O. Box 405-11, Newark, N. J.

Smith Sealed. Prices postpaid
 -12.50c; 25.50c;
 60, \$1.00; 100, \$1.50;
 500, \$6.50; 1000, \$12.50.

LEG BANDS

Leader Adjustable. Prices postpaid
 12.15c;
 25.25c; 50, 40c;
 100, 60c; 250, \$1.25;
 500, \$2.25; 1000, \$4.25.

FREE SAMPLES

Write postal or order now Satisfaction guaranteed. Address THE EYES-DAYES CO., Inc., Dept. 322 (Bath Creek, Michigan)




25 PAT. APPLIED FOR

Aluminum only; two sizes: adjustable to fit any fowl. Held by double lock. Can't lose off. postpaid 12-15c; 25-20c; 50-35c, 100-60c. Initials 10c per 100 extra. 50 or less 5c. Also Pigeon Bands.

T. CADWALLADER, Box 1206, Salem, Ohio.

SUCCESS WITH POULTRY

The best book on poultry ever published, one which embraces every branch of the poultry business, is Success with Poultry. From the first chapter, "How to Get Started," to the different chapters an every phase of poultry for profit, this is a book that is of greater value than any other ever published.

Do you want to get plans for building used in the big poultry plants of the country? Success with Poultry will tell you.

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Do you want to learn about raising capons, foods and diseases of poultry and remedies? Success With Poultry tells this.

Success With Poultry contains 128 pages (9x12 inches in size) with numerous half-tones and etchings. Price is \$1 per copy. For price of book alone we will furnish a full year's subscription to Poultry Keeper and send Success with Poultry postpaid. Offer is good for new subs or renewals. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

45 Varieties Land and Water Fowls

Send for free illustrated catalogue, which tells you much you should know. Stock and eggs at all times.

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MADISON SQUARE WINNERS. Rose and S. Comb Brown and White Leghorns of the best strains bred. 242 240 and 244 egg strains. Big eggs, big birds. Winners everywhere, start with the best. **BARRED ROCKS, WHITE GIANDOTTES, the very best.**

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Box 20 Po ttstown, Pa. Michigan. Ohio.

Millions of Chickens and Pigeons

Thousands of Pet Animals and Birds

die each year because their owners do not notice first symptoms. I can show anyone in five minutes how to tell at a glance, when feeding or tending the flock, whether there is anything wrong and just what to do to remedy it right at the start when cures are easy.

The watery eye, dirty beak, discolored comb, condition of the droppings, tell the story at a glance before the chicken really acts sick. A penny spent then is worth a dollar spent later. You can easily tell whether a chicken is being run down by lice or mites; whether roup, canker or bronchitis is starting and just what to do to effect a cure.

I have made a special study for twenty-five years of poultry and pet stock troubles—how to diagnose quickly and how to apply the easiest and surest remedy. I want to show each reader of this how to raise more and better chickens, keeping them healthy, active and productive. Every additional thousand chickens in the country helps the sale of Lee's Lice Killer, Lee's Insect Powder, Lee's Egg Maker and Germozone, which are sold at more than 10,000 towns in the United States and Canada. I will send free our Poultry Book and our pamphlets, "Pointers for the Amateur" and "Diagnosis of Diseases of Poultry and Pet Stock" and also answer any special inquiries free of charge.

Lee's Lice Killer is the wonderful insecticide that you have only to paint or spray on the perches or roosting places of chickens, pigeons or any birds to get rid of insect pests. No dusting, dipping, greasing or handling of individual birds.

Germozone is Antiseptic, Germicide, Fungicide; the most widely popular remedy for Poultry, Pigeons, Dogs, Pet Animals and Singing Birds. Its use is indicated to a large majority of affections of the eyes, nostrils, mouth, throat, skin, crop and bowels.

Get posted now before troubles set in. Address your letter to

GEO. H. LEE CO. Dent. 15 --Omaha, Nebraska

though they had horns starting from their backs. The above statement is for those who have doubts about open front coops doing for laying hens.

I fed wheat and oats in litter for the morning feed and same at noon, until I started to feeding green cut bone the eighteenth of January. The evening feed was ear corn chopped into small pieces. The water dish was set on warm bricks to keep it from freezing. I fed one pound of green bone at noon and by the first of February they were laying well, and I soon came to the conclusion that I was feeding too heavily as I had as many as sixteen wanting to sit at one time. I fed one third wheat and two thirds oats, nearly four quarts in the morning; one pound cut bone at noon and eight ears of corn at night. The heaviest feed per day cost just fifteen cents and after the end of April they had to look out for themselves, until the end of November when I shut them up again.

The eggs averaged twenty-four cents and a fraction per dozen here and figuring what we used on the table at the same price, with cockerels and old hens sold to the butchers, and twenty-seven pullts (at 50c) for the new season's pen, the thirty Rose Comb Reds netted better than two two dollars apiece. This is no great record, but it shows that a cow has to be a hustler to do as well taking into consideration the money invested.

Egg Yield for the Year.

January	424 eggs
February	286 eggs
March	286 eggs
April	222 eggs
May	372 eggs
June	297 eggs
July	288 eggs
August	363 eggs
September	255 eggs
October	223 eggs
November	26 eggs
December	261 eggs
Total	3378 eggs

F. L. Walter.

MOISTURE AND VENTILATION IN HATCHING.

Why do so many chickens die in the shell?

This question has been puzzling me for two or three years. We have used three or four kinds of incubators, never getting more than one-third of a hatch from any of them. I followed the directions that came with them. Nothing was definite about ventilation only in a general way. I talked with people that hatched a great many chickens. I asked one man who hatches with gas, "How do you ventilate?" "Well, I ventilate from the bottom. There are four or five holes in the bottom and I leave them open from the start. If you don't you will have a lot of dead chicks in the shell." Another said, "I don't ventilate any the first week; the second week a little; the last week open all the ventilators."

I read the book of instructions to see if I missed anything. I will take the hen for my guide and do as she does and see what luck I have. The hen has no holes in the bottom of her nest when she makes it herself. The first week she sits closely, indicating the eggs need little ventilating. After the first week and on through the hatch she will go off the nest and stay, sometimes an hour, indicating that at this stage ventilation is more necessary than at first. These three things, ventilation, moisture and lack of vitality in either male bird or the hen that laid the egg, seem to me to be the causes of dead chicks in the shell.

When I start the incubator again I shall close the bottom tight and just leave room for a saucer of water the last 10 days of the hatch. I shall make holes in the top and be governed by the atmosphere of the room where the incubator is and outside conditions as to how much I ventilate. It seems to me the incubator makers touch too lightly on moisture and ventilation. I want to hear from others on these two subjects.

Mrs. D. E.

WHAT CAN BE DONE WITH A TRIO OR PEN?

I have raised pure bred poultry for several years and have derived quite a lot of pleasure and a goodly amount of profit therefrom.

Let me say at the beginning; I am for standard bred poultry first, last and all the time. There is no logical argument whatever in favor of the mongrel, and I am proud to say that away down here in the South where the move for better poultry has been shown, the people as a whole are beginning to wake up and take notice of the greater benefits to be derived from the breeding of pure-bred poultry. The result is that the mongrel is fast giving away to pens and flocks of good standard bred varieties.

In the poultry journals and poultry departments of farm papers and magazines I see quite a few inquiries, "Can I begin raising poultry successfully from a trio or pen?" Most assuredly one can. In my humble opinion this is the most practical way for the beginner or amateur to start. Quite a lot of would-be poultry raisers go to the fall fairs and shows, see nice classes of birds, get the chicken fever, buy and pay a good price for 25 or 30 good birds. They go home, put them in some ill-arranged house or run, give them feed that is a matter of guesswork and get a few eggs. Nature will assert itself to a certain extent although badly handicapped. They buy and pay a good price for an incubator, put in the eggs, get maybe a thirty per cent hatch, disease sets in and they get disgusted and sell out for about half the price paid. They meet their neighbors and tell them they just can't have any luck raising chickens.

Last October (1912) I bought two trios. One each of a highly advertised strain of S. C. Black Minorcas and B. P. Rocks. Being desirous of keeping these strains pure I built their houses and yards sufficiently large to accommodate them and their this season's off-spring. The houses front south and are about 7 ft. front, 5 ft. rear by 8 ft. wide and 10 ft. long, (better ten times too much room than not enough.) They are built of planing mill scraps, commonly called refuse odds and ends of 1x6 and 1x8. Cost, labor omitted, about \$3 each. Looks are only skin deep. They answer the purpose and will last practically as long as houses costing \$25 and \$30 each.

The yards are 35x50 ft. In November I put two temporary fences across each pen making four pens 25x35 ft. In one pen each I planted equal parts of rye and oats. When about four inches high each trio was given access to their respective pens. This furnished green food until spring when cabbage, lettuce, etc., were plentiful. In each corner of the other pens which were bare I made scratch pens 12x12 by turning 12 inch boards up edgewise. These pens were kept 6 to 8 inches deep in good litter all the time. I use a good grade of commercial



NOW READY NEW PRAIRIE STATE CATALOG

One of the world's foremost experts on artificial incubation and the rearing of poultry, wrote this big 112 page book. His advice is worth hundreds of dollars, especially to the beginner. For example—he tells you how, by studying the ways of hens that stole their nests, he hit upon the idea of the moistened Sand Tray and how it resulted in a wonderful increase in the number of strong, vigorous "chicks that live"—the profit producing kind—the only ones you can afford to raise.

PRAIRIE STATE INCUBATORS and BROODERS

are used and endorsed by leading Agricultural Colleges and Poultry Experts, the world over. For over 30 years they have maintained the lead and with the many new 1914 features, they are simply incomparable. Beginners will be particularly interested in the new Keystone Model which maintains Prairie State quality with all the new improvements and yet sells for only \$9 and up.

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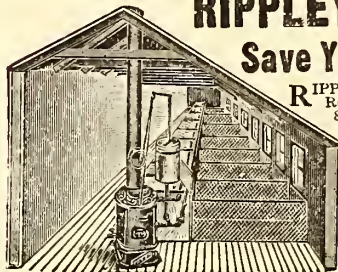
Do it today. A delightful surprise will await you for this is more than an ordinary catalog. It contains in addition to full descriptions of Prairie State machines and their exclusive features, about 60 pages of other valuable information on poultry raising. For example—How to Feed, Rear and Breed for Best Results; How to Grow Green Feed in Winter; How to Build Poultry Houses; How to Treat Diseases; How to Preserve Eggs, etc., etc.

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RIPPLEY'S HEATER AND COOKERS

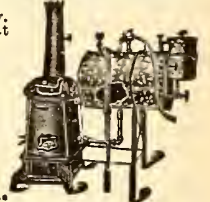
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RIPPLEY'S No. 200 Heater works automatically. Regulates temperature in hovers; will heat 800 feet 1 1/2-in. pipe. Also fine for heating Hog Houses, Green Houses, Work Shops, etc. We sell cookers from \$3.95 to \$50.00. We manufacture full line Egg and Chick Shipping Boxes, Fireless Brooders, Coops, Whitewashers, Sprayers, Carts, Chick feed, etc. Catalog mailed free.

RIPPLEY MFG. CO.

Box 24 Grafton, Ill., U. S. A.



BUFF WYANDOTTES

THE GREAT GENERAL PURPOSE BREED—BIG BARGAINS IN BREEDING STOCK NOW
Let me try to please you. Send for circulars containing best lot of testimonials put out by any breeder. Ten years a breeder of Buff Wyandottes.
ORIGINATOR "HIGH QUALITY" STRAIN.

J. E. WILLMARTH,

AMITYVILLE, N. Y.

scratch feed which was thrown in this litter night and morning at the rate of one quart to ten birds.

At noon they were fed a goodly amount of table scraps, meat ends, bone, etc. Fresh water and ground oyster shell were before them all the time.

By the middle of November both pairs of hens were laying and layed well all through the winter. I used four R. I Reds to hatch my first lot of eggs. Brought off the first hatch of eggs January 2. The last of March I set both Rock hens and in April set three Reds again. All told from these trios I set 136 eggs and hatched 102 chicks.

When the eggs hatched, I would double up or give two hen's chicks to one. I put them in coops and gave the hens all the whole grain and corn they would eat to keep them quiet. When chicks were 36 hours old I gave

water and all the good commercial chick feed they would eat four or five times daily.

I kept the hens in coops until chicks were one week old. I then gave scratch feed and weather permitting, I let them out on a twenty acre free range. However, when there was a heavy dew, frost or rain they were not let out until it was dried off of grass, weeds, etc.

Of course where one has no range, animal food, mashes, etc., will have to be provided. Sometimes they would come in at noon. If so, they were given table scraps. If no scraps, all the scratch feed they could eat up nicely in two minutes. However, as a usual thing I would never see them until they came into roost, when they were given all the scratch feed they could eat.

The first of August when I began to cull out, eat and sell what I did not want for breeders, I had 92 nice cock-

erels and pullets. Three were drowned and two were killed in coops. I never knew what went with the other five. I suppose they died on range. If they had a case of bowel trouble I never knew it. I also sold \$9.15 worth of eggs for setting from these trios, the rest of their eggs was put in with other eggs and no record kept.

My advice to the beginners summed up in a few words as I know how to put it is;

Buy a few good birds, get a Standard of Perfection, (most poultry journals sell them) and learn the standard requirements of your chosen breed. Subscribe for two or three good poultry journals, you will get lots of good ideas from one not contained in the other. Never try to raise more chickens than you can successfully attend to. If after carefully culling, you have more good birds than you want use the classified ads. in your poultry journal.

Watch your birds closely and try to learn their dispositions, natures and individualities. Try as nearly as possible to provide what nature intended they should have. By trying to defeat nature you invite trouble. Don't try to incorporate every theory and system you see mentioned in the poultry press in your work. Some of them are all right but first master the elementary principles involved. Water the little things. They assume large proportions in the course of a breeding season. Never put off till to-morrow what should be done to-day. Eternal vigilance is the price of success with poultry. And last, but by no means least, keep your weather eye on utility. It is the bed-rock upon which the gigantic poultry industry is founded.

Would like to see some articles from S. C. B. Minorca breeders.

Harley L. Williams.

Georgia.

PROMINENT POULTRY EXPERTS ENDORSE PRAIRIE STATE MACHINES.

The new 1914 edition of the Prairie State Incubator Catalog contains endorsement from men who are recognized as authorities in matters of incubation and poultry keeping. We find among, others, letters from Prof. F. H. Stoneburn, poultry husbandman at Storrs Agricultural Experiment Station, Storrs, Conn.; Prof. Phillips of Kansas Agricultural College; Mr. O. C. Frantz of the Rocky Ford Poultry Farm, Rocky Ford, Colo.; Mr. Edgar Briggs, Pleasant Valley, N. Y.; Mr. A. A. Brigham of South Dakota School of Agriculture; Mr. U. R. Fishel, Hope, Ind.; Prof. J. S. Jeffery of North Carolina College of Agriculture; Mr. M. F. Delano, proprietor of The Owen Farm, Vinyard Haven, Mass., and many others.

From the widely scattered sections represented in the above list it would seem that the Prairie State machines are adapted to all climates and atmospheric conditions and indeed they are. No other machine stands higher in the esteem of the American public and in

Our Free Book

telling about

The "O. K. Plan" of

keeping your laying hens is worth big money to you. Send for your copy to-day and learn how to keep your hens in the most profitable way known. It will tell you how to get plenty of winter eggs, save over one-fifth of your feed and save almost all the time you now have to put in at feeding and watering your hens.

The "O. K. Plan" was discovered by our foremost state experiment stations and developed into a complete practical system on your own experimental poultry farm. Don't delay another day, but

Send for It Today

CATALOGUE A

Learn about the only satisfactory method of feeding and watering hens in five minutes per pen.

The Oakes Mfg. Co.

Factory and home Office, Tipton Ind.
Eastern Branch, 64 Cliff St., N. Y.
Canadian Branch,
415 Symington Ave., Toronto.

This non-freezing, top-filling sanitary fountain is one of our famous labor savers. Let us tell you about it.



Canada where extreme climatic conditions put a machine to the severest test, Prairie States are particularly favored. The Prairie State Incubator Co. operates one of the largest manufacturing plants of its kind in the world and their new steel and concrete building is provided with every equipment looking to the economical production of machines of the highest type.

One of the exclusive features of Prairie State Machines which has brought them into such general favor during the past few years is the sand tray. A hen that stole her nest really suggested to the mind of the inventor this improvement in the methods of incubation. By means of a tray of moistened sand placed in the incubator the atmosphere is kept at the proper humidity and the result is a marked improvement in the vigor and health of the baby chicks. In fact, this improvement has won for Prairie State machines the reputation of hatching the most "chicks that live" and probably accounts in a large measure for its general endorsement by eminent authorities.

The Prairie State Company have just finished printing their 112 page 1914 catalog and offer to send it free and postpaid to any reader of this paper who will write for it. Among other things this valuable book contains about 60 pages of general information for poultry keepers such as—Which Breed is Best?—How to Preserve Eggs—How to Feed, Rear and Breed—How to Treat Diseases—How to Grow Green Feed for Winter—etc., etc.

We suggest that any reader considering the purchase of incubators, hovers, colony houses, etc., should write at once for a copy of this free book. Address Prairie State Incubator Co., 471 Main St., Homer City, Pa.

If you are interested in advertising send for a copy of our rate card, which shows our charge for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our classified ad. department in the back part of each issue furnishes an easy way to get started at a low cost.

FEEDING FOR EGGS

Whether you keep 12 or 1000
hens you want them to

Lay when Eggs are High

HOW TO FEED WHAT TO FEED

The profits in poultry are
in eggs—profits in eggs are
during the cold months and
not during the summer.

Feed Right and Your Hens Will Lay

SPECIAL OFFER

For fifty cents (stamps ac-
cepted) we will send copy of
our booklet with Formulas
and Tables for Feeding and
a full years subscription to
the

Poultry Keeper

The most practical and help-
ful poultry paper published.
Send to us with 50 cents in
stamps.

POULTRY KEEPER PUB. CO.

Quincy, Illinois.

Send booklet on Feeding Poul-
try and a year's subscription to
Poultry Keeper.

Name

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NEW X-RAY FACTORY MEANS PROMPT INCUBATOR SHIP- MENT.

Company can now reach any part of the
corn belt within a few hours—larg-
est of all incubator plants in the
world—a marvel of modern equip-
ment—the new factory of the
X-Ray Incubator Co. at
Des Moines, Ia., is attract-
ing poultry raisers in
all parts of the coun-
try.

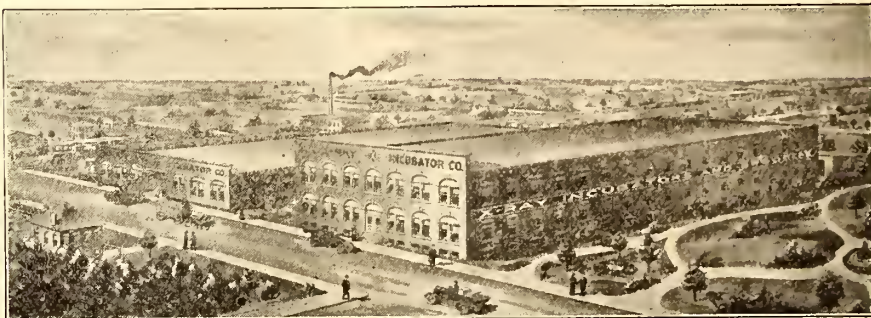
The factory, recently completed, is
now open to visitors. Multitudes have
already availed themselves of the op-
portunity to view the plant and to ac-
quire the valuable information which
a trip through the big institution af-
fords. The visit is in fact a chapter of
real education on poultry culture which
no one interested in the business should
miss when in Des Moines.

The product of the factory is a strik-
ing instance of how perfectly scientifi-
c method and economy can be com-
bined in incubation.

One gallon of oil to the hatch is
the entire requirement of the X-Ray
incubator. The tank is filled once on-
ly. No further attention whatever is
given until the hatch comes off. When
this is contrasted with the necessity,
before the days of the X-Ray, of fill-
ing the lamp every day, it will be seen
how labor is saved, trouble is saved
and money is saved.

The construction of the X-Ray is u-
nique. The lamp is situated in the
center of the machine below the egg
tray, so that it actually uses all the
heat produced. Thus the hatch is com-
pleted with one gallon of oil instead
of the five gallons made necessary by
other forms of construction.

A visit to the X-Ray factory at Des
Moines discloses not only this but
other important advances in incubator



The New X-Ray Incubator Factory at Des Moines, Ia.

The prime object in locating this
plant at the Iowa capital is the bet-
terment of shipping facilities. The
constant and rapid growth of the X-
Ray Company's business some times
occasioned unavoidable delay in ship-
ping.

It will be welcome news to poultry
people everywhere that all such delay
has been effectually overcome by the
new location. In a few hours the X-
Ray Company now reaches any point
in the corn belt with an incubator
shipment. This means that any cus-
tomer can now count on receiving his
incubator at once, where formerly he
had to wait some days.

The growth of the X-Ray business
making necessary this immense plant
is conceded to be the most remarkable
in the industry.

The manufacture of X-Ray incubat-
ors began only half a dozen years ago
in a little carpenter shop.

Two years ago the company achiev-
ed the distinction of operating the
largest exclusive incubator plant in
the world. Yet it did not stop there.

The demands of poultry people in ev-
ery region compelled the X-Ray to
outdo itself.

It is a great commentary on the
state of the poultry industry—how it
is increasing by leaps and bounds—
how modern methods have come into
universal practice—are most eloquent-
ly and convincingly proved by the
new X-Ray factory.

building. To those who can not come,
however, the X-Ray Incubator Com-
pany will gladly send illustrations and
full description of the machine to
those who write, stating that they are
readers of the Poultry Keeper.

SOME GOOD LAYERS.

Record for nine and one-half months
of 1913. Date of report October 7,
1913.

4 Single Comb White Leghorns.....	795
Eggs.	
1 Barred Rock.....	333
1 Barred Rock.....	198

Total for 6 birds.....1,226

Record of 13 birds in pullet year:
(4 Single Comb White Leghorns, 7
Barred Rocks, 1 Rhode Island Red, 1
cross Barred Rock and Rhode Island
Red).

Number of eggs laid.....	2287
Average	176

Complete report will be given at the
close of the laying year.

Myron E. Keats.

Wisconsin.

"Success With Poultry" is worth
more than all other poultry books put
together. If you want to learn how to
make money with poultry. Price of
book, \$1.00. For that amount (\$1.00)
we will send book postpaid and a full
year's subscription to the Poultry
Keeper. This is the best value ever
offered in poultry literature.

Wyckoff's S. C. White Leghorns

ACKNOWLEDGED EVERYWHERE THE WORLD'S GREATEST LAYING STRAIN. UNEQUALED IN STANDARD QUALITIES. Remember that we are the ORIGINATORS, and for over 30 years SPECIALTY BREEDERS of the justly celebrated "WYCKOFF STRAIN" of S. C. WHITE LEGHORNS, the MOST PROFITABLE STRAIN OF POULTRY IN AMERICA today. Place your orders at headquarters and make no mistake.

Two thousand choice yearling hens, fine strong early cockerels, and a few yearling cocks; must be sold at once to make room, and prices will be made especially attractive to early buyers. Send for catalogue and state wants as near as possible and mention the Poultry Keeper. Address

G. H. WYCKOFF & SON, Box P. K. Aurora, Cayuga Co. N. Y.

WHITE LEGHORN HEN IN N. A. COMPETITION BREAKS ALL RECORDS.

'Princess Dedit' Leads World With 282 Eggs in One Year—An English Entry.

Princess Dedit, a White Leghorn, belonging to Tom Barron, an Englishman who has brought poultry raising down to an exact science, is the champion competition hen of the world, having laid 282 eggs in one year.

This means that she has smashed all previous records, has added hundreds of dollars to her individual value, has shown all poultry raisers that, after all, it is blood, breeding and care that "tell" and has added the finishing touch hoped for in the North American's second great International Egg-Laying Competition, which has just closed.

Princess Dedit is one of a pen of five White Leghorns entered in this contest by Mr. Barron. These hens were received a little more than a year ago by those in charge of the competition. They quickly recovered from the effects of their long journey across the ocean and were in excellent condition when the competition opened, November 1, 1912. Between that date and the closing time—365 days, to be exact—Princess Dedit laid more eggs than any other bird ever entered in a competition, beating the record made last year in the Missouri contest by but one egg, it is true, but beating it, nevertheless.

Five Extraordinary Layers.

The four other birds in the Barron existence. Princess Dedit alone being the total yield, including that of the record breaker, being 1190 eggs, an average of 238. This pen thus becomes, probably, the most valuable in existence. Princess Dedit alone being worth much more money than the average poultryman can afford to give.

One of Princess Dedit's sisters was not far to the rear of the champion, producing 262 eggs in the 365 days and standing third in the competition. Another laid 230, still another 210 and the lowest 206.

For years all poultrymen have looked forward to the 200-egg hen. Here are five that are better, one a world's champion, all belonging to one man. They show what careful breeding, wise selection and proper care will do, and as object lessons are well worth world-

wide inspection.

To Old Grime's hen of storied fame, was imputed the glory of two eggs each week day and three on Sundays, but practical hens outside of poetry have not yet reached that point. Princess Dedit is amazing enough with practically four eggs every five days. Many hens have equaled this record for very short periods; but it should not be forgotten that the Princess remained on the job for a year at this rate, through all sorts of weather and also through the molting season which is supposed to be death on records.

American Bird Second With 267.

A Connecticut hen owned by Mr. Burton E. Moore ran a fairly close second to Princess Dedit in the second competition with a store of 267. This record a few years ago would have been almost unbelievable, and escapes being amazing only by the efforts of the Barron champion. However, Connecticut scores over the second best of the Barron pen by five eggs and brings some glory to America.

The record cannot be disputed, Princess was under constant observation from the beginning of the competition until the end, and her daily record was carefully chronicled, though not more carefully than that of any other bird entered in the competition. Under the system pursued, there is not the slightest opportunity for mistakes, hence the record of Princess Dedit will stand until some other bird in an accredited competition exceeds it. It is hoped that the third of the North American's egg-laying contest, now in progress in Thorndale, Pa., thirty-five miles out of Philadelphia, will produce another record breaker.—Philadelphia North American, November 9, 1913.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; \$1.75 for five, \$2 for six. The clubbing list on another page will show what some of the papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.

NEW 1914 Free Poultry Book

written by ROBERT ESSEX who tells of things he has learned during his Quarter Century with Poultry, such as—How to Start Right—How to Make Money with Standard-breds and Show-birds—How to Get More Profit from Farm Hens, etc.; also illustrates Poultry Houses used on Experiment Stations for winter and summer use, with cost to build. This free information is invaluable. He also describes and illustrates the

Essex-Model Incubators and Brooders

America's Largest Line

including the Multiple Mammoth Incubators THIS FREE BOOK tells of the success of customers with Essex-Model Incubators and Brooders in competition with other makes. Get it before buying an Incubator or Brooder.

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BOURNE "BIGNUM" POULTRY BAND.



Bin-num-ber band, black numbers from 1 to 100, showing 10 feet away, printed on white, light blue, pink, green, yellow, cherry and red celluloid. Withstands weather and water.

BOURNE "ALUMINE" POULTRY BAND.

The plain double clinch band in common use. Cheaper than the "Bignum" band. All aluminum, no celluloid. Numbered to order. Send two one cent United States stamps for samples and descriptive circulars of these poultry bands. Mention P. K.

BOURNE MANUFACTURING CO.
Dept. L. 216 Howard St., Melrose, Mass.

CAPON TOOLS

CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use **PILLING CAPONIZING SETS**. Postpaid \$2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. Wealsomake Poultry Marker 25c. Gape Worm Extractor 25c. French Killing Knife 60c. Capon Book Free. **G. P. Pilling & Son Co., Philadelphia, Pa.**

The Extra Eggs will soon pay for one of these **Automatic Self-Heating Poultry Fountains and Heaters**. Keeps water at the right temperature day and night in the coldest weather and requires less than a quart of oil a week. Made of Galvanized Steel. A long felt want supplied. Every Hen-house needs one. Price of 1 Heater and 2 gallon Automatic Fountain complete \$1.15. Write for Circular B and testimonials. Agents wanted. **C. A. S. FORGE WORKS, SARANAC, MICHIGAN**

AN EXPERIENCE WITH FIRELESS BROODERS.

It all happened by accident. With my home I had purchased two lamp heated brooder coops, and I planned to set hens and put the chicks from several hens in one coop. I had a great deal of trouble with the lamp, but at last it worked better and in went the chicks. I kept the temperature about right until bed time; and next morning filled and trimmed the lamp. The chicks seemed happy and I was shaking hands with myself when I discovered smoke. The lamp chamber was overheated and lamp was in flames. Prompt action on my part saved coop and chickens, which latter were taken to the kitchen in a basket.

A little study showed me that the brooders (a common type in this neighborhood were faultily constructed. I was half sick and there were the chickens to be cared for. So next morning I rearranged the "feathers" slightly and put the chicks in the hover without a lamp. I fixed a thermometer in the box and as it grew colder and colder I watched it closely. I leveled the coop carefully and at ten o'clock, zero weather, the temperature was 92 degrees.

The chickens were snuggled under the fringe, with little huddling and appeared comfortable and happy. Several days passed and the experiment seemed a success, wherefore I made small coops, 24x24 with hovers 14x22, with yards 3x4 feet, covered to protect from cats. These I located on a sunny southern slope and moved onto fresh grass every few days. Twenty-five or thirty chickens were placed in each coop and pushed back under the hovers as fast as they came out until the lesson was learned. After 36 hours I fed commercial chick grains three times daily with a dry mash, plenty of green food and potassium permanganate in their water. They were out on the ground as soon as three days old, and grew like weeds. As they grew larger I simply removed the hovers until they were shifted to the large houses.

Of 181 chickens hatched with 16 hens and all treated as above outlined, I raised 177, the losses being accidental. Only one chicken was ever dumpy and a dose of castor oil cured him. The only coddling was the covering of the coops and yards with burlap at night and in stormy weather.

I expect to raise 500 chickens this next season and am planning the same arrangement. I believe it is the best (artificial) way. I have watched all methods. I have smelled the odor-laden, vitiated air in the lamp brooders, and have heard the boasts—"Pooh, that's nothing! I lost ten per cent of mine." And I wonder why they did not lose them all. Chickens need fresh air and lots of it, and they must have their feet on the ground. Protect them from wind and rain, but let them run. Don't boast of your losses. Get busy and prevent them. You can if you will and it is not hard work.

C. C. Darby.

Massachusetts.

Owen Farms'

Buff Orpingtons, White Orpingtons, White Rocks

[White Wyandottes and S. C. R. I. Reds

HAVE PROVEN
THEY ARE THE BEST IN AMERICA.

SPECIALS FOR DECEMBER

Grand Breeding Birds at extremely low prices for quality. Perfect health, grand bone and size, with plenty of vigor and stamina are characteristic of every one. Their ancestors were unexcelled as layers as well as in the show room. You cannot buy better producers at any price and you cannot equal the value I am giving you this month.

Trios at \$15.00, \$20.00 and \$25.00.

Pens at \$20.00, \$25.00 and \$30.00.

ALL VARIETIES AND THIS MONTH ONLY.

Send your remittance directly from this ad and secure early selection. If birds are sold I will refund your money. I guarantee satisfaction and will treat you so well you will become a permanent customer.

My fine new Illustrated CATALOGUE will be mailed you.
Address,

Maurice F. Delano

OWEN FARMS,

Maurice F. Delano, Proprietor,
Frank H. Davey, Superintendent.

127 William Street,
Vineyard Haven, Mass.



A Good Trap-Nest

Sheboygan Falls, Wis.

(Box P. K.)

made in a few minutes from a common box. Send 10c for illustrated plans for making the most simple and reliable trap-nest. Farm water drinking fountains, feed hoppers, poultry houses, etc.



STIRDIVANT FARMS CO.

CAUSES THAT AFFECT FERTILITY

Editor, Poultry Keeper:

I have just read both with interest and amusement the article in your November number headed "Used Two and Three Year Old Hens for Breeders."

The writer is "cock sure" that his lack of success in hatching is due to the fact that his breeders were pullets. I take it that his failures were with eggs incubated in a machine. A little of my own experience may cause the writer of the above named article to realize that he has another "think" coming."

Last spring I had three pens of Part-ridge Rock fowls composed entirely of cockerels and pullets, all of which had been hatched in incubators and I did not get more than twenty-five per cent hatches. These were all eggs that I had bought at a high price and I do not know whether they were laid by pullets or old hens. However, I made up my pens from the chicks raised from these eggs.

I had an incubator that was guaranteed to be the equal of any machine in the world. This, of course, settled that question. I, of course, placed these precious eggs in that incubator and on the twelfth day they, according to all the rules laid down by those who know, showed an infertility of about forty per cent. At least I found that many clear eggs.

Don't all the authorities say clear eggs are infertile? Of the remainder there were many that died in the shell, others hatched but were defective and soon died or I killed them.

This did not discourage me, so I tried it again and had almost exactly the same result in every respect. Now I am not a novice in running an incubator as I have been at it for many years and, in fact, made the first one I ever saw. It was simply a large double box with about six inches of saw dust all around the egg container. There was a large tank above the eggs which would hold six or eight gallons of water. Into this was poured hot water about twice per day after having drawn out what was thought necessary to make room for the fresh hot water. Well, it hatched chickens, too, but not quite so large a per cent as the modern incubator. From that time to the present I have used various incubators many times with better success than last year, but I have never been able to get a hatch of 100 per cent, no, nor 90, nor 80 even. My honest opinion is that when an incubator maker advertises such hatches his statements are plain lies, and that he is a fraud and ought to be classed with quack doctors who claim to be cure-alls.

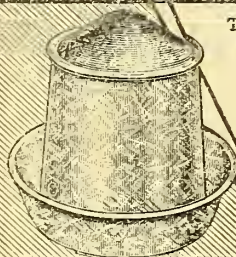
But to return to the pullet question. After my second hatch I put one hundred fresh eggs in a basket, carried them in my hand to a city not far

Keep Your Birds Healthy— Save Money on Feed

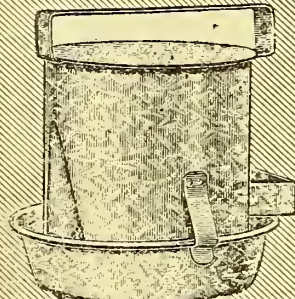
There are two big profit making features for you in Kentuco Poultry Ware. One is that you have the best possible protection for keeping poultry feed and water pure—the other is that the birds cannot waste their feed. It is the truest economy to equip your entire poultry yard with

KENTUCO Poultry Ware

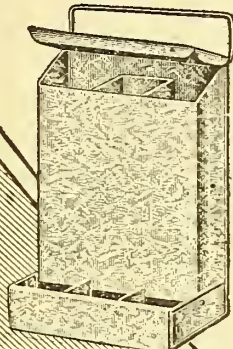
The water fountains are galvanized after they are made. There's no possible chance for rust. Every piece is easy to clean and keep clean. For instance, take the **Kentuco Sanitary Wall Fountain** illustrated here. It's made with two pieces. You can get into the reservoir with a brush to clean it. There's plenty of room all around the pan for many birds to drink at the same time. No other wall fountain is built like this. No other can be cleaned so easily. Equally valuable points of construction can be found in every piece of Kentuco Ware —yet Kentuco Ware does not cost more than the less worthy stuff now on the market.



Kentuco Two Piece Fountain
Cone top prevents birds from perching on it and polluting water in the pan.



Kentuco Sanitary Wall Fountain
Birds can not pollute water, yet always have a plentiful supply. Reservoir can be taken off and cleaned.

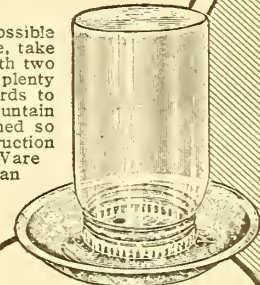


Kentuco Grit Box or Food Hopper
Birds can not waste food or pollute it.

Write at Once

for the big folder telling the money making facts about Kentuco Ware. Ask your dealer about Kentuco Poultry Ware. Insist upon buying it. But write today for the big Folder. Also ask for jar fountain if you want it. Address

**Kentucky
Stamping Co.
110 N. 15th St.
Louisville,
Kentucky**



FREE

Kentuco Jar Fountain

The handiest fountain anyone could imagine. Screw the base on to any Mason jar. This base is made so it doesn't splash water when inverting it as others do.

To let you know more about Kentuco construction we will send you the base free if you will enclose 8c. stamps, to cover postage and packing.

away where an expert was hatching in another "best machine in the world." Well, from that one hundred eggs I received **just forty chicks** with the statement that there were thirty clear eggs on the tenth day and several others that were doubtful.

Up to this time not an egg from these pullets had been set under hens, but now a neighbor to whom I sold a sitting of fifteen eggs reported fifteen healthy and lively chicks. In a few days I had a duplicate experience. In the meantime I shipped thirty eggs to the same city where I carried the eggs to be incubated in the machine. In the course of three weeks I received word that the two old biddies had come off with twenty-eight chicks. About this time I sold a similar number to a neighbor lady whose two hens brought off twenty-eight chicks. I again sold thirty eggs to a lady who lived eight miles away. These eggs were hauled by buggy or wagon to her home and from these she got twenty-seven chicks. Then during the late spring and summer my sitting hens continued to carry on the same business at the old stand, and eleven chicks was the lightest hatch I had. But here is a special case. About the middle of August when it was as hot as Hades ought to be, one of my Partridge beauties wanted to become a real mother so I gave her fifteen eggs, one of which she broke on the second day, and on the twentieth day

she had fourteen as pretty chicks as under the most conclusive test, will show a large per cent infertile that you ever looked at.

Now remember, brother Hardenbrook, every one of the eggs accounted for was laid by a pullet and was fertilized by a cockerel; those that were incubated in the machine as well as those under the hen. Now where is your theory about pullet eggs not hatching? I do believe from what experience I have had that the eggs of the Partridge Rocks must carry an unusual degree of fertility, and if so it is barely possible that the variety of poultry you are breeding may be defective in the way you claim.

Now I want to call attention to an incidental fact developed in the course of my experience, and that is that clear eggs on the tenth day or any other day of incubation are no evidence whatever of infertility. How could it be possible that a sitting of eggs laid just before I carried the one hundred eggs to the incubator should develop fifteen healthy chicks, and the hundred eggs laid immediately after should show thirty clear eggs with several others in doubt, and the further fact that another fifteen laid immediately after the experience with the machine should produce another chick from every egg?

It is no doubt true, that some persons get better results with an incubator than I have ever been able to get, but my experience shows conclusively that eggs in an incubator

I may not know much about the poultry business, in fact I am sure I know very little as to the ultimate facts, but I am equally sure there are others, and many of them are sure they know a "heap".

A. W. Foreman.

Illinois.

W. W. Kulp of Pottstown, Penn., writes the editor of Poultry Keeper that he has recently received a second order from far away New Zealand for some of his heavy laying strain, R. C. Brown Leghorns. Mr. Kulp has been eminently successful as a breeder of Leghorns, especially of the heavy layers, as his birds are in big demand since the recent egg laying contests have shown what position the Leghorns occupy when it comes to producing those large white shelled eggs so highly prized in the eastern markets.

To any reader of Poultry Keeper sending us a list of twenty names, of people interested in poultry raising, no matter whether they keep one or a hundred hens, we will send free of charge a copy of our booklet number four on "Feeding for Eggs." This booklet contains much information on this all important subject of service to those wanting winter eggs.

Paint Without Oil

Remarkable Discovery That Cuts Down the Cost of Paint Seventy-Five Per Cent.

A Free Trial Package is Mailed to Everyone Who Writes.

A. L. Rice, a prominent manufacturer of Adams, N. Y., has discovered a process of making a new kind of paint without the use of oil. He calls it Powderpaint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof and as durable as oil paint. It adheres to any surface, wood, stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

Write to Mr. A. L. Rice, Manufr., 21 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.

RHEUMATISM

A Home Cure Given by One Who Had It.

In the spring of 1911 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally I found a remedy that cured me completely and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism and it affected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. After you have used it and it has proven itself to be the long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free. Don't delay. Write to-day.

Mark H. Jackson, No. 8 Gurney Bldg. Syracuse, N. Y.

THE IMPROVED ALUMINUM CHAMPION LEG BAND PRICES REDUCED.

The Champion Leg Band is the oldest and most popular band on the market. It is made in one piece, in two sizes, adjustable to fit any fowl.

25 PAT. APPLIED FOR

This band always stays securely where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the broad part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend



the two lugs over the loose end as shown in cut. Cut off surplus with scissors.

Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state what you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

ABOUT INDIAN RUNNERS

Editor, Poultry Keeper:

I am one of those who greatly admire the Indian Runner duck. My ideal in that line is the English penciled variety and to my notion they are the most beautiful of all water-fowls, the markings are so pretty, the carriage so erect, the movements so graceful. They are a very interesting fowl. To see a flock of them is a very beautiful sight, they are so much alike.

Too much can not be said of their good qualities and a trial of them will certainly convince the breeder that it is both profitable and pleasant to own a flock of such attractive birds.

It does not require fine houses in which to raise these ducks. The simplest shelter will satisfy them. Five or six may easily use a large tight dry-goods box for their sleeping quarters, the open end being protected by denim or burlap curtains, with clean, dry bedding of straw or some such litter.

They are very easy to raise and when given a little care and kindness are very tame and can be grown in almost any poultry yards. They are not troubled with lice or mites or any of the diseases peculiar to the chicken. They are the most practical duck for the farmer, the fancier as well as the fruit grower.

They are the duck for city or village residents, supplying him with eggs, also a fine juicy roast or fry. They outdo chickens in egg yield. Their eggs too, are about a third larger than hen eggs. They are considered more profitable as they require less expensive houses and are much easier to control. They will not fly over a two-foot poultry netting fence.

In order to get good results, strength or vigor in the offspring, the ducks should be mated early. The advantages of early mating are numerous.

In the first place ducks select their mates early in the season and if parted from them will mourn for their old mates and are loath to take up with the new. I have known people to put off mating their pens till March or April and the result was infertile eggs during the season. The advantage in having pens mated at least five months before time to set eggs, will more than repay the loss one would have from attempting to incubate the season's infertile eggs.

Mrs. Jennie Sloan.

Kansas.

PROFIT IN CAPONS.

The wise farmer, looking to profit sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.15, we will send the capon tools prepaid and a year's subscription to Poultry Keeper Address, Poultry Keeper Publishing Co., Quincy, Illinois.

Our Big Dollar Offers

SENT TO SAME OR SEPARATE ADDRESSES.

HERE ARE 12 DIFFERENT CLUBS. ANY ONE SENT TO YOUR ADDRESS FOR \$1.00.

Poultry Keeper\$.50	Poultry Keeper\$.50	Poultry Keeper\$.50
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Farm & Home50	Farm Poultry50	Monthly50
		Farm & Fireside50
Poultry Keeper\$.50	Poultry Keeper\$.50	Poultry Keeper\$.50
Reliable P. JI.50	Fruit Grower 1.00	Philo System Poultry .. .50
Housewife50		Book50
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Poultry Keeper\$.50	Poultry Keeper\$.50	Book "Success With .. . 1.00
Farm Poultry50	Green's Fruit Grower. .50	
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Poultry Keeper\$.50	Poultry Keeper\$.50	Farm Poultry50
Reliable P. JI.50	Farm & Fireside50	
American P. World .. .50	Farm & Home ..... .50	

Poultry Keeper Publishing Co., Quincy, Ill.: Enclosed find \$1.00 for which send the following publications for one year to the address below:

..... P. O.

..... State

..... St. or R. F. D.

..... Name

A GOOD REPORT—READ IT.

In order to do justice to a high class article and for the benefit of our readers we feel that we should publish the following copy of a letter, the firm mentioned below has sent us as being received by one of their customers.

St. C., Minn., Nov. 10th, 1913
Gentlemen:

As soon as I had received your nicely illustrated and well written circular on your Sectional Grain Sprouter, I placed an order with you for the No. 3 Sprouter. I received the Sprouter promptly and was well impressed with its almost all steel construction and especially with the galvanized steel trays. I thought if it would work as well as it looked, I should have no reason to complain. Well, I soaked my oats, filled the trays and before I expected it the grain was in full sprouting. That was three weeks ago and I have kept it going ever since. When the sprouts were about 4 inches long I began to feed them to my flock and during the two weeks I have done this I can already notice quite an increase in the daily egg yield. The fowls seem to feel as if new life has been put into them. I can surely recommend the Successful Sprouter as a handy green food provider and a great help in getting more eggs from the fowls when the prices are extra good.

Wishing you abundant success in your new line, I am,

Yours truly,

Frank Miller.

PARTRIDGE WYANDOTTES.

I have read so much in Poultry Keeper about White Wyandottes but never anything on Partridge Wyandottes. I have raised this fowl for 3 years and have been more successful every year.

Like all Wyandottes they are hardy and chicks mature early with very little mortality and care. I hatched about 150 last spring (March and April) and lost only 12 or 15 out of the whole lot. They are a lively lot and all were hatched in an incubator and reared with a universal hover. They make good fryers early and need less feed and attention than Plymouth Rocks.

Their plumage being a dark penciled mahogany in the female and a beautiful deep red with dark slate and greenish under color in the male, makes them the "beauty breed" for any yard as they always look clean and never show up dirty. They need little preparation for the show room. Their close fitting rose combs make them ideal birds for any climate.

Like the Wyandottes they are fine layers and with proper care stay so all the year round. My flock of 60 is admired by people passing, who see them on the lawn and stop to ask what kind they are, as I am the only one in this locality who has them. As a table fowl they make an excellent showing for their plumpness which makes it a good market bird.

Missouri.

Edw. A. Kamp.

Grain Sprouters at a Bargain

5,000 more of the famous Reliance Grain Sprouters are now ready for delivery at factory prices. This gives you another opportunity of saving \$5.00 for yourself, which you can put into an incubator or brooder. If you order quickly, you will get a still better bargain for our special

November Price Is Good Up to December 15th

There's many reasons why we can undersell all competition on Grain Sprouters. In the first place, by buying large quantities of raw material—best steel, lumber, etc., for cash, we secure large discounts. Again, we manufacture by thousands, while others hundreds, which saves factory costs. Again, we sell direct to our customers; employ no agents, therefore have no agents' commissions to pay or agents' high prices to protect. We add only one small profit to actual cost for ourselves.

Our low prices are not quoted on one size only, but on all sizes. Shipped complete same day order is received. Safe delivery guaranteed.



Front Contains More Glass Which Gives More Sprouts

Are Made Like

Reliance Grain Sprouters

Money for you

You need a Grain Sprouter—every poultry man does. So don't delay, but write today for low prices on different sizes. Choose the size you want, then when the Reliance comes start giving your hens sprouted grain. Reliance sprouted grains will be the means of

Increasing Egg Yield 30 p.c., Keep Hens Laying All Winter, Aid Growth, Promote Fertility of Fowl and Cut Your Feed Bill in Half.

The Reliance will produce 60 lbs. of sprouts from 1 bu. of grain and do it quicker with less care and attention. In fact, there is

None Better Made—No Matter What the Price

The Reliance has double walls, double galvanized iron linings, galvanized trays (not wooden), strong steel, the lumber is of the highest grade, the heating system is better than any other, which induces larger quantity of sprouts. Don't put it on 7 losses, but write, right now, and learn what a really low price we place on our machines. Facts and literature will be sent by return mail. Address:

RELiance INCUBATOR CO., Dept. 52, P. O. Box 11, Chicago, Illinois
Manufacturers of Grain Sprouters, Incubators, Brooders

"Dandy" Bone Cutter

You needn't pay one penny for this bone cutter until you try it and it satisfies you. Feeding green bone is one of the first steps to gain a big egg yield. But the bone must be cut right. The Dandy Green Bone Cutter cuts across the grain of the bone, enabling the hen to digest the nutritive elements better and convert same into eggs, blood, feathers. Our terms on the Dandy Bone Cutter are

\$5

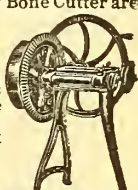
AND UP

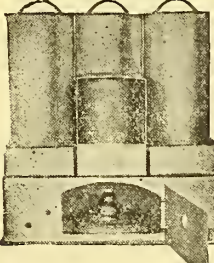
NO MONEY IN ADVANCE

30 DAYS FREE TRIAL

The Dandy costs less than most bone cutters and it works infinitely better. Also cuts meat, vegetables, roots, etc. To ensure big sales this year we have made special reduction in prices. Write quickly for free booklet. Prices are liable to rise next month, owing to big demand for raw material.

STRATTON MFG. CO., Box 43, Erie, Pa.





Don't Wait-- Now is the Time

To equip your poultry houses with **NON-FREEZING** Poultry drinking fountains, **FEED HOPPERS** and **EXERCISERS**, and all kinds of such articles. Have them on hand when you are ready to put your stock in winter quarters. This cut illustrates our No. 4 combination water and feeder. Keeps the water and feed warm. Will increase the egg yield 1-3 in freezing weather. Get our catalogue describing 60 different articles. We make everything a poultryman wants; it is free.

WENDELL INCUBATOR CO., 60 Main St. Holly, Mich.

SIGILIAN BUTTERGUPS

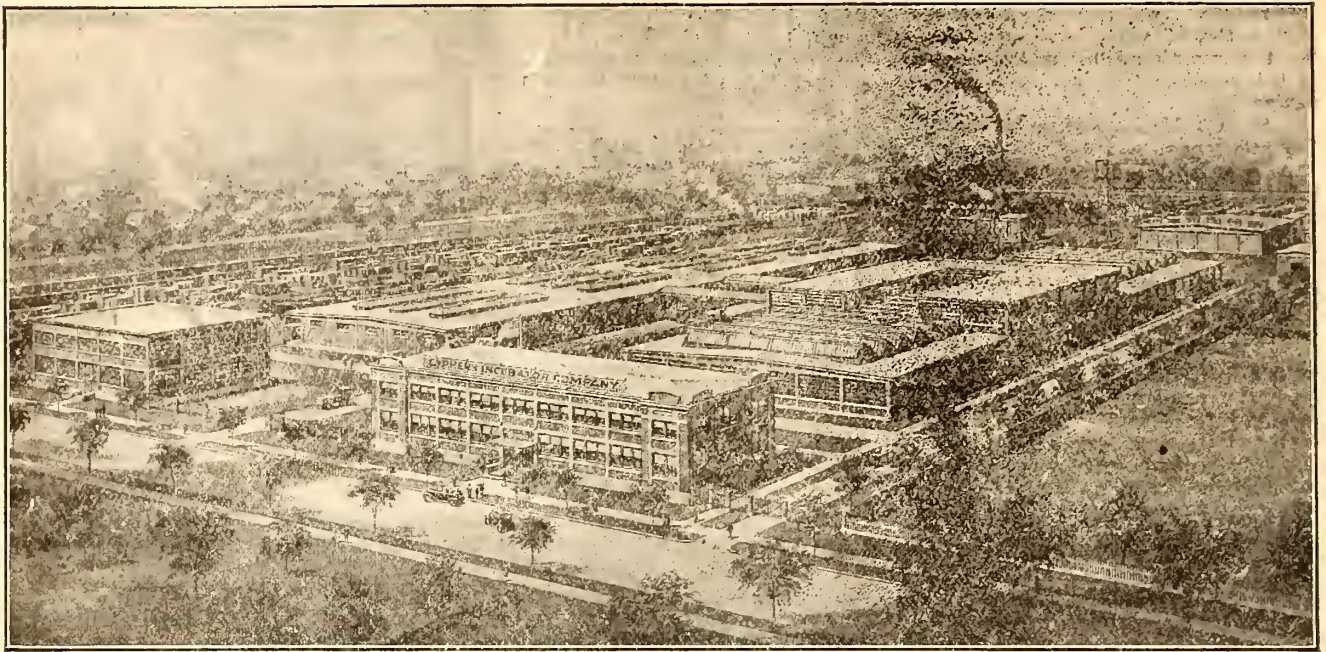
S. G. Reds, Indian Runner Ducks and Fantail Pigeons

1914 Mating List now ready. 12 Blue Ribbons won by above Reds and Buttercups. **DR. C. S. BROUILLET, Box P. K. Gardner, Mass.**

FOR CURING ROUP.

Try kerosene for roup. Pour a little kerosene in a dish. Wet a finger and run it down the throat and rub plenty on the head. Separate the birds to avoid contagion.

Missouri. J. G. H.



FACTORY AND HOME OFFICES OF CYPHERS INCUBATOR COMPANY.

View of the new manufacturing plant. Erected by Cyphers Incubator Company at Buffalo, New York, during the summer of 1913. Occupies eight and one-third acres of land near the center of the city and is devoted exclusively to the manufacture of incubators, brooders and general poultry appliances and supplies. It is considered the largest establishment of its kind in the world. Built throughout of reinforced concrete and is indestructible by fire.

A MAN AND A FACTORY.

Being the Story of the Cyphers Incubator Co.—Its New Plant—Its Old Time-tried Principles and the Man and Men Behind It.

By D. Herbert Moore.
Editor Agricultural Advertising.

“The biggest thing in the poultry business.”

That is the unanimous opinion of those who visit the new plant of the Cyphers Incubator Co. in Buffalo, N. Y.

No “long distance” conception of the size and scope—the modernized perfection of this plant, can be given without resorting to figures.

The new Cyphers Company plant occupies eight and one-third acres of land near the center of the city, within 600 feet of Main street, Buffalo’s leading thoroughfare, and it is considered to be the largest establishment of its kind in the world. It is built of re-inforced concrete, with Fenestra steel window construction that admits the softened daylight—in short it is practically indestructible by fire. It is said that “not wood enough to make a box of matches” was used in these buildings.

For seventeen years the name “Cyphers Company” has been recognized as standing for highest quality in incubators and brooders, as well as in the one hundred other articles they manufacture for the use of poultry breeders.

In tracing the success so apparent in the Cyphers Company’s new home, one naturally is inclined to look for the personality that has brought about these changes.



GRANT M. CURTIS.
President of Cyphers Incubator Company.

president of the company.

Talk about live wires! Here is a man who is a regular dynamo of mental strength, of initiative and of organization ability.

At his office every day and often far into the night, carrying the heavy responsibility of a business whose sales, for a period of years, have exceeded a million dollars every year, he finds recreation and relaxation in the editorship of two of the leading poultry papers and in serving in many ways the best interests of the poultry industry in general.

Mr. Curtis has been engaged exclusively in the poultry business twenty consecutive years. In the early days he developed the largest standard-bred poultry plant in the central west and made a success of it. He became interested in the manufacture of in-

cubators, brooders and poultry supplies in 1894. That same year he founded the Reliable Poultry Journal of Quincy, Ill., one of the most influential and authoritative papers in the field, of which he is still editor and principal owner. He is the president of the American Poultry Publishing Co., Buffalo, N. Y., and editor of the American Poultry World.

In 1899 he became associated with the Cyphers Incubator Company. He visited the leading countries of Europe and of the poultry business of the different nations. Mr. Curtis has compiled several books dealing with practical and standard-bred poultry subjects and he edited the 1905 edition of the American Standard of Perfection.

In brief, Mr. Curtis unquestionably has been a leading factor in the development of the poultry business of America, and it is apparent that he occupies that position to-day.

Nor has his work been theoretical. Under his direction Cyphers Incubator Company conducts a \$75,000 experimental and demonstration farm on the outskirts of Buffalo where actual, scientific facts regarding poultry raising are developed and proven. These facts are later given to poultry raisers whether or not they are Cyphers customers, in the form of free books, such as “Poultry Foods and Feeding,” and “Best Methods of Brooding”; also in a series of free bulletins which go into careful detail regarding the latest and most successful methods of poultry and egg production and of breeding and developing standard-bred and special purpose fowls.

Cyphers Incubator Co., however is by no means a one-man institution. Mr. Curtis has surrounded himself (and that personality is Grant M Curtis

what is more, kept himself surrounded) by a group of as able and loyal lieutenants as ever rallied to the support of a fighting captain.

Every head of a department of the Cyphers Incubator Co., every manager of a Cyphers Co. branch house has worked himself up through a term of years and won his place by sheer merit.

It is not "outside talent" that has made Cyphers Incubator Company what it is today. It is the development of the Cyphers Co. spirit throughout the working force, under Mr. Curtis' forceful, appreciative leadership.

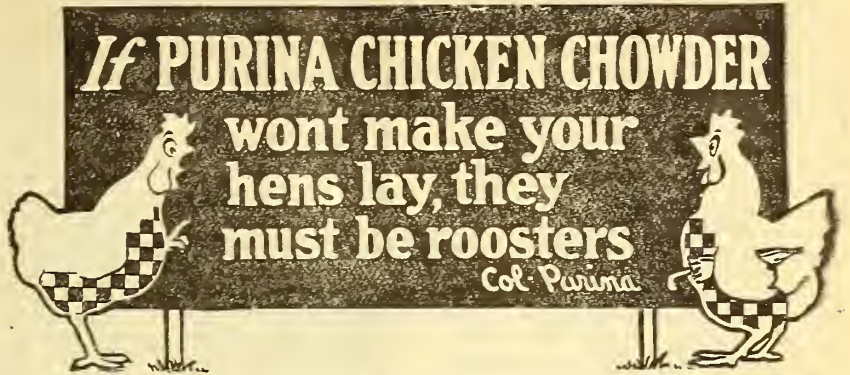
It is small wonder that such an institution as this has grown to the point where 500 working people are employed.

In the factory as in the sales organization, employes have stuck because they liked their jobs—liked the way they are treated. Every factory foreman employed by them—ten in number—has been with the company for a period of eight to sixteen years.

"Scientific arrangement and management" is the reason Cyphers incubators, hovers, brooders, etc., can be made in such immense quantities and at the same time every machine be given the most minute care in construction and the most careful final inspection.

At the present time Cyphers Company has in its largest fireproof warehouses goods of every kind sufficient to last till after the first of the year and manufacturing in the new factory is now going on apace.

The great size and capacity of the home plant give an incomplete idea of the real greatness of the Cyphers Company industry. For instance, a "Cyphers Co." poultry mill for the manufacture of chick and developing foods and the grinding of alfalfa is in operation in Chicago, representing an investment of \$140,000.00. Here Cyphers Correctly Balanced Poultry Foods are produced under ideal conditions, their factory turning out hun-



Purina Chicken Chowder is a dry mash which contains just the ingredients to insure an abundance of eggs right through the Winter. Dry Purina Chicken Chowder should be kept before hens all of the time. The more Chicken Chowder Biddy eats the more eggs she will lay. Hens should also have Purina Scratch Feed, two or three times a day, in a litter.

Col. Purina guarantees More eggs or money back

to any poultry raiser who uses Purina Chicken Chowder according to directions and fails to get more eggs.

Purina Poultry Feeds are for sale by the leading dealers. Your dealer will order them for you, if he doesn't already carry them in stock.

Poultry Book Free

For your dealer's name I will send you this 48-page Poultry Book, containing plans of houses, breeding and feeding charts, space for daily egg records, cures of diseases, care for baby chicks, etc. It also contains information about Col. Purina's half price galvanized iron Chick Drinking Fountain (2 for 25c) and more details about his galvanized iron Automatic Chicken Chowder Feeder [50c]. Write today.

Col. Purina, Purina Mills, 803 S. Eighth St., St. Louis, Mo.



dreds of car loads each year.

Not only does this company have large, completely stocked, branch houses in New York, Chicago, Boston, Kansas City, Oakland, Cal., and London, England, but it has distributing agents and selling representatives in practically every well known city and trading center of this country. Cyphers Company also has selling houses and agencies in the principal cities of

Europe, Australia, South Africa, Hawaii, Cuba and Central and South America.

Reverting to the cause of the success of this wonderful modern enterprise which has been enthusiastically and truly termed "The biggest thing in the poultry business," we come back to the man whose power, whose force, whose courage, whose knowledge of the right way and how to accomplish it, have made possible a business which represents true leadership in its line.

The poultry industry in America certainly owes a lot to Grant M. Curtis.



INTERIOR VIEW OF HOME OFFICES OF CYPHERS INCUBATOR COMPANY.

Photographic view of general office, including stenographic help, of Cyphers Incubator Company, Buffalo, N. Y. Additional to the work of attending to correspondence connected with the receiving and filling of retail and wholesale orders amounting to one million dollars annually, the Cyphers Company conducts a Personal-Letter Service Department that is free and open to all poultrymen everywhere regardless of whether they are customers of the company.

The best favor you can do Poultry Keeper is to tell your poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special disk offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.

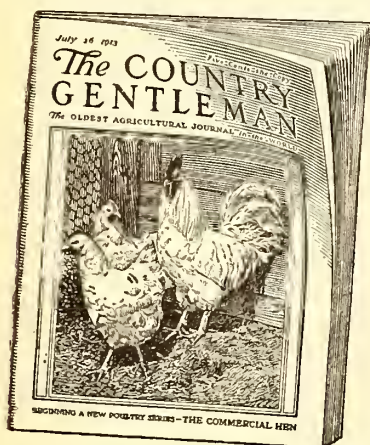
Have you any stock or eggs to sell? Our cheap rates shown in the Classified ad department will enable you to make the desired sales.

THE POPULAR WEEKLY FOR PROGRESSIVE POULTRYMEN.

We call your attention to the advertisement of the Country Gentleman in this issue. This popular weekly paper has, through its progressive policy and practically unlimited financial resources, created a new kind of farm and poultry literature that is practical.

While the Country gentleman is the oldest agricultural journal in the world it is not yet three years of age in its present form. Good evidence of the wisdom of the plan to furnish the modern business poultryman, farmer and fruit-grower with practical helpful information and reading matter, is shown in the wonderful jumps made in the circulation of this attractive weekly during the past two years.

Everyone who reads one issue of the



Country Gentleman becomes from then on its friend. It is especially valuable to the poultryman. The best talent in the world—men and women who are authorities as well as plain everyday poultry raisers—are glad to contribute their experience to readers of this great paper. Such well known writers on poultry subjects as Michael K. Boyer, T. F. McGrew, Dan T. Lambert, W. H. Card, W. C. Hunter, David Buffum, R. P. Ellis and many others are frequent contributors of interesting articles from which poultrymen gain much valuable "Don'ts and Does" and advantage on their own poultry farms.

The Country Gentleman tells how to market poultry and eggs most profitably—how both the big and the small business poultryman may pack and ship economically and more satisfactorily—how to advertise and create new and better outlets for poultry products. It describes many new ways and better methods of poultry farming, fruit-growing and gardening. Each issue is so full of valuable matter that you'll save it for future reference. There's no theory in this new type of paper—everything is taken right from real experiences in poultry raising and farm life. It describes failures as well as successful ventures and shows the why of the failure.

You receive 52 big, valuable numbers of The Country Gentleman for only

Wins in the Two BIGGEST HATCHING Contests Ever Held

Ironclad TRADE MARK

Why take chances with untried machines when for only \$10 we guarantee to deliver safely, all freight charges paid (East of Rockies), BOTH of these big prize winning machines fully equipped, set up ready for use? Why not own an Ironclad—the only incubator that has for two years in succession won the greatest hatching contest ever held? In the last contest conducted by Missouri Valley Farmer and Nebraska Farm Journal, 2,000 Machines were entered including practically every make, style and price. With 140-egg Ironclad—the same machine we offer with Brooder freight paid, for only \$10, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in the last contest.

30 Days Free Trial
Money Back if not Satisfied

Both for \$10 Freight Paid East of Rockies

140 Egg
Ironclads are not covered with cheap tin or other thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the Natural color—you can see exactly what you are getting. Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering, galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boiler, self regulator, Tyco's Thermometer, glass in door, set up complete ready for use and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this advertisement.

140 Chick Brooder

IRONCLAD INCUBATOR COMPANY, Box 167, RACINE, WIS.

J. T. FRENCH
BREEDER OF
Exhibition Barred Plymouth Rocks

OF THE HIGHEST QUALITY.
Winners at Toledo, Detroit, Cleveland and Chicago, and many other shows in strongest competition 36 prizes in one season. Stock of my raising has scored 94 points in competition.

Eggs, \$3.00 and \$5.00 per 15 straight.
888 WEST GROVE PLACE,

TOLEDO, OHIO.

\$1.50, less than 3 cents a copy for a year's subscription. Or it may be purchased from any news dealer or "Curtis" boy for 5c a copy. We advise you to send a year's subscription to the Curtis Publishing Co., Philadelphia, Pa., and receive this live publication regularly at your home. We, ourselves, look forward to each week's visit of The Country Gentleman with much anticipation of the pleasure and profit we are going to obtain from reading it.

BANTAMS AS PETS.

So long as there are boys in the family there will be a place for various pets which child life must have. Nothing can be more useful in this way than Bantams which lay well under proper care and the eggs may be used the same as from larger varieties of chickens. The Mohawk Bantam Yards, S. B. Faxon, owner, Schenectady, N. Y., have a neat little catalogue showing the several varieties of Bantams bred there and a copy of the catalogue may be easily had by writing Mr. Faxon. Like with pigeon culture, many men are interested in these pets and a copy of the catalogue will be interesting also to grown ps.

McKEE'S ROYAL BLUE AND WHITE

ORPINGTONS and M. B. TURKEYS are leading in the south to-day. Many valuable show birds shipped to all parts of the country. More proof of quality, our White Orpingtons won at the great National Conservation Exposition show at Knoxville, Tenn., Sept. 22 to 27, 1913. 1-2-3-4-5 cockerel. 1-2-4-5 pullet, 1-4-5 hen, 1 cock, 1 pen, a purse of gold and a diploma, 5 ribbons on 5 entries of Blue Orpingtons. These fine birds are for sale, price \$100. Turkeys \$10 a trio. White Orpingtons \$7.50 a trio up, \$12.50 a pen and up. Eggs from our finest whites this season 1914 at \$10 per 15. Catalog free.

McKee's Orpington Yards

Garvey McKee, prop., breeder and importer.
Box, P. K. Watertown, Tenn.

KELLERSTRASS STRAIN
Crystal White Orpingtons

Good layers, fine stock, satisfaction guaranteed.

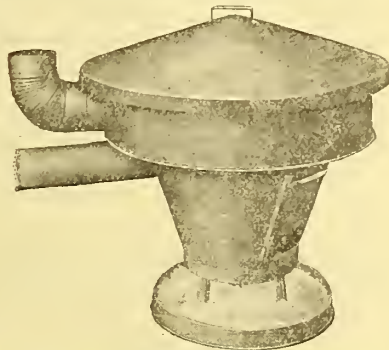
THOS B. KEAN.

Box 521. Nantucket, Mass.

WHITE WYANDOTTES for sale. Eggs in season. Frank Bigelow, Moberly, Mo. 12-4

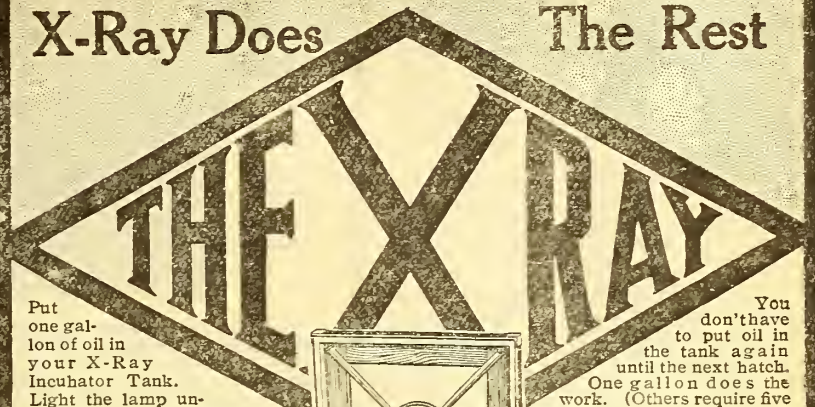
THE DUPLEX COLONY BROODING SYSTEM.

It is generally admitted by all poultry breeders who have tried to raise chickens and ducks that there is something wrong with the generally accepted idea of brooding. The idea of placing small numbers of chicks in small compartments which contain a hover has been thoroughly tried out and would have been discarded years ago if any other possible method of caring for chickens had been offered. It is hard to conceive of a more expensive method of caring for chicks than that which is now accepted as the best and most practical. It is not only expensive in fuel consumption but the labor involved makes it almost prohibitive where any number of chicks are to be raised. However, were it not for the heavy losses sustained, this method would prove highly profitable, but the fact that the breeder who can bring to maturity fifty per cent of his birds proves beyond doubt that a new system of brooding must be brought out before the poultry breeder can hope to be even reasonably successful in the poultry business. White diarrhoea is the leader in putting a crimp into the poultryman's profits by taking a terrible toll from his flock of youngsters. Many of our poultry experts have given



en this scourge years of study. Experiment stations throughout the country have worked honestly in their efforts to find a way to control or cure it, but they all admit that absolutely no progress has been made. This dread disease cannot be cured or controlled, but better than either it can be prevented. A number of experiments convince us that white diarrhoea is nothing more or less than a form of ptomaine poisoning brought on by the chicks breathing back into the body the carbon dioxide from the lungs and the droppings of the chicks. If the chicks can be supplied with pure, fresh air at all times they will not be troubled with white diarrhoea. It is a well known fact that chicks hatched in May and June are much easier to raise than those hatched in February, March or April. In May and June the weather has moderated enough to allow the chicks to live outside the hovers most of the time and in this way to get more pure air than do the chicks hatched earlier which must spend more time under the hovers in order to keep warm. These late hatched chickens are not affected by white diarrhoea nearly as much as

**One Gallon Oil—One Filling
X-Ray Does The Rest**



Put one gallon of oil in your X-Ray Incubator Tank. Light the lamp underneath. In 15 minutes your X-Ray is at perfect hatching temperature (Others require 4 to 8 hours.) Then your X-Ray takes the oil and lamp work away from you.

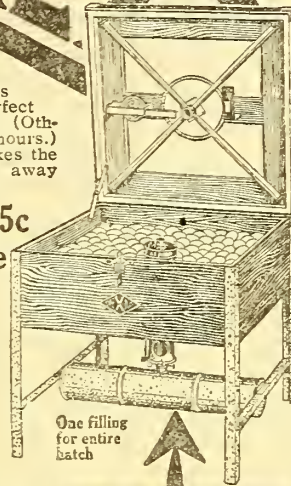
X-Ray Saves 75c to \$1.25 on the Hatch

because the Central Heating Plant is underneath—in the middle—where it should be. All the heat is used—just enough and evenly supplied to every corner of the egg chamber.

No other incubator in the world heats in this way. The X-Ray is patented. It is the simplest—the safest—produces the largest hatches.

Send for Free Book No. 12

X-Ray Brooder also has the Central Heating Plant. The floor always warm and dry. Air always fresh without chill. The book shows you WHY X-Ray poultry-raisers get more chicks—healthier chicks—greater poultry profits.



You don't have to put oil in the tank again until the next hatch. One gallon does the work. (Others require five gallons.) You don't have to regulate the flame. The X-Ray Automatic Trip does that. (Think of the time others waste on the temperature of old fashioned incubators.)

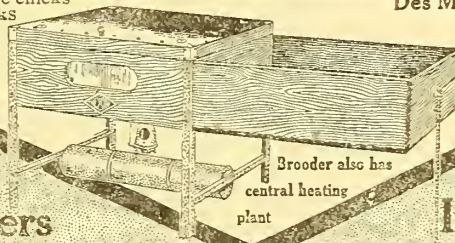
Largest Incubator Factory Means Lowest Prices

The new X-Ray Factory at Des Moines, Iowa, is the largest exclusive incubator factory in existence. Completely equipped with the most modern machinery. It enables us to produce the best incubator—best in materials—best in workmanship as well as best in principle—at the lowest prices. No finer incubator construction can be found anywhere than this factory can put out.

You get the X-Ray direct from the factory—FREIGHT PREPAID—at the lowest factory price. No agents—no middlemen—to add on profits. Buy the X-Ray yourself where the X-Ray is made. Write today.

X-Ray Incubator Company
Des Moines, Iowa

Only Incubator in the world with Central Heating Plant underneath—in the middle. Saves oil! Saves work! Saves money! Most profit!



X-Ray Brooders

Gives chicks healthiest start

X-Ray Incubators

Success With Poultry

is worth more than all other poultry books put together, if you want to learn how to

Make Money With Poultry

118 Pages, (9x12 inches Handsomely and Extensively Illustrated. Printed on Embossed Paper. Describes Different Breeds, tells how to Feed and Care for Old and Young. How to Run Incubators and Brooders.

Price \$1 per copy. By special arrangement we will send book postpaid and a year's subscription to the Poultry Keeper for \$1. Address

POULTRY KEEPER PUBLISHING CO., Quincy, Ill.

these hatched earlier. This would seem to prove our contention.

It is the early hatches which make the money for the breeder and any system of brooding which does not make it possible to raise February and March hatches cannot be called a success. The cost of fuel and caring for the chicks must also be taken into consideration.

The Duplex Colony Brooding System solves all of these problems. By this system of raising chicks it is not necessary to have hovers for them to run into in order to keep warm, which means that the chicks will all breathe and that means that white diarrhoea positively cannot get a foothold among them. Your losses from this disease will be cut to absolute zero. You can raise chicks in February and March as successfully as you can in May and June. With the Duplex Colony Brooding System the chicks are always in sight. The large room they are in gives them plenty of space for exercise which keeps their muscles hard and their appetites good. This means that the chicks will grow much faster and mature earlier. It positively is no more work to care for 1000 chicks under the Duplex Colony Brooding System than to care for 100 in any other way. The difference being that you put a quantity of feed and water in one pen under the Duplex Colony Brooding System while with any other system you must put a small quantity in each of fifteen or twenty compartments. You have one stove to attend to which requires practically no attention instead of fifteen or twenty lamps. You have one room to clean out instead of fifteen or twenty, and so on all along the line. Duplex Colony System devices are in sizes to accommodate even the smallest breeders. The Duplex Colony Brooding System positively saves nine-tenths the labor, three quarters of the expense and will bring to maturity from twenty to sixty per cent more and better chicks. This wonderful new system of brooding is fully explained in a booklet entitled "Colony Brooding" issued by the Duplex Colony Brooding Co., 477 N. Avon St., Rockford Illinois. They will send it to you free if you mention this paper. We consider this system worth looking into and suggest that our readers write for it.

QUESTIONS AND ANSWERS.

Continued from page 294.

permitted to leave the house from about October 1st till the mild days of spring, when I let them run out. The droppings board is cleaned once a week and straw replaced on the floor about every three months. This method has only been tried out one month, and I would like to hear your ideas regarding same. As to egg results I cannot say what it will do for this month (November) all my hens are molting and pullets not laying, but combs are beginning to get large and red. Any suggestions you have to offer will be appreciated.


F. W. S.

Missouri.

Your method of feeding and ration look good to us. The only question is, are you

Acme Incubator Lamp Wick

MINERAL
FIBRE WICKS
DO NOT
BURN OR
CHAR



MINERAL
FIBRE WICKS
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Practically Indestructible. Keep lamps well filled with oil and wicks do not need trimming, burning uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and aid keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two, 15-16 inch wide; or Number three, 11-9 inches wide. Price, ten cents each. Special rate made on large lots. Fit any lamp. Address.

Poultry Keeper Publishing Company, Quincy, Illinois

not feeding so liberally on grain that the hens do not take a sufficient quantity of the mash? We are not prepared to say that feeding three times a day is any better than feeding twice. We practice the latter method, but in your case we would not change as the hens have become accustomed to this method. There is no certain way that is right and others wrong. There are many methods of caring for laying hens which are widely different and still bring good results. We believe your method, as mapped out above will prove satisfactory. The only objection we can see to it is that it necessitates considerable labor, but with a small flock this is not serious. Those who are feeding large flocks are looking to cut out the item of labor as much as possible.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published namely "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

Classified Ads

rates for ads classified under proper headings are as follows:

1 month	4c per word
2 months	8c per word
3 months	9c per word
4 months	10c per word

ANCONAS.

REMOVAL SALE Anconas. Both Combs Old and young stock. G. Fairbank, Averill Park, N. Y.

ANCONAS—Some fine single comb cockerels—Fawn and White Runner Drakes. White egg strain. Write for prices. King & Sheriff, Fayette, Ohio. 12-1

SIX HUNDRED YEARLING ANCONAS for our big baby chick trade this coming season. You will want the best; get your order in early. Illustrated catalog. J. O. Somers, Bedford, Ohio. 12-4

ANCONA COCKERELS. Breeder and exhibitor six years. Reasonable prices. P. E. Gregoire, Newton Illinois. 11-8

MUSKINGUM POULTRY FARM. Anconas. 500 breeders for sale, \$4, \$6 and \$9 per trio. Eggs and chix a specialty in season. Catalog free. Evans & Timms, Malta Ohio. 11-4

FOR SALE Surplus large, dark, neatly mottled March Ancona pullets, \$2. younger \$1.50; yearling hens, \$1.25. Cockerels \$1.50 up. From fine exhibition matings. Not outok W. H. Clapp, Hagerstown, Md 11-4

SINGLE COMB ANCONA COCKERELS and cocks at \$3 and \$5 apiece. Also some fine pullets and yearling hens at reasonable prices (Sheppard strain). Guy Shatto, Dunkirk, Ind. 11-4

SHEPPARD'S FAMOUS ANCONAS. The world's best. Single or Rose Comb. First at world's greatest shows, including London, England, Madison Square and Weymouth. Greatest egg record—256 average. Catalogue free. Cecil Sheppard, Box H, Berea, Ohio. President International Anconas Club. 10-8

LOOK HERE, WYMAN'S FAMOUS ANCONA breeders at \$1.50 each, while they last. Must have the room for young stock. Write for catalog. E. F. Wyman, Route 2, Brunswick, Ohio. 8-4

ANDALUSIANS.

FOR SALE, BLUE ANDALUSIAN, White Langshans Cockerels, pullets, bred from best stock. Strong, healthy, large, boney fellows. Satisfaction guaranteed. R. A. Weinkauf, Box 56, Truman, Minn. 10-4

BABY CHICKS.

GET YOUR ORDER in early for strong hustling baby chicks. Single Comb White and Buff Leghorns, Barred Plymouth Rocks, Black Minorcas and Golden Sebright Bantams, 15c to 20c each. Safe arrival guaranteed. Baroda Hatchery, Baroda, Mich. 12-4

BANTAMS.

BUFF COCHIN BANTAM cockerels \$1.00. Mrs. N. J. Vickery, Arkoe, Mo.

"MOHAWK STRAINS SUPERIOR." Largest breeders, leading varieties. Game and Cochlin Bantams, Madison Square Garden winners, shipped on approval. Mohawk Bantam Yards, Box J, Schenectady, N. Y.

BUFF AND BLACK COCHIN Bantams. Highest honors world's greatest shows. Wm. Fillman, Red Hill, Pa. 11-4

RARE BARGAINS. GOLDEN AND SILVER SEBRIGHT, BUFF, BLACK, White and Partridge Cochlin, Rose Comb Black, Black Tailed Japanese, Red Pyle and Black Red Game Bantams. Proper & Son, Schoharie, N. Y. 8-12

BRAHMAS

DARK BRAHMAS—We have made a specialty of breeding Dark Brahmas for 39 years. Can furnish a small number of fine breeding birds when fully matured. Thos. Perrine, Lebanon, Ohio. 12-4

BUTTERCUPS.

SICILIAN BUTTERCUPS—April and later hatched cockerels from best strains. Vigorous farm raised birds at reasonable prices. Eggs after February 1st. G. A. Williams, Box 324, Warwick, N. Y. 12-4

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WEISBERG'S QUALITY BUCKEYES. Pullets now laying. Good breeding trios, \$10.00. Pens, \$15.00. Glad to send catalogue. A. H. Weisberg, Nevada, Mo. 10-4

CAMPINES

BRAEKEL CAMPINES. A few choice females for sale at a low price. A. A. Whitford, Milton Junction, Wisc. 12-1

300 FINE SILVER and Golden Campines for quick sale at half price. Send for bargain list. E. Benson, Latimer, Iowa.

SILVER CAMPINES. Four firsts out of possible five, Cortland, N. Y., proof of quality. Imported and American line bred. Show birds and utility stock for sale. Money back guarantee. Short & Tripp, Cortland, N. Y. 11-4

COCHINS.

PARTRIDGE COCHIN cockerels, pullets and eggs for sale. Write for description and prices to Chas. B. Ogg, Mt. Pleasant, Iowa. 11-3

DUCKS.

PENCILLED WHITE EGG RUNNERS. Young stock for sale. Eggs and ducklings in season. Member Cumberland Club. Mrs. Wayne Flint, Randolph, Pa. 12-4

PRIZE WINNING Fawn and White Indian Runners, also Pekin ducks, hens and drakes at \$1.50 each. Mary Ellis, Industry, Illinois. 12-1

WHITE RUNNERS. 250 for sale. Fishel and Spencer strains. Pure white eggs, pure white breeders. As good as money can buy anywhere. Price on application. C. W. Michael, Independence, Ind. 12-4

ENGLISH RUNNER DUCKS. Mrs. Wm. J. Turner, Sharon, Vermont. 12-1

FINE WHITE INDIAN RUNNERS of the racy type. Also choice White and Fawn Runners. Eggs at \$1.00 per twelve. Oscar Wells, Farina, Ill. 12-1

WHITE RUNNER DUCKS. Winners at Chicago and Ill. State Show, Racy, large, white eggs. No stock. Eggs, 13, \$1.50; 50, \$4.00; 100, \$7.00. Orders booked. A. A. Whitford, Milton Junction, Wis. 12-2

WHITE AND FAWN and White Ducks and Drakes for sale. Also Ancona cockerels at prices reasonable. Lena Liese, Corde, Mo. 12-1

MAMMOTH PEKINS (Rankin) and Toulouse Geese (Davidson) for sale. C. McFerrin, Bellville, Ohio. 12-4

CUMBERLAND DRAKES. Young's White Leghorn cockerels. Fine birds. White eggs. Mrs. Galvin Wilcox, (Hillcroft) Spencer, N. Y. 11-4

BARGAIN IN WHITE RUNNERS. 3 pens of seven each at \$10 per pen. Fishel's strain direct. George Christensen, Ereland, Wis. 11-3

CHURCH-SPENCER WHITE RUNNERS. \$8 a trio. White egg. Pencilled bargains. Mrs. Galvin Wilcox, Spencer, N. Y. 11-4

INDIAN RUNNER DUCKS. Fawn and White, also white. White Chinese geese. Fine show birds and breeders. W. M. Sawyer, president of National Indian Runner Duck Club, Lancaster, Mo. Box P. K. 11-4

BARGAIN SALE. Pure white Runner ducks, \$1.00 each. Rose Comb Red and Partridge Rock chickens. \$1.00 up. J. A. Stormont, Salem, Ill. 11-4

DUCKS—PEKIN, ROUEN, AYLESBURY, W. I. Runner and Fawn and White, Grey and White Call, Colored and W. Muscovy, Cayuga, Mallard, Teal, Pin Tail, Pheasants, Pea Fowl, Guinea. Geese—Egyptian, Canadian, Brant, African, Embden, Toulouse, and Turkeys. Banded Rock, Anconas, S. C. R. L. Reds, W. Wyandottes, Dawson Brown and W. China, Bronze and W. Holbrook, Frankville, Wis. 10-8

INDIAN RUNNER DUCKS, ugat fawn and white, white egg strain. White Wyandottes, Martin Strain direct. Stock for sale. W. E. Marckel, Continental, Ohio. 10-4

WHITE RUNNER DUCKS. Fine type. Large eggs. My ducks have won at Chicago and Illinois State Poultry Show, and also a breeder of choice Braekel Campines. Eggs in season. A. A. Whitford, Milton Junction, Wisconsin, formerly of Farina, Ill. 11-4

WHITE AND FAWN and White Ducks for sale; also Single Comb White Leghorns of quality. Chas. J. Rauch, Jenera, Ohio. 9-4

SEND 10 STAMP for Duck Culture for beginners Show Pekins and White Runners for sale. Oscar Wells, Farina, Ill. 10-13

BUFF ORPINGTON DUCKS. Largest flock in state. First-class stock for sale in large or small lots. Now is time to buy. Watch for egg ad later. Pherson, Bainbridge, Ind. 9-x

MAMMOTH PEKIN DUCKS. Big breeders from stock that has won at state and other big shows. 16 years' experience breeding and showing Pekins. White eggs always, \$5.00 per 100. Oscar Wells, Farina, Ill. 10-13

WHITE RUNNERS. We have the long racy type, high standers. Will out-lay hens. Eggs, \$1.50 per dozen, July and August. Pedigreed Fox Terriers. R. C. Brown Leghorns. Carl A. Farthing, Salem, Illinois. 1-12

DOGS.

FOR SALE, thoroughbred Fox Terrier pups. Best ratters on earth. \$3.00 each. John Thurman, Armstrong, Mo. 10-4

FAVEROLLES.

SALMON FAVEROLLES, bred for beauty and heavy egg production. Stock for sale. Chas. C. Lowmiller, Germano Harrison Co., Ohio. 12-1

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GEESE. Mammoth Toulouse, White Embden, White China, Brown China, Gray African. Ducks, Imperial Pekins, Indian Runners, Rouens, Muscovys, Gray Call, Buff ducks; White Holland, Bourbon Red. High quality fowls at low prices. Alf A. Ziemer, Austin Minn. 12-4

LARGE EMBDEN GANDERS for sale. Eggs in season, 20 cents each. Alvin Range, Plattsmouth, Nebraska. 11-4

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WHITE AFRICAN GUINEAS for sale, \$1 each this month and next. Sallie Townsend, Nottingham (Chester Co.) Pa. 12-1

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SILVER SPANGLED HAMBURGS, cockerels and pullets. Prize winners. \$2.50 to \$5.00 each. Also utility stock, \$1.00, \$2.00 each. Great laying strain. Eggs \$2.00 per fifteen. Raymond Heald, West Chester, Pennsylvania 12-4

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FAMOUS HOUDANS. A nice lot of young birds. Fine winter layers. Cockerels, \$3.00; pullets, \$2.00. M. B. Richardson, Mocksville, N. C. 10-4

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COCKERELS. Black Langshans, \$2 to \$5. Golden Gate Farm, Lafayette, Ind. 12-4

MOORE'S WHITE LANGSHANS. Farmers' friends, noted for health and winter laying. Stock for sale for both farmer and fancier. Will gladly answer all inquiries. R. H. Moore, Nellie, O. 11-4

BUFF LEGHORNS.

"AMERICAN QUALITY" SINGLE Comb Buff Leghorns. Bred for eggs but they win." Hundreds of grand winners, breeders, layers. Priced right. Leo Munger, DeKalb, Ill. 11-4

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TOM BARRONS STRAIN S. C. White Leghorns; also Wyckoff strain. Any number strong chicks, hatching eggs from large, vigorous farm range stock, carefully selected for sale. Circulars. Write wants R. T. Ewing, Atlantic, Pa. 12-4

(BLANCHARD-WYCKOFF) Single Comb lected for heavy laying. Prices low. Choice White Leghorns. Hens, cockerels. Eggs \$2.50 to \$5.00 per 100. Catalog free. William Albers, Lombard, Ill. 9-12

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500 S. C. WHITE LEGHORN yearlings and pullets at bargain. Write for prices. Mt. Senia Poultry Farm, Ripley, N. Y. 12-1

CHOICE SINGLE COMB WHITE Leghorn cockerels for sale. Two dollars each; three for five dollars. Eggs in season. L. W. Hamblin, Wilson, Niagara Co., N. Y. 12-1

SINGLE COMB WHITE LEGHORNS. Utility cockerels. \$1.00 each. Jesse Walter, Summum, Illinois. 12-1

ROSE COMB BROWN LEGHORN cockerels, from Kulp's heavy laying strain, \$2.00 each. None better. J. F. Severens, Pearl, Mich. 12-1

PEDIGREED S. C. BUFF LEGHORNS. Stock and eggs bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Los Angeles, Indianapolis, Columbus, Racine and Kansas State shows. Winners for any show now. Dr. L. Heasley, Dorr, Mich. 11-6

FINE COCKERELS. S. C. White Leghorns, (Lakewood Strain). Price \$2 to \$5 each. John Senior, 1622 Fourth St., New Brighton, Penn. 11-8

ROSE COMB WHITE LEGHORNS. Cockerels fine white. P. Augustin, R. 3, Orland, Illinois. 11-8

S. C. BUFF LEGHORNS. Heavy laying strain. Bred to lay and pay. Large vigorous stock. Pullets, hens, cockerels. Reasonable prices. Satisfaction guaranteed. Eggs in season. W. B. Carnahan, Ada, Ohio 11-4

SINGLE COMB WHITE LEGHORNS. (Wyckoff strain). Cockerels \$2. Ethel Ives, Muncy, Pa. 11-3

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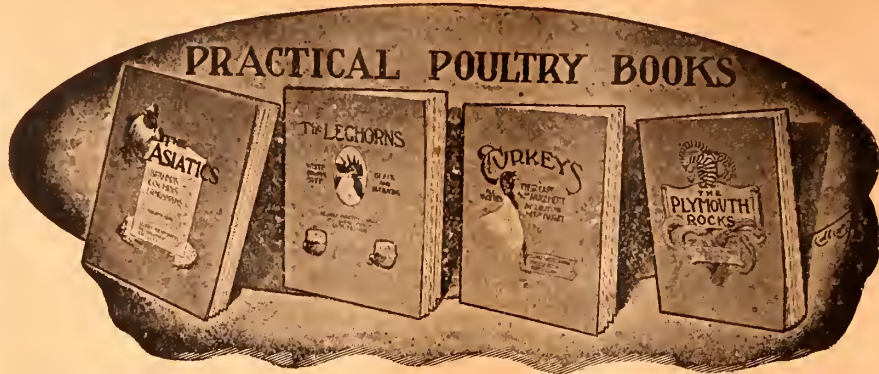
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QUINCY, ILLINOIS.



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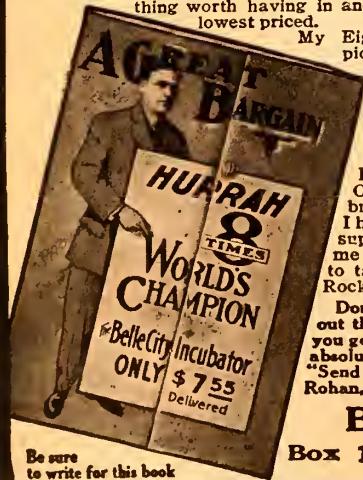
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IN MAKING
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PAY

VOL. XXX.

JANUARY, 1914.

No. 10

INDIAN RUNNER DUCKS.

Although much has been written about Runner Ducks the past few years, there can hardly be too much said about this popular fowl.

It can be safely said there has been no variety of fowl that has gained favor so rapidly as the Indian Runner, and justly so. They are superior to chickens in nearly every way. In only two points are they lacking, and those are noisiness and cleanliness, and they count but for little if kept away from the house, as they should be. I have been a breeder of this popular fowl for several years and find them much more profitable than chickens. They will lay from 50 to 75 per cent more eggs in a year. In fact, while I have bred several varieties of chickens, I never had those that would lay more than one-half as many eggs as my Runner ducks, and their feed costs but little more, and for houses and fencing, the cost is less.

In my opinion the White Runners have some advantage over the Fawn and White, and I have discarded the latter and will breed only the White, as a larger per cent will breed closer to the standard, as they have no color markings and too, a white duck sells better on the market, and I notice the eggs are larger.

Contrary to some writers, they do well on whole corn as part of their rations, and like it as well as the mash. My ducks always get nothing at night but whole corn the year around.

For morning and noon feed a mash made of bran and cornmeal, ground rather coarse equal parts by measure. Sometimes I add one-half part of shorts, sometimes too, I add one part whole oats, but the meal and bran is used mostly. To seven measures of above, I add one of beef scrap, and in each feed a pinch of salt. The feed is moistened. During the winter I also feed in mash alfalfa meal. They only have water for drinking and except at such times a heavy fall of rain fills the ditches, water is kept before them at all times.

A half candy pail makes a good drinking dish for pens of 25. For larger pens I use wash tubs cut down to 6 or 7 inches in depth.

My ducks usually lay ten months in the year. I want them to take a rest from December 15 to February 15. The eggs run high in fertility at all times, but not quite so high in late summer.

Have known ducks hatched in September to begin laying in March. The ducks mated to drakes of same age and their first eggs to make a hatch of 90 per cent. So much for the claim I once heard that a young drake would not fertilize the eggs.

While my ducks are sold for breeders, I see no reason why they should not be profitable for brooders. I have had them weigh four pounds at ten weeks of age. While this is one pound less than Pekin's weight at same age, they have consumed less feed and therefore they have been grown at a less cost. My experience and observation has shown me that a Runner will lay from forty to sixty more eggs in a year than a Pekin, and with less feed, which at the present price of feed is quite an item.

Customers have written me that the that the Runners were so much more profitable. They should keep no other poultry.



FIRST DRAKE—CHICAGO SHOW.
Owned by A. A. Whitford, Milton Junction,
Wisconsin.

If allowed to roam, they will pick up much of their living, and no matter how far they roam, are sure to come to their quarters at night.

They will do well in small runs, but should have green feed furnished them. The ducklings are easy to raise, grow rapidly and lay at four and one-half months, if cared for properly.

A. A. WHITFORD.

Milton Junction, Wis.

CINDERS FOR GRIT.

Two years ago it became terribly muddy about my back porch, so I set to work with pick and shovel and cut a small ditch around the porch. It was very low, so that the water still stood on the ground, so I had a wagon load of cinders dumped in the lowest part of the yard. As soon as the cinders hit the ground, every chicken in the yard sailed in and in a few days there was little left of the cinders. I have kept cinders in the yard from that time on, and find they make the finest kind of grit, as they are hard and rough. My ducks are wild over them. I also have plenty of rock and gravel in my yard. The cinders are all right for any kind of fowl.

J. W. Skinner.

North Carolina.

The best favor you can do Poultry Keeper is to tell your poultry raising friends how good a poultry magazine it is. Will you send us the names and postoffice addresses of your neighbors and friends, who are interested in poultry work, so we may solicit their subscriptions? We have a special club offer of three subs. for one dollar. Why not get two new subscribers to send in with your subscription? Your friends will thank you and you will help us.

X When a subscriber finds this item marked with an X in blue pencil he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants its except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

A SUCCESSFUL POULTRY FARM.

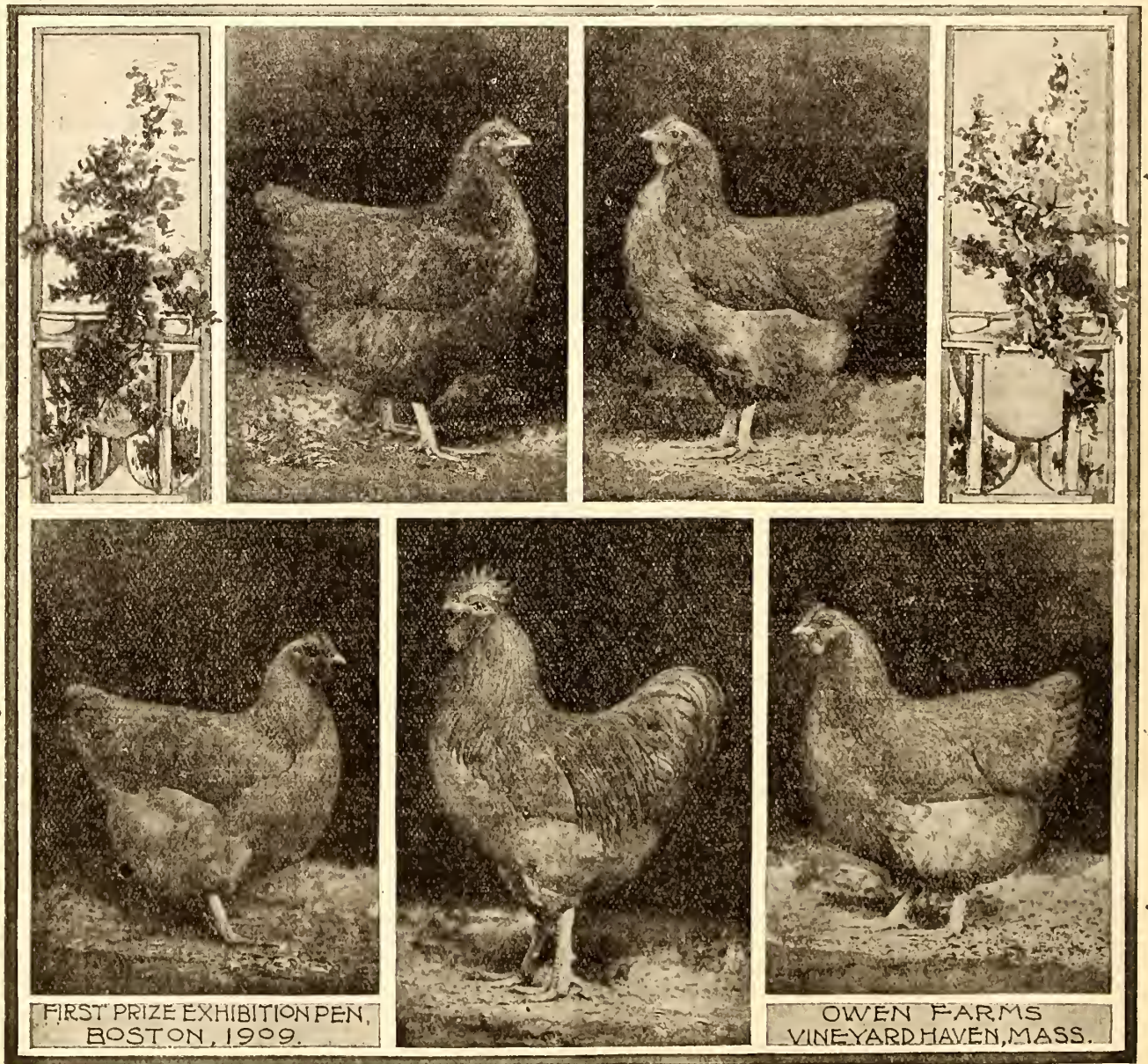
VISITORS at all of the leading poultry shows of the United States have been impressed during the past few years by the showing made by the Owen Farms. This Farm is located at Vineyard Haven Mass., a place admirably located for the production of hardy, northern grown stock that has made the name of Owen Farms one that is well known by exhibiting fanciers as well as the attending visitors at the shows.

The Owen Farms was originally started by Mr. William Barry Owen, who has won success in the business world, but the cares of business had made him anxious to have something that would give him diversion and outdoor occupation and he decided upon the poultry business to give him this recreation. While he has been successful in previous business ventures, he has not fully counted upon the re-

markable success there was in store for him in the poultry business, though he might fairly have presumed that he would win out in this venture, the same as he had in other fields. The wholesale winnings at the big Madison Square Garden Shows and other leading shows, and the consequent demand for Owen stock and eggs for hatching required the building of an immense business, which of late years has grown beyond the strength of the originator to take care of it properly and he decided to let it pass into the control of Maurice F. Delano who has been his main support for many years. Thus it happened that the control of Owen Farms passed to Mr. Delano and it could not have fallen into better hands as Mr. Delano understood the business thoroughly and being in full accord with Mr. Owen and his ideas, will develop and continue the business along lines which have made it so successful in the past.

Not only have the Owen Farms exhibited largely themselves, but they have made a specialty for several seasons of supplying winning birds for customers, which birds have been guaranteed to win in some particular show. This has required a guarantee of quality which has been preserved even in birds sold at moderate prices, and Mr. Delano's policy will be to so satisfy a customer that he will always remain a Delano customer. The admirable location of the plant and the strict sanitary conditions that have been maintained have contributed largely to making this success possible.

Naturally, the success of so large an enterprise would involve the breeding of the Orpington class of birds which have been so popular all through the United States. These birds were originated in Great Britain after many years of careful mating and crossing



FIRST PRIZE EXHIBITION PEN, BOSTON, 1909.

OWEN FARMS VINEYARD HAVEN, MASS.

and the Owen Farm stock has been perfected from the highest grade of imported stock. Not only has especial attention been paid to the White Orpingtons, but equally as good stock has been developed in the Buff variety, and the Buffs are almost as strong in popularity as the white variety.

As the quality show varieties in the different breeds seem to the whites, the Owen Farms have chosen the White Orpingtons, White Rocks and White Wyandottes and these three varieties together with the S. C. Reds, comprise the different varieties bred at the Owen Farms. Naturally it requires lots of room and attention to take care of these different varieties and to preserve them in their pureness, but the Owen Farms have that capacity and their guarantee as to quality and pureness will protect any customer from the possibility of mixed breeding. When the reader takes into consideration the fact that a single season's sale of stock and eggs amounted to about \$80,000 and that the recent October grain bill at Owen Farms was \$600, he will form some idea of the capacity of such a plant.

There can be no doubt that all of the varieties bred at Owen Farms are excellent general purpose fowls as well as fancy show varieties. So long as interest is taken in poultry shows these varieties will continue to be bred in their purity. These are the varieties that make the most valuable birds for home flocks as they are all good winter layers, being heavily feathered and hardy stock and when dressed for table use are of good size for home cooking. By keeping your home flocks pure you will always have a good demand each hatching season for all the surplus eggs you have. These need not be sold on the market as common eggs when prices are low, as they would have to be if the eggs were from common or mixed flocks, but may be sold as fancy hatching eggs at \$5.00 a sitting and upwards, according to quality. A few sittings sold at such prices soon pay the year's feed bills and turn a flock into a profitable proposition.

All of the stock sold by Mr. Delano is produced by him on his own farms and customers need have no fear of buying stock that has been resold from some other poultry plant.

By the time this issue of Poultry Keeper is in the mails, many of the leading shows of the country will have been held and the close approach of the 1914 breeding season will make it necessary to give some thought to any new stock or hatching eggs needed. Naturally, a large plant like the Owen Farms receives thousands of orders each season and while they may be in excellent shape to fill orders promptly it is well to have your order booked and thus be sure of getting what you want, when you want it.

The poultry fraternity owes much to the enterprise of such farms as the Owen Farms. Nothing but business integrity could make this farm possible, as dishonorable methods of a single season would effectually put them

out of business. Complaints of dishonest treatment are not made of such a farm, but usually come from "mush room" farms who do not have what they have to sell and fill orders frequently from stock bought of huxsters. The guarantee of Owen Farms is not only the personal guarantee of Mr. Delano but it carries with it the implied guarantee of the poultry press, which would not be possible if complaints were received from customers who had been defrauded.

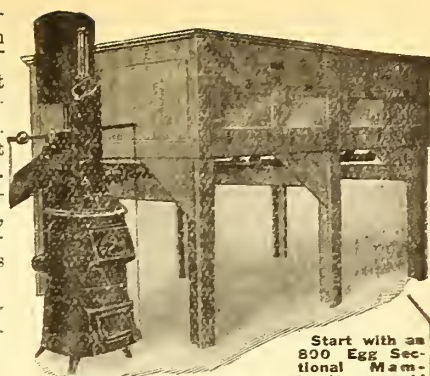
We regret that space will not allow us to go further into details and describe the five varieties bred by Mr. Delano, but deem this unnecessary here. Mr. Delano has recently issued his first annual catalogue as successor to the Owen Farms and naturally is anxious to send a copy of it to any one who is desirous of knowing more about his birds. The editor of Poultry Keeper hopes that there will be many responses for copies of it. Write for a copy of the catalogue today, addressing Mr. Maurice F. Delano, 127 William Street, Vineyard Haven, Mass.

TURKEYS FOR MARKET.

Do not let the turkey fall off in flesh when insect food becomes scarce. Gradually increase the grain supply for the turkeys intended for market, and fatten them while on range. Turkeys in confinement are apt to lose flesh or barely hold their own on the most fattening of rations—they apparently never entirely lose their wild habits and are impatient of restrictions. When every pound increase in weight means from 16 to 23 cents live weight, it behooves the turkey grower to get busy, and give the market birds all the grain they can be coaxed to eat. Keep them growing from start to finish; with plenty of exercise they will assimilate a surprising amount of food. Do not take turkeys from a scanty ration and put them on full feed, treat them as you would any fattening stock, get them on full feed gradually. Old corn should be saved for fattening the Thanksgiving turkeys; if necessary to use new corn begin gradually, or boil or parch before feeding. Keep grit and green food before the turkeys constantly. The English method of feeding is to give twice a day a mixture of ground oats, barley and corn, equal parts mixed with table scraps, boiled carrots, potatoes and other vegetables mixed with milk. Near the end of the feeding some fat suet or butcher's scraps is mixed with the mash.

Unless the price for the turkeys dressed for the oven is exceptionally good, it will not pay to kill and dress them.

Turkeys are easier scalded in a wash boiler. Push the bird entirely under water while you count ten, remove and count ten, then leave under water while you count thirty, remove and plunge in a kettle of cold water so the heat remaining in the feathers will not scald the tender skin and cause it to tear.—Exchange.



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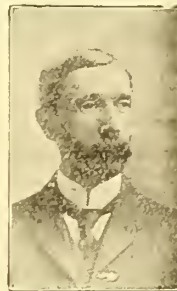
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- II—How to Hatch More and Raise Better Chicks
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and your lice troubles will be no more. Safe, sure, quick, easy to apply. Will not injure hens, eggs, chicks, or soil plumage. Sold in 1lb., 2lb., 5lb. and 10lb. sizes. Send 2c for latest copy of Lambert's "POCKET BOOK OF POINTERS".

W. K. Stock Food Co., 504 Traders Bldg., Chicago

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. costing ten cents per word for all four months, is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

WINTER HOUSING AS IT AFFECTS REAR OF EACH COMPARTMENT. IN SUCH A HOUSE, THERE WILL BE FEW DAYS DURING THE WINTER WHEN WATER WILL FREEZE IN THE DRINKING FOUNTAINS AND BY HAVING THE HOUSE MADE LARGE ENOUGH THE BIRDS MAY BE KEPT CONFINED DURING THE BAD DAYS WITHOUT ANY EVIL EFFECTS.

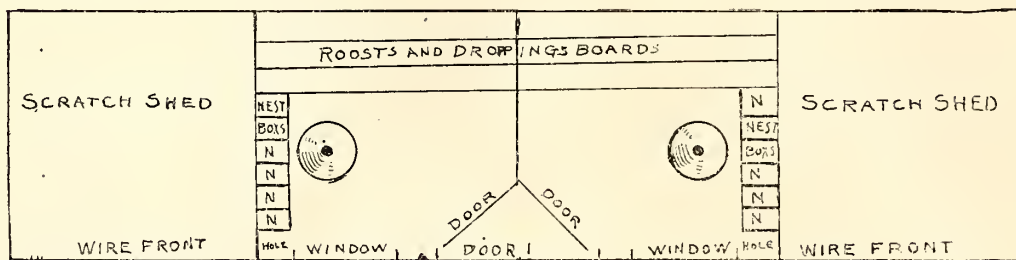
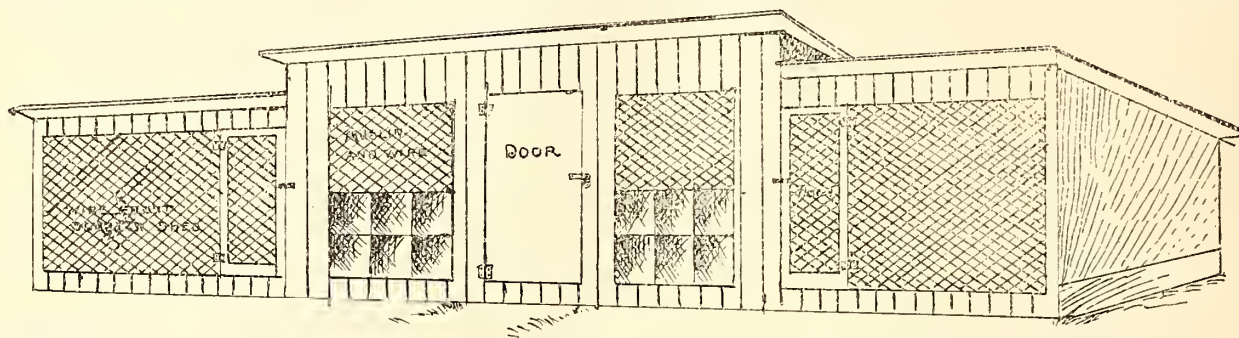
How many flocks have been giving a good egg yield during the past month of December? The old understanding was that hens would not lay in the winter months and consequently there was little effort made to house them properly. Experiments during the last few years have proven that proper housing is a very important factor in getting fall and winter eggs, and the open front house has received much attention.

At most of the state experiment stations some form of the open front house is in use for winter layers and eminent authorities do not hesitate to recommend this type of house for general winter use. It may be a little out of place to talk poultry house construction during a month when build-

ten as they like. They will not drink more than they need.

I feed dry feed rather than a mash and never let my chicks go hungry and have regular hours for feeding. Chicks eat whole wheat when a few days old but it is better to feed it cracked. Keep everything clean. Scald out drink and feed dishes with soap suds as often as once a week. Good shelter is required from the hot sun as well as the elements. Be careful with the temperature of the brooder.

I watch my chicks carefully for any symptoms of illness and cull the sick



Robert Wilkinson's Open Front House.

The accompanying plan of house is one used on the poultry plant of Robert Wilkinson, Cumberland, Maryland. While this latitude is not extreme in the way of severe winter weather, it is far enough north to make substantial housing necessary and some of the far north fanciers may think that a modification of the plan may be advisable. However, this plan ought to work out well in any locality where the weather does not stay at zero or below for long periods.

The plan is a double combination house for two pens, thus making it possible to house two separate varieties in the same building, but ample provision should be made for runs to let the hens out during favorable weather, keeping them confined only when snow or rain make the outside runs wet or muddy. The two ends are scratching sheds to which the hens should have access every day and their grain scattered in deep litter to make them hunt for it. The complete open fronts keep the dust down, at the same time admitting plenty of fresh air and sunshine. These latter elements are extremely necessary to the health of any animal. In the roosting and laying pens, there is about one-third glass, one-third wire and muslin and the balance solid board. This permits plenty of light and ventilation, with room at the sides for nests and roosts along the

ing operations are suspended, but if you have not been having good returns from your layers, now is the time to plan to change matters for next season.

TWENTY YEARS EXPERIENCE IN THE POULTRY BUSINESS.

No matter how strong and healthy your chicks are when hatched; no matter how good the brooder is and no matter how much care you take in everything else, if you are not very careful in feeding the chicks the poultry business is going to be a failure with you.

In the first place, chicks should not be fed before they are 48 hours old as nature has provided them with enough food to last at least 48 hours after pipping the shells. After they are two days old, feed little and often, five times a day is not too much, until they are two or three weeks old. Chicks digest food very fast and are hungry again. As soon as they seem to have had enough at a meal all surplus must be removed.

The first feed should be stale bread or cracker crumbs. Sometimes it is good to feed hard boiled eggs finely ground. They may also be fed a small supply of rolled oats.

Give chicks plenty of grit. Dig up wet spots and keep them scratching for worms. Drinking water should be placed where chickens can drink as of-

ones and care for them apart from the others.

I think these suggestions will be taken in the right spirit. They are not rules by any means but they have all been tried and are being used with success.

We want to help every one we can who is in the poultry business. This is one of the ways we help you. The secret of success in the poultry business is learning by the other fellow's experience. Our own experience is valuable but it costs money while we get other people's for nothing.

Mrs. M. E. Walters.

Mississippi.

Success With Poultry contains 128 pages (9x12 inches in size) with numerous half-tones and etchings. Price is \$1 per copy. For price of book alone we will furnish a full year's subscription to Poultry Keeper and send Success With Poultry postpaid. Offer is good for new subs or renewals. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

SICILIAN BUTTERCUPS AS PROFITABLE POULTRY.

In writing this article I wish to say that I bred various breeds of poultry for twenty years or more and found some strains in all breeds to be profitable if handled correctly, but I find that the thoroughbred Sicilian Buttercup is the most profitable bird under general conditions. This I consider is because the birds are an original breed and are not made up of several breeds like most poultry common in this country.

The man who said "the hen that lays is the hen that pays" was a wise man, for he knew as we know today that the egg was the paying product, that the feathers, carcass and manure were by-products. The hen that will lay one hundred and fifty eggs or more in a year on a small amount of food is a valuable hen. The Buttercups are noted for the large amount of eggs they will lay on a small amount of food. I know of other breeds that will lay nearly as many eggs, but require a great deal more food. It is hardly profitable to keep a hen that lays an egg a day if it takes an egg a day to keep her. The average farmer's objection to the hen is the amount of grain she consumes, as he will tell you that his cow eats only grass and in return he gets milk. Now it is up to the poultry fancier to show the farmer that the price of a cow invested in the proper breed of hen will net him great returns with less chance of loss.

The reason I pick the Buttercups as the profitable hen, is because they are great foragers as when having free range they can nearly live on grass, insects and wild seeds, that you can house a great many in small quarters and still have them do well, that they are naturally good egg producers, while very alert yet they are tame.

Their color makes them most attractive as they always look neat and trim, for a little dirt does not show as on white birds.

Whereas the Buttercup hen is only about a four pound hen, her carcass is most attractive as the breast is so round and full. They have nice yellow skin and sell readily to small families, usually bringing a higher price. The cockerels can easily be culled at three months and make extra fine broilers, commanding the top market price. They make fine roast chickens at six months, many weighing six lbs, at that age, also commanding top prices.

As to their egg producing qualities I would say that they are naturally heavy consistent layers of large white eggs and that they respond to forcing the best of any fowls I have ever bred.

I have found in my years of experience that the hen that will respond to forcing and that will shell out eggs

when prices are high is a most valuable hen and is fully entitled to any rest she would want to take when not being forced.

As a reasonable profit is all that any just man should expect from any enterprise, I strongly recommend the Sicilian Buttercups as the fowl that will give that in return for its keeping whether it be on the small or large scale and the pleasure is immeasurable. Massachusetts. Dr. C. S. Brouillet.

R. C. WHITE ORPINGTONS.

In writing these few lines about White Orpingtons, I do not want to belittle any of the other breeds, but merely to bring before the readers of your

**QUALITY SICILIAN BUTTERCUP.**

Male Bird. Owned by Dr. C. C. Brouillet Gardner, Massachusetts.

journal the fine qualities of this great breed, by far too little known.

For fancy and utility, for pleasure and profit, they have no equal. They weigh, win, lay and pay. I have hens going over nine pounds, and cocks 12 pounds. I have found them to be equalled by none as a table fowl and as broilers they are ready for market a month earlier than any other breed I know of. They mature more quickly and can stand any severe climate from the hot South to the cold North.

The Rose Comb Whites are very much like the single combs in origin and in every other way except the comb, and the rose comb makes them a very pretty bird. Their close fitting comb, which never freezes, is the one great advantage over their single comb cousins. There is not so much competition at present in the rose comb classes at small shows. Out at large shows the competition is very large, and is increasing fast and I believe they will excel the single comb classes in a few years, as they are coming fast to the front—where they belong. I know of no breed on which one stands a better chance to make good than the Rose Comb White Orpington.

They have reached the place before the public eye where there is no question about their remaining and contin-

uing to grow as one of the most popular breeds. They are certain to enter the field of the White Wyandotte. Their full round breast, nice comb and egg-producing type of a back, which the Wyandotte does not have, makes them a great utility fowl.

Breeders who get a start in this great and valuable breed now will certainly enjoy the fruits of the first great boom which is as certain to come as the sun is to shine.

To own White Orpington birds today of good quality is just as safe as an investment in bonds and gold. There are no fluctuations in the market—99 cents worth of quality in these noble birds is worth just 90 cents on the dollar any day. There is always a ready market for any increase to which White Orpingtons will be bred, and as long as White Orpingtons are bred there will be buyers.

A great many take up other breeds for a while and turn back to White Orpingtons, of which the Rose Combs will be the leader. If any person is hesitating as to what breed to commence with, he will make no mistake in choosing the Rose Comb White Orpingtons, either for fancy or utility, they are not to be beaten. Look up the ads and cuts in The Poultry Keeper and other different good poultry magazines and see what the Orpingtons have done for us. Their are more Orpingtons bred than any other breed, I believe. There are several kinds, White, Buff and Black, the most popular. Then the Blue and Jubilee, not so popular in America, but bred by a few large breeders to perfection. The Rose Comb White Orpingtons have come to stay. An investment in Rose Comb White Orpingtons will pay you in both fancy and utility points.

Pennsylvania E. M. MENGEL.

Have you any stock or eggs to sell? Our cheap rates shown in the classified ad department will enable you to make the desired sales.

McKEE'S ROYAL BLUE AND WHITE

ORPINGTONS and M. B. TURKEYS are leading in the south to-day. Many valuable show birds shipped to all parts of the country. More proof of quality, our White Orpingtons won at the great National Conservation Exposition show at Knoxville, Tenn., Sept. 22 to 27, 1913. 1-2-3-4-5 cockerel. 1-2-4-5 pullet, 1-4-5 hen, 1 cock, 1 pen, a purse of gold and a diploma, 5 ribbons on 5 entries of Blue Orpingtons. These fine birds are for sale, price \$100, Turkeys \$10 a trio. White Orpingtons \$7.50 a trio up, \$12.50 a pen and up. Eggs from our finest whites this season 1914 at \$10 per 15. Catalog free.

McKee's Orpington Yards

Garvey McKee, prop., breeder and importer. Box. P. K. Watertown, Tenn.

PURE BRED CHICKENS ON THE FARM.

One of the advantages urged in favor of the pure-bred chicks is the uniformity of size and color in both eggs and birds. Where a man has a private trade he soon gains a reputation for eggs of a certain size and color. A housewife will pay a little more per dozen for eggs if she knows each egg will be about so in size. She learns what one, two or ten eggs will do in making up a certain recipe, and it is important that she always have eggs of uniform size. It takes just a trifle longer to boil a large egg than a small one, and where members of the family are particular about their eggs it pays to have them of a uniform size. Furthermore, eggs of uniform color and size make a very attractive package. A neat housewife will be attracted to such a package even though she herself has never thought on the subject. Unconsciously she decides in favor of the nice looking eggs.

As for carcass in dressed chickens, a housewife learns to look for her favorite shade of skin. It may not make any particular difference which color you teach her to look for, but if some morning you bring her a chicken of a different shade of flesh or skin she will look askance at it and be a tri-

ple afraid of its quality. There is a uniformity of shape to the carcass in pure breeds, if well prepared for market, that is impossible to get from a mixed flock. Unconsciously or deliberately the housewife acquires a fondness for a certain type of carcass and resents the offering of any other. She may say nothing, but every time you offer a long slim carcass where before you furnished a short, plump one, you get a black mark in the mind of that particular housewife.

Then with pure breeds there is always the opportunity to embark in the business of selling eggs for hatching or breeding stock if you but add a few good cocks of the same strain too build up and strengthen the good points in your flock. The pure bred bird is never a detriment to its owner and never fails to give larger profits than the scrub if properly managed.—Exchange.

POULTRY REMEDIES.

All diseased birds should be isolated.

Colds and roup—Disinfect the drinking water as follows: To each gallon of water add the amount of potassium permanganate that will remain on the surface of a dime.

Canker—Sprinkle a little flowers of sulphur in the mouth and throat of the bird, and put some chlorate of potash in the water. Also carefully remove the exudate with the aid of

warm water and apply a 2 per cent solution of creolin to the diseased tissue.

Chicken Pox—Apply a touch of iodine and carbolated vaseline to each sore.

Gapes—New ground and vigorous cultivation will often remedy this trouble.

Scaly Legs—Apply vaseline containing 2 per cent of creolin to the affected parts, and after 24 hours soak in warm soapy water. Repeat treatment until cured.

Diarrhea in Hens—Low grade wheat flour or middlings is good for this trouble. Also give teaspoonful of castor oil containing five drops of oil of turpentine to each fowl.

Bowel Trouble in Chicks—Well boiled rice mixed with a little charcoal will often check this complaint. Dissolve 15 grains of crude catechu in each gallon of drinking water.—Exchange.

FREE—Nebraska Poultry Co., Clay Center, Nebr., will send plans and specifications of a pure air poultry house free. We breed all paying varieties of poultry, and have these houses in practical use. Address, W. F. Holcomb, Manager. 1-4

S. C. W. LEGHORNS—Eggs from trap-nested BRED-TO-LAY stock, \$1.50 per 15; \$8.00 per 100; \$35.00 per 500. Baby chicks \$16.00 per 100; \$70.00 per 500. Circular free. Devils Glen Poultry Farm, A. H. Schlosser & Son, Davenport, Iowa, 416 Harrison street. 4-1

Use Trapnesting Methods

and produce hens like "LADY SHOW YOU" the \$800 White Rock formerly owned by J. A. Bickerdike.

Mr. Bickerdike has produced many fowls that were blue ribbon stock and has an enviable record among poultry raisers of the east. His stock is noted both for fancy and utility purposes. His latest book,

PEDIGREED POULTRY BREEDING

Will be ready for delivery February first. It is a volume of information compiled from practical experiences gathered by Mr. Bickerdike and carefully portrayed in simple language for poultry raisers. His success is due to the TRAP-NESTING and he will tell you how it is done, besides telling how to make hens lay in the winter time when eggs are high; how to feed for eggs and vigor; how the breeding of "Lady Show You" made it easy to sell her for \$800.00. "Lady Show You" is a result of Trapnesting.

This method is being used by thousands of poultry raisers throughout the United States. Whether you are breeding for show or utility, trapnesting is the method you will eventually use for results.

PEDIGREE POULTRY BREEDING, by J. A. Bickerdike, explains all these things and many more.

To introduce our trap to the readers of this journal we will send one of the Bickerdike Traps, complete with directions and right to make and use together with the book **Pedigree Poultry Breeding** for a limited time for only \$1.00, either ordered separately will be sent, charges prepaid, for \$1.00. If you are using a trap-nest it will pay you to investigate the Bickerdike Trapnest. Address all orders to

MEDFORD TRAPNEST CO., Dept. C-1, Medford, Ore.

STANDARD LOW-COST BROODING DEVICES

FACTS TALK, not mere "claims," and this company *always* every claim it makes for its goods—backs up *proof* in the form of *signed* and *dated* reports from *satisfied customers*, from have "paid their good money" for our products and who know, therefore, from *actual, personal experience* whereof they speak or write.

CYPHERS PORTABLE HOVERS If you, Reader, are looking for a *low-cost method* of brooding the early chicks you are planning to raise—either home-hatched or bought as day-old chicks—you *cannot do better* than invest in a Cyphers Self-regulating, Self-ventilating, All-metal PORTABLE HOVER. See accompanying illustration, also footnote. Please read the *sample reports* herewith and write today—now, before you forget it!—for our latest (1914) large-size, PORTABLE HOVER CIRCULAR, telling "When, Where and How To Use" for best results.

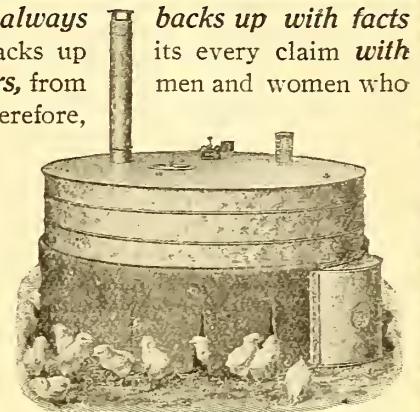
Kendal Green, Mass., July 16, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—
 The four Portable Hovers you shipped us have proved very satisfactory. We regret that you could not at the time furnish us with ten more of these hovers, for we are sure they would have proved of considerable financial benefit to us. We have ten hovers of an inferior make which we were obliged to purchase, not being able to obtain yours, and we are now disposing of them to make room for the Cyphers Portables. Of the twenty-five hovers in our modern, latest-style brooder house, fourteen are Cyphers and the remaining ten are to be exchanged for Cyphers the coming season.

G. L. & W. L. HAGER.

Maple Beach, N. Y., September 4, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—
 I have five of your Self-regulating, Self-ventilating Portable Hovers and consider them wonderful. Have never had a bit of crowding in these hovers and not one chick has smothered. All were strong and vigorous. We kept a record of two of the hovers and out of 295 chicks placed in them, not one died. Morning after morning we would find every chick alive and healthy. These hovers are both self-regulating and self-ventilating, as you claim, and ran like clock work. During the entire season they never smoked or bothered us a bit.

W. W. FENNO.

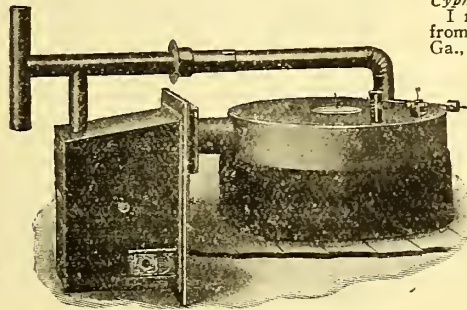
College Park, Ga., May 3, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—
 I recently purchased nine Portable Hovers from your agent, H. C. Hastings & Co., Atlanta, Ga., and am more than pleased with them. I have



Cyphers Portable Hover

Set it down Anywhere Indoors and you will have a Safe and Comfortable Place for the Little Chicks. "Movable" at a Moment's Notice without even turning down the Lamp Flame. No steps or Inclines that Chicks Must run up and down. Weighs 35 Pounds in use. Price, Complete, Safely Boxed, \$8.50 free on cars at all our Places of Business, except Oakland and London. Oakland F. O. B. price, \$9.50. Entirely Safe to order a sample from this advertisement.

used a number of the different makes of brooding hovers on the market, including the _____ and _____, but yours is far superior to any of these. They are self-regulating, automatic in ventilation, convenient to use and being all-metal and substantially made will last for many years. RESTHAVEN POULTRY FARM, F. O. Alexander, Prop.



Cyphers Adaptable Hover

Fire-proof, Wind-proof, Insurable, Self-regulating and Automatic in Ventilation. Best Device in World's Markets for Use in Home-made Brooder Cases, Colony Coops, Roosting Coops and Portable Houses. All Metal and will last Many Years. Price, Complete, Safely Boxed for Shipment, \$8.50 free on board cars at all our Places of Business, except Oakland and London. Oakland F. O. B. Price, \$9.50.

Vulcan, Mich., June 25, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—
 I am perfectly satisfied with your Self-regulating Adaptable Hovers. We set one up in a dry-goods box, and although the weather was very bad, we raised nearly all our chicks. Cannot say too much in favor of these hovers. Only wish I had had half a dozen of them so I could have raised a larger number of chicks. Your Adaptable Hovers save lots of worry—and there is no danger of fire or of chicks freezing to death if these hovers are used.

CHAS. A. ALBERT.

East Derry, N. H., July 15, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—
 The two Adaptable Hovers purchased from you last winter have proved more than generally satisfactory—"wholly satisfactory" is the least I can say. Your Adaptable Hover warms the air without polluting it and is really a perfect "warmer" in cold, wintry weather. We have very severe winds here during the winter and early spring and sudden changes in temperature, but these self-regulating brooding devices seemed to care nothing for that. The above facts, gladly stated, simply confirm the claims you make for these brooding devices.

R. W. SKIRROW.

Algonquin, Ill., June 28, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—
 I bought three Adaptable Brooding Hovers from you this spring and would not again try to raise chicks without them. They are easy to regulate and keep an even temperature, which chicks surely need. I had 160 chicks in a coop 14x16 feet and the outside temperature went down below zero in February, but they were as happy a lot of chicks, thanks to these Cyphers Adaptable Hovers, as if it had been 80 degrees in the shade. I raised over a thousand chicks this season and a very small per cent. died.

CHAS. C. NASON.

Reader, if YOU, personally, have not already sent for a *free copy* of our 52-page (7¼ by 10 inches) booklet, "Best Methods of Brooding," be sure to do so *without delay*. It goes into the subject fully—*telling you in detail* what to do step by step and *day by day* in the proper care of chicks and ducklings. It is FREE, postage paid, and should be worth a great deal to you in your poultry work. Address nearest office of

Cyphers Incubator Company, Dept. 726 Factory and Home Offices, **Buffalo, N. Y.**

BRANCH STORES AND WAREHOUSES } NEW YORK, N. Y. 41 Barclay St. BOSTON, MASS. 12-14 Canal St. CHICAGO, ILL. 329-331 Plymouth Court KANSAS CITY, MO. 317-319 Southwest Boulevard OAKLAND, CAL. 2127 Broadway LONDON, ENGLAND 121-123 Finsbury Pavement

Local Agents Wanted. No Capital Required. Write to Nearest Branch House.

NATURAL OR ARTIFICIAL HATCHING—WHICH SHALL IT BE?

Dr. N. W. Sanborn, Holden, Mass.

AT the beginning of the new year it is right that we should think of the year's work on which we are entering. The opening problem is that of hatching. I find that many folks are questioning as to the method they ought to follow. I have been through a varied experience with both the old hen and the modern incubator. In fact, I once owned one of the first hatchers that was ever put on the market.

We are not all constituted alike and some of us would fail with the artificial hatcher even though we try our best. Others have not the patience that is needed to do good work with the contrary hen. As a rule we work out our final plans according to the suggestions we get from the methods we use. There are certain rules to follow in hatching chicks under the mother hen. There are other directions that have to be obeyed in the hatching with artificial means.

Hatching with the Hen.

Hen hatching is part of the 'ABC's' of poultry keeping. Most beginners use the hen to incubate the eggs. It is right at hand, calls for no additional expense, and makes use of the broody period of the hen's life that would otherwise be an expense. The hen, as a rule, either is laying or resting through the winter months. Few of them desire to sit before the middle of March. Large numbers of chicks cannot be hatched out in January, February and early March, if we depend upon the hen. The broiler man, the winner of prizes at the early fall shows cannot use the hen but must hatch with the modern incubator. The hen, then, is to be used for hatching the chicks that are wanted in March, April and May. If you want large numbers of chicks you cannot depend on the hens to hatch them for you. You cannot get hens enough to do this work for you. The poultryman who is doing a large business has to turn to the incubator for doing the bulk of his hatching.

The hen has always been the necessary choice of small breeders, as well as that of the farmer and she will never be put entirely to one side as the source of heat to bring out the chick from the egg.

There has been a lot said about how to set a hen and many have been the jokes cracked at her work and her owner. But, after all, we are just as interested in the proper method as if we were just beginning to take notice of poultry matters.

The sitting of a hen is something more than the bringing together of a box, some hay, a few eggs and a broody hen. You may have all of these and yet fail to get a chick out of the clutch. The box should be shallow so that the hen need not jump down on the eggs from a distance. She should be able to step in on the eggs as though she had a stolen nest out in the brush.

While the nest may be prepared of all

sorts of material and in varied ways, there is one plan of fixing it that has worked out well for many, many people. It is to cover the bottom of the box with turf from the edge of the lawn or garden, with the grass side down. Scoop out a slight hollow in the center, as the hen would in the nest she makes in the field, and cover the while surface of the inside of the box with cut hay or fine straw. What have you got? You have a mass of soil, slightly damp, that will hold the spare heat when the hen is off the nest to eat and dust. The thin covering of straw will fit itself to the hen and eggs, act as a buffer in her movements on the nest, as well as help even up the heat of the hen.

Then the eggs should be selected with an eye to uniformity of size and shell. Big eggs and little eggs do not do well in the same hatch. Rough shells, thin shells, odd shaped eggs could be rejected in all our hatching problems.

The hen is worth considering before you select her as the one to cover the setting of eggs. She should have staid on her nest two nights before removing to the nestful of eggs. She must have proved her broodiness by her actions for at least forty-eight hours. She must have shown you by the warmth of her body that she has the added heat that is required to bring off chicks that are worth owning. All broody hens have not the required temperature to do good hatching. You sometimes wonder why the chicks come out on the twenty-second or twenty-third day when they should be out and dry on the twenty-first day. Sometimes it is due to insufficient heat on the part of the sitting hen. So select a hen that passes the tests that I have mentioned and put her on the eggs and nest. There is no better time to do this than soon after dark. Then she is closed up in the nest and not allowed to come off till two nights have passed.

The place where the incubating and hatching is to be done is settled by the locations that are at your disposal. It should be comfortable, neither wet nor dust dry, and healthy. Early in the season, while the nights are still liable to be below freezing, a cellar is not a bad place. Later in the spring almost any place will answer. Personally I do all my hatching in the regular poultry buildings. If I needed to do hen hatching before the first of April I should use warmer rooms or cellars for the purpose, but my early hatching is all done with incubators. As I have bred my stock I have got less and less of the broody spirit and setting hens are rare before the first day of April.

On the morning of the third day the board at the front of the nest is removed. If the hen seems willing to come off to eat and drink—well and good. If she sticks to the nest then she is taken off by hand and put on the floor near a dish of water, a box

of feed and a pile of good grit. If the floor of the house has not soil deep enough for dusting then a dust box is provided. Lice and sitting hens do not work in harmony and the dust bath is part of the furniture of the room of the sitting hens. The feed is largely whole corn, though in late years I have thought a part wheat was an improvement. Irritation of the bowels is one of the dangers of the sitting hen and good, sweet, clean, whole corn is our one best food for her. Corn must be watched all through the spring, lest it get moldy. You all know how quickly corn will 'heat' in the growing season. Corn in any form, whole or cracked, should not be fed to any poultry if it is musty or moldy. Hardly a season passes that I do not hear of hens that have died on the nest from bowel disease due to heated corn.

Did you ever wonder why broody hens sometimes persisted in sitting on the edge of the box rather than on the eggs? And on looking for the cause did you fail to find a multitude of red mites all through the straw and cracks? That is the objection to sitting hens in a poultry building. Red mites and lice must be kept in mind and you need to see that the hens do not suffer from either of these pests. Three times during incubation the hens need dusting—once in six days will do the trick—the last being on the eighteenth day.

Under all these conditions, given strong, fertile eggs, you should expect to get hatches that will average seven chicks from every thirteen eggs. Sometimes you will get thirteen chicks from the same number of eggs, but year in and year out, with either hens or machines, you should not expect an average of over fifty-five to sixty-five per cent hatches.

Artificial Hatching.

No one looks upon machine hatching, today, as out of the usual. It is the proper thing on a plant of any size. The fancier has his sixty egg machine, the farmer his four hundred egg hatcher and the big plant has its 6,000, 12,000 and 30,000 egg hatchers. There are dozens of good incubators made today. Hot air, or hot water, they turn out the chicks at any season of the year. They work on the snowy days of winter as well as through the heat of July and August.

You cannot select an incubator from the fine catalogues. Either buy one that has been on the market for a number of years, or else learn from some successful neighbor what he is getting the best results from. Get a machine that has done good work in your section of the country, and having tested it to your satisfaction add more of the same make. It is always safe to follow the directions of the maker. He certainly knows more of machine than you do, at least till you have summered and wintered it in use. In time you may find that certain conditions are different in your plant than in the usual one, and you may have to modify the instructions.

Some facts as to artificial hatching are worth remembering. First it is more important to supply pure air to

the inside of the incubator than to fuss over moisture. Sanitary conditions are as important to the chick within the shell as to the laying pullet in the winter house. The chick that is to come out of the egg is entitled to pure air and clean egg chamber. It will not kill the germs of bacillary white diarrhoea, but it will make a sweeter egg chamber, to wash out egg tray and the inside of the machine with a warm mixture of water and tar disinfectant. If you incubate clean eggs there will be no need of washing the shell and dirty eggs have no place in our work of hatching chicks. Unwashed eggs have a coating that is put on the egg as it comes down the egg passage of the hen, protecting the contents from entrance of any germ life. It is the dirty, washed eggs that spoil in the "putting down" process of the woman who economizes, and often fail to hatch in the modern incubator.

The germ in the shell needs, during the first day or two, a temperature of a little over one hundred degrees. So start the machine with the thermometer showing one hundred and one degrees at the level of the top of the eggs. Increase it a little each day till it comes up to one hundred and three degrees. During the first ten to twelve days of incubation you have to supply heat to the egg in order to keep the germ in proper growing condition. After the twelfth day less heat is given as the growing chick will furnish its own heat if you will keep the chamber of the machine at the usual temperature. You will notice that it takes nearly as much oil to run the machine the first week as it does for the last two weeks.

Much care and time are saved by the burning of a high grade of oil in the lamp. This gives an even flame, less fumes, and no danger from fire. A single scraping of the wick, filling once a day handles the heat problem. You can buy such oil if you will look for it. I think I have good oil when I can run a lamp, in the heated chamber of a brooder, four weeks without trimming or scraping. I did this last spring, filling the lamp through an outside tube, only touching the wick when it was let run dry and burned out. I do not advise handling the incubator wick in this way but it does show what you can do with a good lamp and good oil.

Good artificial hatching is helped by the keeping of the chicks on the tray till dried off. When a machine is run in a cold room or cellar, and the chicks are allowed to drop into the bottom of the incubator while still wet, you take chances of getting bowel trouble in the chicks from chilling. It may be necessary to give added ventilation as the hatch is about over to get rid of some of the surplus moisture, as well as to supply added air to the panting chicks. If the hatch is extra good in number of chicks you will have to remove some of the chicks to a warm brooder or else open the door a crack to let in air. It is in the late spring days that you need to do the ventilating. In January the hatches are not so good, the air is passing through the machine faster than later

in the spring, and the chicks usually get all they need.

We hear of "beginners luck" in incubator hatching. Do you suppose this is due to the perfect condition of the machine as it comes from the maker? If so, it would pay us to look well after every part of the machine. At the close of each hatch: empty the lamp chamber: see that no cobweb hinders the movements of the regulator, put in a fresh wick, clean up the inside of the egg chamber. Remove all broken eggs and shells from the cellar, use the sprinkling can on the earth bottom with some disinfectant.

The Egg of Value.

With everything running properly, nothing about the hatching process overlooked, you will fail unless you have put into the machine eggs that are fit to be hatched into strong chicks.

SUCCESSFUL HATCHING AND BROODING OF CHICKS.

In hatching with incubators the most important things are good eggs, proper heat during incubation, proper moisture and proper ventilation.

Good eggs are eggs that have been laid by hens that have not been forced for winter eggs, hens that have been properly fed and cared for and have had plenty of exercise with a sufficient number of male birds to insure fertile eggs.

Heat should be kept at 102 to 103 degrees the first week and 103 to 104 degrees the remainder of the hatch.

The most successful machines I ever used were those that had the air intakes and outlets on a level with the eggs. My machines have fixed ventilation, so I do not have to bother with slides to regulate ventilation.

Beginning with the fourth day, I place a saucer of water under each tray. I always remove these saucers when the eggs begin to hatch. After the tenth day I sprinkle the eggs with warm water, two or three times.

On the eighteenth day, I take a woolen cloth and wring it out of warm water and place it over the tray of eggs. Then I push the tray back into the machine and leave the cloth on the eggs for fifteen or twenty minutes.

Here in Colorado, with its scant rain fall and high altitude, we need plenty of moisture and I find I get much better hatches by using the woolen cloth to soften the shell on the eighteenth day. Of course one would not need so much moisture at the beginning of the hatch, if any at all in the last, but if a woolen cloth is placed over the eggs on the 18th day it will help many chicks out of the shell that otherwise would be unable to break the shell and consequently die in the shell.

When the eggs begin to hatch avoid opening the doors of the machine too much as this will lower the heat and allow the moisture which is very essential at this time of the hatch to escape. If the incubator has a thermometer holder, hang the thermometer

on this where you can read the temperature without opening the doors.

When the incubator becomes crowded with chicks remove them to a box or basket. Place a cloth over same allowing it to sag down on their backs and set them in the kitchen near the stove.

When the hatch is over I put them all out doors in home made fireless brooders. These brooders have no floor and over the ground in the brooder I place about one inch of alfalfa leaves. After putting the chicks under the hover I close the door between hover and exercising room, confining the chicks to the hover. When the chicks are at least 48 hours old I give them their first feed of prepared chick feed. I avoid feeding more than they will clean up at a feed or what they do not eat will become dirty, as cleanliness is the first step toward the successful brooding of chicks.

Water should be given them in a fountain, which you can make yourself of a tin can and a saucer. To the drinking water I always add a few drops of essence of peppermint.

Young chicks have a habit of drinking so much water as to make them sick and this cuts down their early appetite for water and it is also a good preventive of Diarrhea. As soon as the chicks begin to feel cold put them back under the hover and confine them there until next feeding time. Feed five or six times a day for the first week and always put them under the hover after eating for two or three days and by that time they will have learned to go there themselves.

After they are three or four days old let them out of brooder during the warm part of the day. It is best to have a yard around the brooder to keep them from straying away.

By the above method I average 85 per cent of my chicks and frequently raise every chick and they develop into fine vigorous stock that do their share toward filling the egg basket, proving fireless brooders are not so worthless as some people claim after all.

Jas. Miner, Jr.

Colorado.

We have a special offer of "Poultry Keeper" for three years to any address in the United States, upon receipt of one dollar, or we will send the paper for one year to three separate addresses. Either of these offers means one subscription free of charge. In sending in your own subscription, by making a little effort right in your own neighborhood, you can get two others to send in their subscriptions with you and get all three subscriptions for one dollar. This will be a material assistance to us and will be appreciated.

"Success with Poultry" is worth more than all other poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount (\$1.00) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

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Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

JANUARY, 1914

No. 10

We have recently had several inquiries about the "Philo System" book of intensive poultry keeping. This system and the book describing it were extensively advertised by the originators for a number of years past and the system is still in use by thousands of back yard breeders. The price of the book alone, as advertised by the publishers, has been one dollar, but we can furnish the book direct from the Poultry Keeper office upon receipt of one dollar to cover one year's subscription to the Poultry Keeper, together with a copy of the book.

It is none too early to be thinking of starting the incubators. Sitting hens are scarce in January but the good incubator is at your service whenever you wish to start the season's work. January hatched chicks usually are sold for broilers or small roasters, and the pullets sold too, or kept for summer layers. These early hatched pullets are sure to molt in autumn and take the long rest as do the yearling hens. It is to these very early hatches that we look for the winners at the summer and autumn shows.

The third annual egg laying contest at the Conn. Agricultural College opened in November with eighty-two pens of ten layers each. The White Leghorns lead in numbers, thirty-three pens being of that variety. Next come the R. I. Reds with thirteen pens. Then the White Plymouth Rock with seven pens, five of White Wyandottes, four each of Buff Wyandottes and Banded Plymouth Rocks, three of Buff Plymouth Rocks, while there are two or less pens of Rose Comb R. I. Reds, Columbian Wyandottes, Buff Leghorns, Blue Andalusians, Buff Orpingtons, White Orpingtons, White Laced Red Cornish, and Silver Campines. One queer class of layers are the five pens entered as just "hens." One is made up of pullets picked up by an editor of the Rural New Yorker, picked up in the city market, just any good looking utility fowl. Will this pen of absolutely unknown breeding outlay the

thoroughbred sisters of many breeds and varieties? In undertaking the work this third year it was thought best to combine some experimental feed work with the contest. Much that will be of interest, something of value, should come out of all this spending of time and money. It means much to a breeder to lose the use of eleven pullets for a year, while under the test of this Egg Contest. On the other hand he gets an absolute record of the egg work of each bird for the entire year, a record that cannot be disputed. If his birds make good the owner will get a lot of good advertising. Some of the birds in the last year's contest sold for twenty dollars or more, one pen being reported to have brought several hundred dollars.

This is the best season of the year to feed green cut bone. It can be had through the cold weather in sweet condition, can be kept several days if necessary, and will help provide the needed food for producing the winter eggs. It also adds to the variety of the diet, something that appeals to the hen. If green cut bone is fed in any large quantity it will be necessary to take out the fish or beef scrap from the mash. Too much animal food will upset the digestion and spoil the egg yield. Small bone cutters may be had as low as five dollars which will answer for a village flock, while one that will do the work for three hundred hens can be had for less than twenty dollars. We notice that many of the meat markets have put in bone cutters and sell their waste to the chicken folks as they call for it. Already cut it costs about twice the price of the raw product, but the saving in labor is worth the added cost. With eggs selling at thirty to seventy cents a dozen we can well afford to pay a few cents a pound for good cut bone and meat.

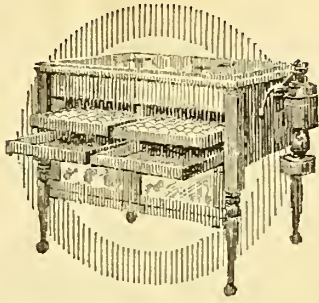
The poultryman who has an abundant supply of skim milk or butter-milk cannot be better off for animal food for his flock of layers, or the growing chicks. The constant feeding of sour milk is helpful to the growth

of chicks and the producing of eggs. Sour milk has in it a germ—millions of them—that aid digestion and keeps under the bad germs that throng the contents of the bowels of the stock. If near a creamery, or some farm that will sell its sour milk at reasonable or ordinary prices you can well afford to use it this winter. Sour milk can be fed in pans or pails, or mixed with the mash and fed as regular meals. Do not make changes from sweet to sour milk and back again, as it will surely upset the digestion. Sour milk is preferred to the sweet for poultry feeding but the quicker it is fed after souring the better for the stock. One of the best large flocks of fancy bred cockerels that we have seen yarded this winter has received a full morning mash mixed with sour milk. These were big, husky, vigorous males, waiting for customers.

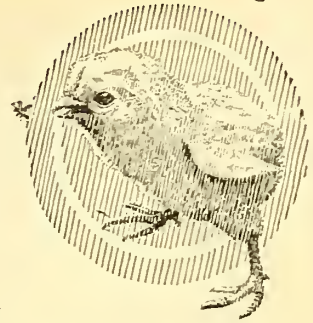
The breeder of utility stock can well afford to buy new males every year. The man who would build up a strain of winners must use his own blood nearly all the time. The building up of a strain of winning birds can never be done except through some inbreeding. The fancier has to pay just as much attention to strength and vitality in his breeders as does the man who is after large numbers of eggs. No poultryman can afford to neglect to throw out of his pens of breeders any bird that does not measure well up to a high degree of health.

Have you a pen of pullets that were early layers? A pen made up of birds that were well up to weight before beginning to lay, yet so early layers as to be noticeable? Get a cockerel that is from the egg of a trap-nested hen that has a record that satisfies you, mate this bird to your pen of pullets, and do the bulk of your utility hatching from it. Try this out several seasons and see if we are not right in telling you that this is the way to get good layers. All the better if the pullets went into the early winter molt and do not lay again until the middle of January. Their eggs will be all the better for your purpose because of the resting period through the molt.

If you will hatch most of your chicks before the first of May, we think that it is safe to say that the sale of the cockerels will pay the expenses of themselves and most of that of the growing of the pullets. It is the late hatched cockerels that are marketed so late in the autumn as to catch the poorest prices of the year. Hatched before the first of May they sell through the summer and into September at the higher prices that return a good profit on the labor and feed. No poultryman can afford to forget to figure on the cash that the surplus sales bring each year. It is the man who does real planning that will obtain the better prices that prevail through the warmer months. Next to those early chicks, for profit, will come those hatched in late August and early September. Unless you have houses and time to handle these chicks—let them alone.



*Your Grandfather Read It
Your Father Read It
Are YOU Reading It?*



The Diary of A COMMERCIAL HEN

First the breeders, then the egg, then the chicken growing into a hen and laying eggs for market—this is the story of the commercial poultryman's flock. Like a moving picture it will be unfolded to you week by week in this series of articles—always the same flock, till you will almost get to know the birds by name. All the difficulties of breeding, hatching, brooding, rearing and feeding for eggs will be told in words and pictures, and also how these troubles were met. It saves you a weekly visit to the farm of a big, successful egg farmer. The first article will be published in January in *The Country Gentleman*.

THE BIGGEST PROFIT PAYER IN THE COUNTRY

IS THE LITTLE FARM HEN. She turns out a cash crop worth \$350,000,000 at the lowest cost. She pays the grocery bill and keeps ready money in the family purse. Better breeding, feed and care will double the poultry income of the average farm. The utility farm fowl is no longer merely an ideal; every farmer may grow it if he will follow the system of Doubling Farm Poultry Profits, which is the subject of a series of articles in *The Country Gentleman*.

THE MAN BEHIND THE FARM

If you had the money and time wouldn't it help your farm if you traveled about the country, looking at the best farms of their kind in the United States? We propose not only to bring the best farms to you, but to bring to you the MEN behind the best farms and let them tell you the secrets of their successes. *The Best Farms I Know* is a series of articles written by men who do know. This one series is worth more than the \$1.50 (less than three cents a week) you pay for *The Country Gentleman*.

“LOOK BEYOND THE END OF YOUR NOSE”

grandfather used to say. A big Florida fruit grower remarked that he had to go to California to learn that he had been wrong for twenty years. So the cattle growers of Montana get hints from Texas; the dairymen learn how to cooperate from the fruit growers. Here's where the national-farm-weekly idea comes in. If you want to get your long-distance lessons in money-making methods without spending carfare, look beyond the end of your nose and get the national-farm-weekly habit; in other words read *The Country Gentleman*.

THE MARKETING END OF THE FARM BUSINESS—

getting the profit—is the keynote of



The COUNTRY GENTLEMAN

The National Farm Weekly

Five Cents the Copy, of all Newsdealers. \$1.50 the Year, by Mail.



THE CURTIS PUBLISHING COMPANY, INDEPENDENCE SQUARE, PHILADELPHIA, PA.

EAT POISON.

Referring to the lye and molasses for rat poison, as given on page 397 of the December Poultry Keeper, people should be careful not to put too much lye in. It does not make any difference about the amount of molasses used. This is certainly one of the best remedies I have ever used. It will certainly do the work if properly used.

J. W. Skinner.

North Carolina.

GET YOUR SAMPLE COPY.

We want to send every reader of Poultry Keeper a sample copy of POUSTRY POST, one of the best poultry journals published for the beginner, full of interesting and helpful articles on how to make money with poultry.

Never was our outlook more encouraging than at the present moment. Beef as a meat diet for the American people will soon be a thing of the past and the demand for poultry and eggs will keep increasing, which will have a tendency to keep the price soaring higher and higher until it will only be a question of a few years when a good living can be made on an acre of ground with poultry.

Good breeding stock will command top notch prices. The higher the market price the more demand it will create for standard breeders. Let us tell

you all about these facts in Poultry Post. Trial four months' subscription 10c. Sample copy free. Poultry Post, D.26, Goshen Ind.

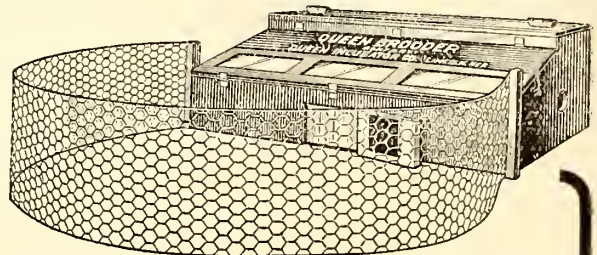
Have you any stock or eggs to sell? Our cheap rates shown in the classified ad department will enable you to make the desired sales.

POULTRY SHOW CALENDAR.

Place.	Dates.	Judge	Secretary.
Baltimore, Md.,	Jan. 6-10		
Binghamton, N. Y.	Jan. 5-10		Henry S. Martin
Boston, Mass.,	Jan. 13-17		
Buffalo, N. Y.,	Jan. 12-17		
Calumet, Mich.,	Jan. 5-10		
Cambridge, Ohio,			
Cedar Rapids, Ia.,	Jan. 12-17		
Charleston, W. Va.,	Jan. 8-14		
Detroit, Mich.,	Jan. 19-25		
Duncannon, Pa.,	Jan. 6-9		
Edon, Ohio,	Jan. 6-9		
Granville, Ohio,	Jan. 13-17		
Janesville, Wis.,	Jan. 12-17		
Johnsonburg, Pa.,	Jan. 20-23		
Lima, Ohio,	Jan. 5-10		
Mendota, Ill.,	Jan. 27-30		
Muncie, Ind.,	Jan. 25-31		
New Hampton, Ia.,	Jan. 19-24		
Norfolk, Va.,	Jan. 6-9		
Oshkosh, Wis.,	Jan. 22-25		
Pittsburg, Pa.,	Feb. 16-21		
St. Albans, Vt., (State)	Jan. 20-22		
Savanna, Ill.,	Jan. 8-12		
Scranton, Pa.,	Jan. 5-10		
South Bend, Ind.,	Feb. 2-7		
Sturgis, Mich.,	Jan. 19-24		
Townville, Pa.,	Jan. 28-31		
Utica, N. Y.,	Jan. 12-17		
Wheeling, W. Va.,	Jan. 26-31		
Wells, Harrison and Daly			Burchard Selghman
Ira Kellar			Jas. C. Sarchet
Dipple, Shellabarger			E. D. Monillaw
Sites			L. L. Strausborger
W. G. Warnock			Dr. H. W. Asche
			J. D. King
			G. J. Bittles
Julius Klein			Elmer Wise
E. M. Quay			R. M. Allen
U. J. Shanklin			P. J. Cooney
			Jas. F. Irvine
Lambert and Shove			M. D. Jarvis
			St. Albans
Chas. McClave			W. H. Griffiths
			Chas. E. Coursen
Northup			C. M. Bill
Geo. Ewald			G. H. Klesert
Eugene Sites			Wm. H. Quay

What % of Chicks Hatched Do You Raise?

**"I hatched 73 chicks from 75 eggs and raised 71 of them in a Queen Brooder."
FRANK C. SPAID, Waukomis, Okla.**

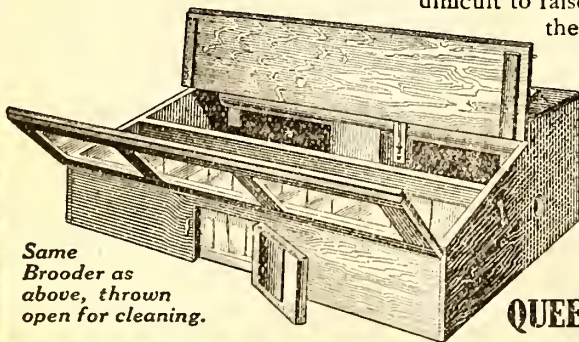


The above letter is not an exceptional one. I get dozens of them just as strong. One before me right now says: "With my Queen Incubator and Brooders I hatched between 90 and 95% of all fertile eggs and raised nearly all the chicks—even more than the hens can raise." All the letters tell the story of success and satisfaction with

Queen Indoor and Outdoor Brooders

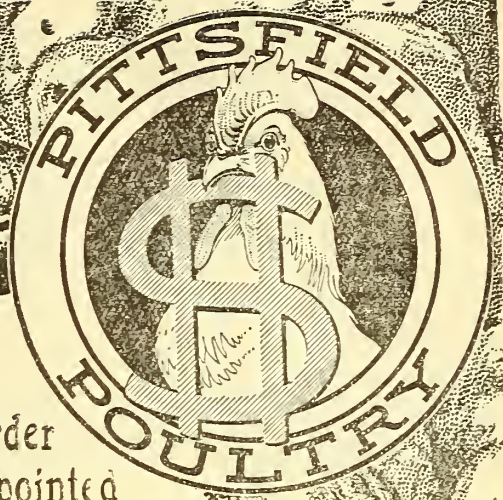
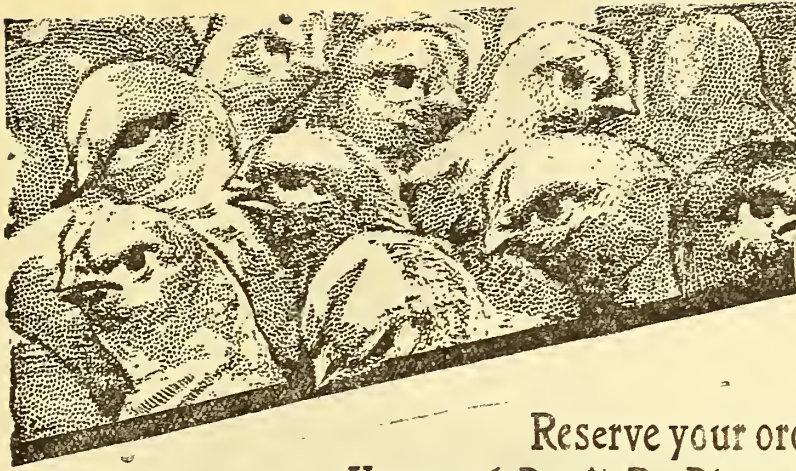
What is your experience? Are your brooding arrangements satisfactory? Undoubtedly you find it more difficult to raise chicks than to hatch them. A Queen Brooder will solve the problem of chick raising for you. All Queen Brooders, whether indoor or outdoor, lamp-heated or lampless, embody latest brooding principles. They are the result of many years practical experience of successful poultry raisers.

The same study, care and fine workmanship that go into Queen Incubators go into the Queen Brooders. You cannot go wrong in the purchase of a Queen Brooder; it is simply a matter of choosing the style. Queen Outdoor Brooders are suited to use indoors, Indoor Brooders can be used outside. Queen catalog shows various styles and sizes of Brooders and a full line of poultry supplies. Write for copy. It's FREE.



Same Brooder as above, thrown open for cleaning.

QUEEN INCUBATOR CO., Box 2, Lincoln, Neb.



Reserve your order
Now and Don't Be Disappointed

\$7.00 Less per 100 for Pure Fred, Husky, Livable

PITTSFIELD Day-Old Chicks

Barred and White Rocks

The recent addition to the great Pittsfield plant of our new 150-acre farm at Holliston, Mass., has increased our day-old capacity to one million chicks a year. As you know, an increased production reduces the cost of production. We believe in passing this saving along to our customers; the saving, as you will see by our prices here, is a material one—no less than \$7.00 per hundred chicks.

But remember, the great Pittsfield strain is never sold on price—price with us is secondary, but when you consider that our present prices for pure thoroughbred chicks is on a par with prices asked for ordinary scrubs, you surely ought to buy from us.

Pittsfield Day-Old Chicks are the aristocrats in the Barred and White Rock type. They certainly have the blood—their ancestry is known—they come from stock that are proven heavy layers. No other kind of hen is allowed in our breeding pens and they are mated to cocks of known stamina and vitality.

Coming from stock of this character, it stands to reason that a large percentage of the Pittsfield strain of day-old chicks reaches maturity. They can stand the "roughing period" in good shape—they grow and feather quickly and start out on a career of usefulness and profit to their owners.

"Money Making Poultry" is the kind that Pittsfield is always endeavoring to produce and sell—that this Pittsfield business has grown to such gigantic proportions is the best proof that we have succeeded and made money for our customers. The Pittsfield day-old chick business has grown to such a huge extent that we have been obliged to enforce the reservations of orders. We were compelled to do this because we found that many people were under the idea that they could send in their order one week and have their chicks the next week. It stands to reason that with the many customers we have we could not do this. Orders are filled in the rotation in which they are received.

We urge you therefore to let us know whether you want Barred or White White Rock chicks—also the number required and approximate date you would like to have them. We then book your order as near as possible to this date. Three weeks before your hatch is coming off we notify you definitely when to expect chicks.

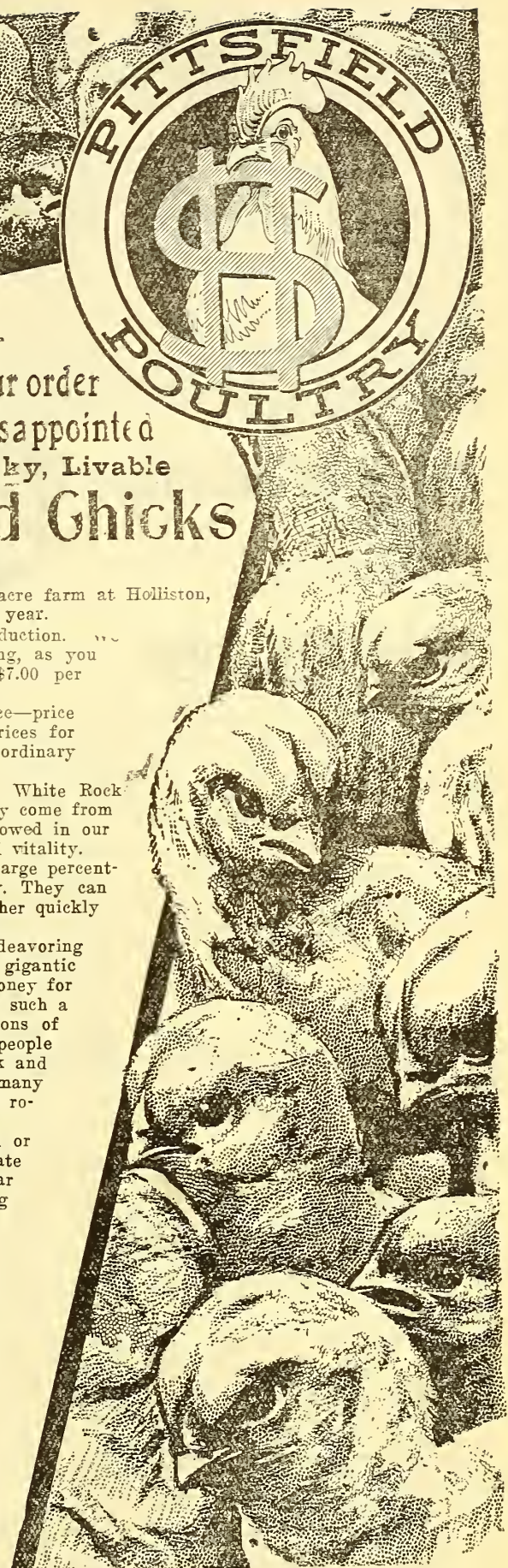
We Ship and Guarantee Safe Delivery Anywhere

Our modern methods of packing ensure strong, healthy, live chicks reaching destination. Remember, you need not send any money with your reserve order—we will tell you a few days ahead of time when remittance is due. Your reserve order simply ensures your getting the required number of chicks at or about the required time.

OUR PRICES ARE AS FOLLOWS:

\$7 per 25 chicks. \$11 per 50 chicks. \$18 per 100 chicks.
OUR PRICES LAST YEAR WERE: \$10 per 25 chicks, \$15 per 50 chicks, \$25 per 100 chicks. Send your order right now.

PITTSFIELD POULTRY FARMS CO., 410 Main St, Pittsfield, Main.



Owen Farms

Buff Orpingtons, White Wyandottes, White Plymouth Rocks and Single Comb R. I. Reds.

HAVE PROVED

They are the Best in America

A Few More Left at December Prices:

Trios \$15.00, \$20.00 and \$25.00
Pens, \$20.00, \$25.00 and \$30.00

1914 Matings

EGGS from BEST MATINGS in the World

\$10.00 for 15, \$30.00 for 50, \$50.00 for 100.

BABY CHICKS from these MATINGS.

\$1.50 each in lots of 20 or more at one time.

EGGS from CHOICE MATINGS.

\$5.00 for 15, \$15.00 for 50, \$25.00 for 100.

BABY CHICKS from these MATINGS.

50c each in lots of 20 or more at one time.

I want your order, and REMEMBER, your ABSOLUTE SATISFACTION means my PERMANENT SUCCESS.

Send for my new ILLUSTRATED CATALOGUE. Address

Maurice F. Delano

127 Williams Street, Vineyard Haven, Mass.

MAURICE F. DELANO, Proprietor.

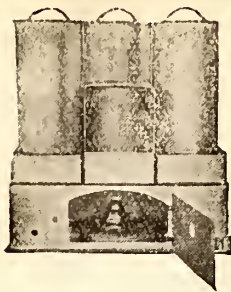
FRANK H. DAVEY, Superintendent.



DOLLARS IN HENS. Reduce cost of living. Produce your own Eggs and Poultry. No large space required. Our poultry magazines tells how. 4 mo. trial, 10c. Sample free. Poultry Post D-26. Goshen, Ind.

CORNISH—Dark, White, White Laced, Red and Heathwoods. Finest I ever raised. Circular free. Fowls all times. Eggs, \$2.00 per 13; single rates. C. D. Smith, Ft. Plain, N. Y. 1-3

WHITE LANGSHAN COCK, year old—First premium at Terre Haute, Ind., 1913. \$5.00. One young dark Muscovy Drake, \$2.00. Elva Gants, Fairmount, Illinois. R. 1 1-1



Don't Wait--Now is the Time

To equip your poultry houses with **NON-FREEZING** Poultry drinking fountains, **FEED HOPPERS** and **EXERCISERS**, and all kinds of such articles. Have them on hand when you are ready to put your stock in winter quarters. This cut illustrates our No. 4 combination water and feeder. Keeps the water and feed warm. Will increase the egg yield 1-3 in freezing weather. Get our catalogue describing 60 different articles. We make everything a poultryman wants; it is free.

WENDELL INCUBATOR CO. 60 Main St. Holly, Mich.



HOW THE BELLE CITY REACHED 276,000 USERS.

It's Small Beginning 14 years ago, and the Big Factory at Racine Today.

Two hundred and seventy-six thousand users of the eight times world's champion Belle City hatching outfit is a statement that readily suggests a big, modernly equipped factory like Jim Rohan's at Racine, Wis.

It does not tell the story of the small beginning—the original little one-storied frame building where the first Belle City incubators were made—the knock and the boosts that made up the chapters year by year—the winning of the eight world's championships—the spread of the Belle City's market until now the Belle City is used by more than a quarter of a million poultry raisers and is found in every part of the civilized world.

Fourteen year's ago when Jim Rohan, then a mere youth, began making Belle City outfits, he summed up his manufacturing policy in the words he had received when a boy from his father: "Jimmy, always be sure to give 100 cents worth for every dollar you get."

The Belle City business has multiplied many hundreds of times since then, but the policy has remained the same. Jimmy's friends insist that in making sure his policy is always maintained, he "stands up so straight that he bends backward"—that is that he gives considerably more than 100 cents for the dollar, but the answer is 276,000 satisfied users of the Belle City; more world's championship winners every year and a demand for Jimmy's hatching outfits so heavy that factory additions are in constant construction to keep up with it.

Today the Belle City Incubator Company's plant at Racine, Wisconsin, is the largest factory in the world devoted exclusively to an incubator and brooder of one size. It's equipment of machinery is the most modern in

every respect and is driven by an electric power plant. All the eight times world's championship Belle City incubators and brooders are made here.

A trip through the various departments is most interesting. The work is carried right through from the beginning of the incubator and brooder, to the packing. To insure the promptness in filling orders which is a special point of Belle City service, it is necessary to have 35,000 machines boxed and ready for instant shipment at all times. These are kept in the storage building adjacent to the C. M. & St. P. Railway tracks and at transfer points at Buffalo, Kansas City and Minneapolis.

These transfer points give quick service to customers in the East, South west and Northwest.

They also make a saving because of the much lower rates on carload lots as compared with the rates on shipments of single outfits. This saving is enough to pay the charge at the transfer point for shipping to customers. This is one of the ways in which is saved enough to send the outfit freight prepaid.

The transfer companies do not get one cent of commission on any Belle City outfit handled by them.

This arrangement is a great advantage to those who live at far distant points. The outfit is forwarded in the shortest possible time after the order is received.

A new book, "Hatching Facts" has just been published by Jimmy Rohan. It tells the story of the winning of the eight world's championships by the Belle City—tells how every part of the Belle City Incubator and Brooder is made—gives illustrations of the incubator and brooder and each part in actual colors and contains many accounts of 90 to 100 per cent hatches by users of the Belle City in all parts of the country. This book will be sent free to any reader of this paper. Address, Jim Rohan, Pres., Belle City Incubator Co., Racine, Wis. Mention P. K.

THE NEST QUESTION.

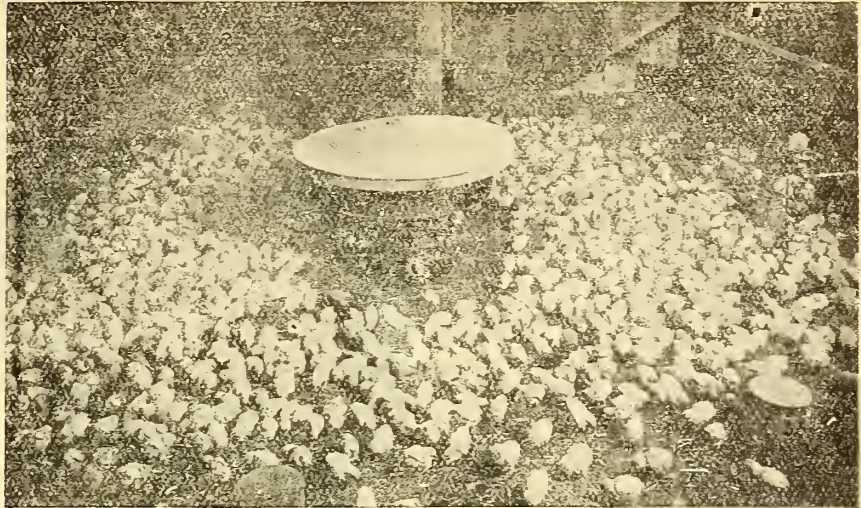
Few hen houses are equipped with enough nest boxes. Not fewer than one nest to every four hens should be used; if the pullets can not find an empty nest when they wish to lay, the eggs will be left on the floor, where they are easily broken, and may establish the vice of egg eating. Hens like a darkened nest; not only should the nests be dark, but they should be abundantly roomy—about 8x10 inches, and 6 to 8 inches high, and easily taken out and cleaned. They should be easily accessible, not only for the hens, but for the owner as well. If a top is used, it should be sloping, to prevent the hens roosting over the nests. A good arrangement of nests is to place them under the dropping boards, with entrance facing the wall; slanting roof hinged to open at the back of the nests in gathering the eggs. Do not use strong smelling disinfectants or mite killers about the nest boxes, the eggs will take up the odor and be unfit for use. Depend on keeping the nests clean with hot soap suds, white wash, or non-melting cleaners. Use nest material which will not soil the eggs, and is fairly fine. Fine hay or straw is good. If the nests get wet, change the straw immediately. If hens persistently refuse to lay in a certain box, examine closely for mites. Try to avoid having favorite nests in the flock by making the nests equally desirable.—Exchange.

GET RID OF THE WEAKLINGS.

If you have undersized chickens on the place, group them in lots according to size, or get rid of them. Half grown chicks can not go into winter quarters with older birds, and do themselves justice; on the contrary, they are apt to be robbed of food and roost room, and so become fit subjects to colds. Much of the trouble with roup and so become fit subjects for roup are permitted to live, and become carriers of the disease.

Hens will lay under almost any conditions; the fact that eggs are being gathered when all the rules of good poultry breeding are being broken is no argument in favor of breaking the rules. To get the best results from chickens, the hens and pullets should be housed separately and the pullets fed heavier than the hens; they are making growth as well as eggs, and need more food. The old hens, surplus cockerels and cocks, and young stuff, should be disposed of.

If the chickens begin to show dirty noses, get a dime's worth of permanganate of potash, dissolve in a pint of boiled water, and put in the drinking water each day enough of the solution to color. If onions can be had cheaply enough, give a feed of onions when the chickens seem to be taking cold. Don't keep drugging with medicines. The permanganate, onions, and an occasional dose of mustard in the mash, will be all a healthy flock should need. All the medicines to be had will do no good if the houses are full of mites; if the birds are lousy, or if the ventila-



The Simplex Brooder Stove by Day

A POSTAL WILL BRING OUR MAIN CATALOG WITH USERS' TESTIMONIALS

A SIMPLEX will bring MORE CHICKS to MATURITY than any other METHOD. STRONGER, BETTER, LARGER, MORE PROFITABLE CHICKS.

The Simplex is the sure preventive of White Diarrhoea. How many dollars of your valuable chicks do you lose yearly from this terrible scourge? A Simplex will save them.

The Canadian Government has adopted the Simplex for use on Government Experimental Stations after a year of exhaustive tests.
"There is a Reason"
A Postal

Have you ever thought what it means to save 90 per cent of your labor, 75 per cent operating expense and raise 20 to 50 per cent MORE CHICKS? These MATTERS surely must APPEAL TO YOU. MAKE us SHOW you. and only ask the chance

Our catalog is BRIM FULL of new UP-TO-DATE INFORMATION worth DOLLARS to you. Do not hesitate. A postal will put all this in your hands. MAY WE SEND it?

BROODS ANY NUMBER, FROM 200 TO 1500.

Simplex Brooder Stove Company

226 FOURTH ST., N. W.

GRAND RAPIDS, MICH.

SIGILIAN BUTTERGUPS

S. G. Reds, Indian Runner Ducks and Fantail Pigeons

1914 Mating List now ready. 12 Blue Ribbons won by above Reds and Buttercups. DR. C. S. BROUILLET, Box P. K. Gardner, Mass.

tion is not good and the water is not clean.

Have your flocks as uniform in age, size and habits as possible. The late hatched chicks will make good layers when the earlier hatched birds are sitting, but keep them apart from the older birds, and give them all they can eat.—Exchange.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this journal is published, namely, "Making Poultry Pay" and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

A FARM GENIUS DISCOVERED

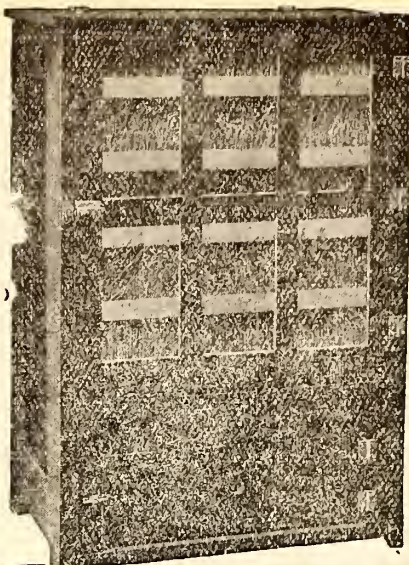
Up in the wilds of Wisconsin, twenty-five miles from a railroad, along the shores of Lake Michigan, once lived a young fellow, who became a walking encyclopedia of farming information and the sympathetic advisor of farmers old enough to have been his grandfathers. This young man lived on a little rented farm of 20 acres. His parents were old and not able to work, and he and the little patch were their entire means of support.

Scientific farming was jeered at; yet Bill Johnson began to realize that he had to farm that 20-acre patch scientifically or else see his parents and himself go hungry. Bill's parents were poor and Bill was too busy making a living for them to hire out and make money to go to an agricultural college but by borrowing books, getting a lot of information from the government and from the state agricultural departments, he was able in three or four years to become so proficient in practical scientific farming that those who formerly had made him the subject of jibes, now came to him freely for advice and made money by it. Bill used to tell how, after working alone in the fields from sunrise till dark, he would sit up till twelve o'clock at night drinking black hot, coffee in order to keep awake while he could study.

He began to write a few practical experiences in farming and sent them to some agricultural papers. Mr Herbert Quick, the author and statesman, received one of these contributions from Johnson and immediately contracted with him to leave the farm and come to work on a certain agricultural paper which Mr. Quick was publishing. Johnson's articles are now copied by farm papers the country over because they almost vie with Abe Lincoln's sympathetic and simple fashion of expression.

This young genius who less than a year ago was a raw, unpolished back woodsman, has written a remarkable article, "Turning Eggs Into Chickens Into Dollars," which is published by the Rayo Incubator Co., 1011 South 13th St, Omaha, Neb. This valuable little booklet, containing also a full description of the most convenient, economical and simple incubator ever invented, will be sent postpaid to all who request it.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; three for \$1.00; four for \$1.40; five for \$1.75; six for \$2.00. Our clubbing list on another page will show what some of the papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.



**Increase Egg Yield
This Winter,
Save Money on Feed,
Make Chicks Grow
Rapidly, Strong**

by installing an Ideal Grain Sprouter and feed your hens the green food that is absolutely necessary to insure prolific egg production.

Eggs are going higher in price every year, the demand is far exceeding the supply, and it looks like good times and plenty of money for the man who has one of our sprouters.

The IDEAL Grain Sprouter

- is the best machine for sprouting grain ever made;
- will produce sprouts over two inches long in 24 hours;
- sprouts any kind of grain better, in less time and without fuss or muss;
- produces three to four bushels of feed from one bushel of grain;
- pays for itself in a single month by saving in feed bills, increasing egg yield, supplying food that makes chicks grow strong and vigorous.

The "Ideal" is made in several sizes—for a few hens up to hundreds. Can be used in summer (without lamp) as it has proper arrangements for moisture and ventilation to produce quick results and crisp feed.

CONSTRUCTION

Made of best lumber—double walls, insulated with heavy deadening felt—inside lined with galvanized iron—frame of trays heavy galvanized iron—bottom of tray heavy wire netting—front of machine glass, which induces green sprouts. These sprouts require very small amount of artificial heat which is produced by the Ideal Safety Lamp, the fumes of which pass through ventilators.

Get Special Low Price Offer Today

Don't delay, but write at once for special low price introductory offer, full particulars and description of this perfect grain sprouter. No poultry man should be without it. It is the Biggest Money Maker for the Poultryman since the Incubator was invented.

Made by J. W. Miller Co. Manufacturers of Incubators, Brooders and Poultry Supplies, which is sufficient guarantee of its excellence.

J. W. MILLER COMPANY, Box 604 ROCKFORD, ILLINOIS

4 Big Bargains

WITHOUT doubt, here are the four biggest incubator bargains ever offered. Read this ad. Note how much better is the 1914 Reliance Incubator—that it has no complicated parts—that it can be successfully operated by boy or girl—that it is more substantially built, reliable, durable—and sells at a price \$10 to \$15 lower than old model incubators.

You needn't hesitate any longer about buying an incubator. We've got the incubator that will do just what you want it to do—at all times—and at a price you can well afford to pay.

1914 Reliance Incubators and Brooders

150-Egg Incubator - \$5.75	70-Egg Incubator - \$3.90	150-Egg Incubator \$5.75
150-Chick Brooder - 3.00	70-Chick Brooder - 3.00	Guaranteed
Total - \$8.75	Total - \$6.90	70-Egg Incubator \$3.90
Both for Only \$8.25		Guaranteed

The 1914 Reliance Incubator is sure to become the sensation of the year.

1st—Because the Reliance is so simple; you don't have to experiment, or take lessons, to get best results. 2nd—The Reliance is so economical that it costs only a little money for a high hatch. 3rd—The Reliance is so reliable, that it requires very little attention and causes no trouble. 4th—The Reliance is so efficient, that it hatches every hatchable egg placed on the tray.

The 1914 Reliance is made of the best lumber. Side walls and top are made of three thicknesses—cold can't get in, heat can't get out. Equipped with best regulator, thermometer, egg tester, lamp, egg trays. Beautiful finish, steel legs. Order direct from ad on our guarantee, or send for literature today.

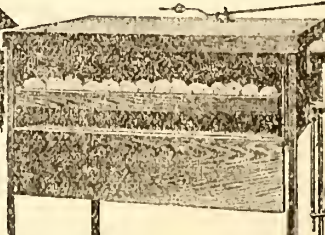
Reliance Incubator Co., Dept. EZ, Freeport, Ill.
Mrs. of Grain Sprouters, Incubators and Brooders

And Start An Early Hatch

The time is just right for making big hatches—big money. Start now and get in an extra hatch before season is over. Every extra hatch means just that much more profit for you. You're safe in sending money now, as we guarantee satisfaction or refund money. But if you want all particulars, send for literature. Orders filled same day received.

Mrs. Ross Sends Her Thanks

write: "I received your incubator O. K. My first hatch was 17 chicks out of 200 eggs and the second hatch 192 chicks out of same number of eggs. I thank you for sending me such a good incubator and will get several orders for you from this neighborhood."—Mrs. Ross, Kahoka, Mo.



**Fully Equipped—
No Extras to Buy**

Order from Ad
Guaranteed
the Equal of Any \$20 Outfit

The Reliance makes chicken-raising pay big profits. No losses, no repair bills; no extras to buy; no waste of oil.

Better order your incubator or brooder—or both right now from this ad. You'll never get any other such offer.

If you want particulars, write for our literature. We send just a plain circular, but it's filled with Reliance incubator facts and reasons why we can sell better than a \$15 hatcher for only \$3.90 and \$5.75. Send your order and start quick. The Reliance will give you satisfaction. Why not order a 70 or 150-egg size—NOW.

FRESH AIR IN THE HEN HOUSE.

The lack of fresh air in cold weather has been the downfall of many air castles built of egg shells. A hen, breathing impure air, in a tightly closed building, will suffer a frozen comb when a bird outside, roosting in a tree, will escape.

Whoever saw a partridge with a frozen comb? It is the oxygen of the air that keeps hens warm, and not the building they are in, and poultrymen are beginning to realize that if they would get eggs in winter, they must give the hens fresh air. The best of feed cannot be utilized without abundant oxygen. And the experience I am about to relate is actual fact and not written to support any theory.

There was a hen house on the place I bought, built with an idea of keeping the hens warm (10x30 feet) facing the south, a window in one end, a door in the other, and three good tight double sash windows in the front. The walls were double with paper between, with tight board floor. Not having any hens, I rented the building to a neighbor, who kept a small flock in it all winter and never got an egg, young hens at that. They had been on free range all summer and had been laying well. He took them out in the spring and let them roost in his barn and run in the lots and they began to lay again. The outlook for winter eggs, up here in Maine, did not seem to be promising.

I had had some experience in keeping hens when they had the run of the farm and roosted in the sheds, but I

had only a village lot here and would have to buy all the feed but garden and table scraps, and it was with some misgivings that I purchased an incubator and started it in the spring.

Most of the eggs were farm stock, purchased at the store, but as the farmers mostly keep good fowls, I got mostly good ones with all varieties from Bantams to Brahmas, mostly Barred Rocks.

I kept the machine going till about the middle of June and succeeded in getting 110 or 112 pullets out of the lot that were quite well grown by fall and some of them had begun to lay before cold weather. They had the run of the yard and roosted in the hen house.

By the first of December we were getting 5 or 6 eggs a day and about half of them showing signs of laying. I hated to sell any of them and yet according to all rules my house was not over half large enough to keep them in when there was deep snow on the ground and they had to be shut up all the time, but I determined to do a little experimenting for myself.

I sold all the roosters but seven very fine ones I wanted for breeders, and when the first snow came put them all in the house and shut the door, 119 of them in 10x30 ft. and with feed boxes, nest boxes, grit and shell boxes and drinking dishes, you could hardly walk through the building without stepping on something besides the floor.

The question of ventilation was settled by taking out the upper half of the three windows in the south side.

There was a loose burlap curtain that I used to unroll the coldest nights and when it stormed, but otherwise a two inch wire netting was all the covering they had.

The lower sash prevented the wind from blowing on the hens when they were on the floor, and they were so thick on the roosts that nothing seemed to matter. There was not a comb frozen all winter. The youngest pullets were all laying by the middle of January. In February they averaged 16 eggs apiece for all the hens, and 20 through March and April, and they were never out of the house till the ground was bare in the spring.

The manure in the house was frozen solid on the floor nearly all winter and they had no straw to scratch in. They had corn and wheat before them all the time in boxes, with a wet mash every morning and cabbage or roots at noon. They ate a large team horse during the winter, bones and all—I chopped up the bones with an axe, after they had picked the meat off, and much of the time this would be frozen hard, as well as the cabbage. Of course, it takes good feed to make hens lay, but with this they want fresh air more than heat.

Maine. J. A. BURDICK.

Will you please tell your friends who are interested in poultry about Poultry Keeper, or better still, send us their names and addresses and let us send them copies? Poultry Keeper claims to be the most practical and helpful paper published for those who are interested in making poultry pay.

CAUTION

Any Bone Cutter claiming to be Mann's without F. W. Mann Co. cast on its surface, is an imitation. If made in Milford, Mass., it is Genuine.



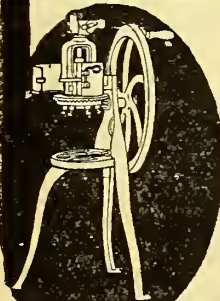
Make Your Hens Lay



Write today for our free poultry books and learn at once what it might take you, alone, years of costly experience to find out. You know how eager fowls are for bugs and worms. Our book tells why. Briefly, it's the animal food they want, and must have, in order to thrive best. Chicks, laying hens, cocks, all need it—to develop frame, muscle, feathers, to produce many eggs, to produce fertile eggs. To replace bugs and worms in winter, or, for yarded fowls, feed freshly cut raw bone, prepared with

MANN'S LATEST MODEL BONE CUTTER

Try One Free—No Money Down



This feed is four times richer in protein (the egg-making, body-building element), than corn is, and it is more easily digested and assimilated. Save money by cutting down your grain ration. Make money by getting more eggs when eggs are worth most and by having better eggs for hatching stronger chicks, earlier and heavier broilers.

Mann's Latest Model Bone Cutter cuts the bone (and all adhering meat and gristle) into a fine, soft mash that fowls of all ages relish and can put to immediate use in producing profit for you. It turns easily, cuts rapidly, never clogs, wastes nothing. We sell it on 10 Days' Free Trial, without money or deposit in advance—so you may be sure it is right. We even pay its freight back if you are not satisfied.

WRITE FOR FREE BOOKS TODAY. To read them is to know how to feed poultry for most profit.

F. W. Mann Company, Box 57, Milford, Mass.

POULTRY FENCE
 22 Cents a rod for 48-inch fence.
 Fewer posts and no base board
 or top rail required. Buy from the
 factory direct. Other styles of
 Poultry, Farm and Lawn Fencing.
 Large Catalog free. Write today
 Box 229 Kitzelman Bros, Muncie, Ind.

**PERFECTION SANITARY CIRCULAR
 METAL BROOD COOP**
 made entirely of galvanized iron
 which will last a life time. They
 are properly ventilated, and are
 Rat, Mink, Weasel and Skunk
 proof. Just the coop you are
 looking for. Write for circular
 & special introductory price.
 Perfection Metal Brood Coop
 Co., Box 56E Warsaw, Ill.

**25% MORE
 WINTER EGGS**
 Can be obtained by using the
**Crescent Fire and Frost Proof
 Poultry Water Fountain**
 Write for circular
 F. Conrad & Son, Ft. Atkinson, Wis.

WHITEWASHING
 and disinfecting with the new
**"Kant-Klog"
 Sprayer**
 gives twice the results with
 same labor and fluid. Also for
 spraying trees, vines, vegetables,
 etc. Agents Wanted. Booklet free.
 Rochester Spray Pump Co.,
 400 Broadway, Rochester, N. Y.

**45 VARIETIES
 Land and Water Fowls**
 Send for free illustrated cata-
 logue, which tells you much
 you should know. Stock and
 eggs at all times.
 S. A. HUMMEL Box 50 Freeport, Ill.

Don't Feed Green Food!
 Do away with the bother by using
Succulenta Tablets
 They are better and cheaper and more relished
 by all fowl. Simply dissolve one tablet in one quart drink-
 ing water for fowl. Sample can (100 large tablets) by mail
 50c. Can of 250 large tablets by mail \$1.00. **YOUR MONEY
 BACK IF NOT SATISFIED.** Drop postal for particulars to
 The Succulenta Co., P. O. Box 405-11, Newark, N. J.

Smith Sealed. Prices postpaid
 —12, 30c; 25, 50c;
 60, \$1.00; 100
 \$1.50; 500
 \$6.00; 1000, \$12.50.

LEG BANDS

**Leader Adjust-
 able. Prices postpaid**
 12, 15c; 25, 25c; 50, 40c;
 100, 65c; 250, \$1.25;
 500, \$2.75; 1000, \$5.25.

FREE SAMPLES

Write postal or order
 now. Satisfaction
 guaranteed. Address
**THE KEYES-DAVIS
 CO., Inc., Dept. 582
 Battle Creek, Michigan**

RAT APPLIED FOR

Aluminum only; two sizes; ad-
 justable to fit any fowl. Held
 by double lock. Can't lose off.
 postpaid 12-15c; 25-20c; 50-35c;
 100-60c. Initials 10c per 100 ex-
 tra. 50 or less, 5c. Also Pigeon Bands.
T. CADWALLADER, Box 1408, Salem, Ohio.

130 EGG Mankato Incubator \$7.25



260-EGG-SIZE ONLY \$10.25
 Brooders for 120 Chicks \$2.50; for 240 Chicks \$4.00 and up. Send today for our big new annual catalog and see the why of our low prices and how good the Mankato is made—it's free.
MANKATO INCUBATOR COMPANY, Box 767 MANKATO, MINN.

SIX REMARKABLE HATCHES.

We publish herewith a letter from The Buckeye Incubator Co., which refers to a question that has been argued pro and con for a great many years.

We are quite sure that it will prove quite as interesting to our readers as it was to us.

Springfield, Ohio, December 1, 1913. Editor, Poultry Keeper:

You will no doubt be interested to learn the results of six different hatches that were made simultaneously in six different parts of the country with six Buckeye incubators of exactly the same type.

This record was kept for the purpose of learning whether the widely different atmospheric conditions would make any difference in the hatching results or the vitality of the chicks, and we were much gratified to find conclusively that all machines hatched equally well, despite the fact that no artificial moisture was used in any of them.

This test was made during the most unfavorable part of the hatching season, and resulted as follows:

Albion Poultry Yards, Bangor, Pa. Hatched 149 chicks from 150 fertile eggs. All chicks strong and healthy.

N. F. Hewes, Gulfport, Miss. Hatched 109 chicks from 110 fertile eggs. All chicks strong and healthy.

Maplewood Poultry Farm, Cheshire, Conn. Hatched 98 chicks from 98 fertile eggs. Operator never used an incubator before. All chicks strong and healthy.

Shady Oak Poultry Farm, Hendricks' W. Va. 95 chicks from 102 fertile eggs. All chicks strong and healthy.

W. H. Jones, Philadelphia, Pa. 101 chicks from 101 fertile eggs Hatch made in a store under very unfavorable conditions. All chicks strong and healthy.

L. C. Poling, Parsons, W. Va. 98 chicks from 102 fertile eggs. All chicks strong and healthy.

The results of this test convince us that artificial moisture is entirely unnecessary when the incubator is properly constructed to provide moisture in the natural way—and should be set aside any further argument as to the necessity of using artificial moisture in incubators.

Of course there are any number of incubators that cannot be operated successfully without artificial moisture simply because their system of heating

SAVE one-half by buying the Mankato. It is sold direct from our factory to you and has behind it our binding guarantee and 18 years practical experience building and operating incubators and raising poultry. There's no incubator at any price that will give you better results—and it's results you want. It's the one high class hatcher that is **MADE** right and **SOLD** right.

No Better Incubators Made

Built of real California Red-wood in natural wood finish, three thicknesses of walls, asbestos lined, heavy pure copper hot water tank and boiler, perfect automatic regulator, correct ventilation, safety lamp, high nursery, high legs, tested thermometer, etc. Heavy, well insulated wall construction and special double heating system insures uniform temperature and highest per-cent hatches. All set up ready for use. Simple, sure, safe, handsome and most successful. Big factory output, quick shipments.

and ventilating demands it, but under the improved system of heating and ventilating used in the construction of the Buckeye incubators, they can be operated with equal success in any climate and under any conditions. We just had a communication from a customer in New Mexico (which is admitted to be the most difficult climate for artificial incubation) advising us that during an entire season's hatching with his 110-egg Buckeye, he had but two dead chicks in the shell all season.

During the season just passed we received hundreds of testimonial letters from all parts of the country, all showing the same high percentage of hatches from all of the five sizes of machines that we build ranging from 60 eggs to 350 eggs, thereby proving conclusively that the Buckeye no-moisture plan of hatching is more uniformly successful than the old guesswork plan of trying to figure out just when, and how much, moisture should be applied.

We know that you will be gratified to have this old argument settled conclusively, and if any of your readers should want any information on the subject in question, we would be glad to have you refer them to us.

Yours very truly,
 The Buckeye Incubator Co.,
 By George Cugley, President.
 Springfield, Ohio.

INTERESTED IN EGG LAYING CONTESTS.

Editor, Poultry Keeper:
 As a reader of your paper, let me thank you for giving in your November number the result (up to 47th week) of the Storrs, Conn., egg contest. I have been searching for this result in several other poultry papers, and while some of them mention the contest, no figures were given.

From an amateur point of view, these contests are very interesting and I look forward to read your December number, giving a few additional facts and lessons to be gained from these contests.

In the London (England) Poultry World's report of the utility poultry laying competition, in which the White Dottes seem to have it all over the other breeds—8 Dotte pens among the 12 first ones—a peculiarity of the contest is that they give the value of the eggs laid.

Illinois. Wm. Lanceworth.

DOUBLE QUICK GRAIN SPROUTER

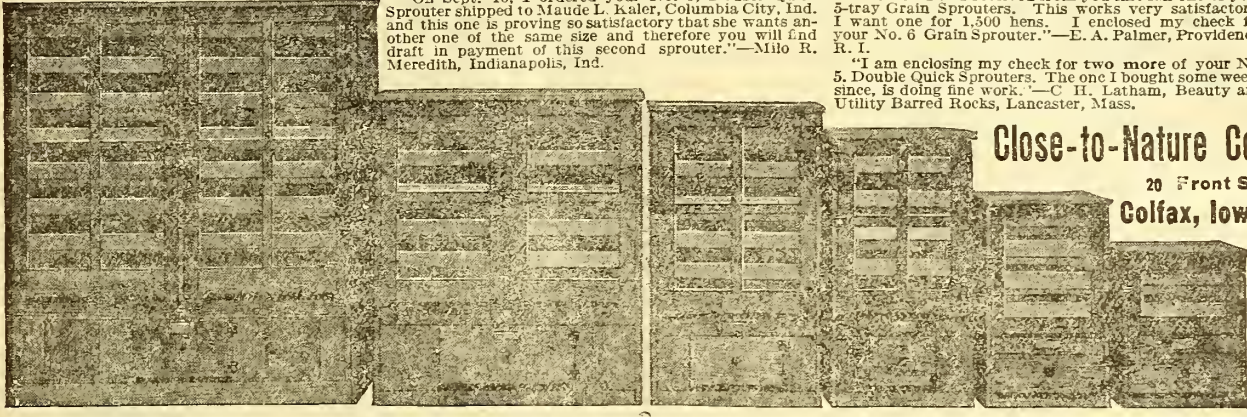
THE PERPETUAL POULTRY SILO--Grows Green Feed While You Wait
The First, the Original, the Pioneer of All Grain Sprouters. Built in six sizes, from $\frac{1}{4}$ bu. to 8 bu.; for a few hens to 1,000

The Double Quick originates and initiates—others imitate and appropriate. Fully 100 Double Quicks to every half dozen of all other kinds combined. Now in its fourth year—in use in every state and territory in the U. S.; in Canada and Mexico; in eight foreign countries; thousands have tested its value; many large poultry plants use from one to five.

"On Sept. 16, I ordered your No. 5, Double Quick Sprouter shipped to Maude L. Kaler, Columbia City, Ind. and this one is proving so satisfactory that she wants another one of the same size and therefore you will find draft in payment of this second sprouter."—Milo R. Meredith, Indianapolis, Ind.

"I ordered and received from you last fall one of your 5-tray Grain Sprouters. This works very satisfactory. I want one for 1,500 hens. I enclosed my check for your No. 6 Grain Sprouter."—E. A. Palmer, Providence, R. I.

"I am enclosing my check for two more of your No. 5, Double Quick Sprouters. The one I bought some weeks since, is doing fine work."—C. H. Latham, Beauty and Utility Barred Rocks, Lancaster, Mass.



Close-to-Nature Co.

20 Front St.
 Colfax, Iowa

INCUBATING AND REARING CHICKS.

This is one of the greatest problems that confronts the average poultryman. Herein determines whether or not he will make a success of his business. Taking it for granted that he has good, vigorous breeding stock, he has the foundation for strong chicks. Eggs from yearling or two-year-old hens produce the strongest chicks. So in order that he may get the best results, he should always use hens for his matings. This, of course, is not always possible.

The question has often been asked: "Which is the better way, using incubators or hens to incubate chicks?" This question can be solved only by the poultryman himself. He must experiment and see whether or not he can make a success with incubators. There are various kinds and nearly all produce fair results if directions are followed up closely.

Some one has said anybody can hatch chicks with an incubator, but that is not the case. Anybody who can read and understand (and positively follow) the manufacturer's directions, should be able to do so. Many people think they know a better way or an improvement over the directions. The result is a failure and the fault laid to the incubator, but nobody is to blame but the operator. Tampering with an incubator is the main cause for so many failures in the hatching of chicks. If you abide with and follow closely the directions of the manufacturer of your incubator you should be able to get fair hatches out of any good standard incubator.

Many poultrymen hatch their chicks mostly with hens, claiming this to be the best way. Eggs set with hens do not require so much care as with an incubator, which method is the best is determined best by experience.

Incubator-hatched chicks may require a little more care the first few

days, but after they are two or three weeks old they are able to go with any hen hatched chicks, so far as development is concerned. They do not depend upon the mother hen to scratch for them. They do it themselves, and so keep hustling and running for the dainty morsels.

More incubator chicks die from getting chilled before they get out of the incubator than from any other cause. I find the nursery trays are often 5 to 10 degrees colder than the egg trays. The little chicks start to roll and tumble as soon as out of the shell and finally come to the nursery tray all wet, and the fact that they are developed in such a moisture causes the chill. Chicks that are dry before they get to the nursery are not so liable to get chilled. Some manufacturers are discontinuing the nursery compartment altogether; a very wise thing to do unless they can supply even heat to both the egg tray and nursery. This, I believe, is the best, as the chicks often on the egg tray roll the eggs around and turn the piped side down and often smother the little chicks in the shell.

If you wish to try out this fact, too, mark a few wet chicks that have fallen on the nursery tray.

So many ways and systems have been given as to the proper way and method of feeding chicks. It is best for every breeder to work out his own system of feeding. There are now many good chick foods on the market, by which, if directions of feeding are followed, success is sure.

Many amateurs in the poultry business desire to get day-old chicks from a distant breeder but fear to do so because they think they are more liable to die, which, on the contrary, if they are properly packed, do better than if they are hatched right at home. The reason for this is, the chicks have rested out, have been given proper time for the assimilation of the yolk of the egg, which must be entirely assim-

ilated before the chick should be fed, which requires from 48 to 70 hours.

In our kindness to help the little chicks that are just put in the brooder we often do them harm by feeding them when they should have been kept quiet and warm for about ten hours. After that they are ready to hunt for their feed and will start to develop fast if given the proper attention. Little chicks should always have clean water. Never let their drinking vessels get tainted. Scrub and disinfect at least once a week if you wish success. Those things, if they do not kill the chicks, hinder their best development.

Cleanliness of the brooder is of most importance. Some people forget to attend to this matter, and wonder why they do not succeed in raising their chicks. Is it a wonder?

The brooder floor should be covered with about one or two inches of sand, upon this should be fine clover litter. Into the clover litter throw all the chicks' grain, grit, etc. Let them scratch for these things. It's nature's way, and the nearer we follow this the better our success.

Never fail to provide them with plenty of green food. For the growing chicks, sprouted oats, millet, in fact, any grain is good. They just love it, too.

E. M. M.

NEED GOOD POULTRY FENCING?

If so, look up the adv. of Kitzelman Bros., of Muncie, Ind., on page 354 of this issue. They can supply your wants and supply them right. They are advertising a poultry fence with mesh wires close enough for small chicks, yet strong enough to turn stock. Their latest catalogue, handsomely illustrated is now ready. Write them for it. It is free. Address, Kitzelman Bros., Box 229, Muncie, Indiana.

FEEDING FOR EGGS

Whether you keep 12 or 1000 hens you want them to

Lay when Eggs are High

HOW TO FEED WHAT TO FEED

The profits in poultry are in eggs—profits in eggs are during the cold months and not during the summer.

Feed Right and Your Hens Will Lay

SPECIAL OFFER
For fifty cents (stamps accepted) we will send copy of our booklet with Formulas and Tables for Feeding and a full years subscription to the

Poultry Keeper

The most practical and helpful poultry paper published. send to us with 50 cents in stamps.

POULTRY KEEPER PUB. CO.
Quincy, Illinois.

Send booklet on Feeding Poultry and a year's subscription to Poultry Keeper.

Name

NO LIVING MAN can hatch one egg the Magic Egg Tester rejects before incubation. We challenge the world to do it. Why put eggs under the hen or in the incubator that you are not first sure about? You lose if you do it. You are wasting the earliest and best hatching month if you delay its use. Heed this warning, or next May you will wish you had. "The Magic Egg Tester is the poultry raiser's *vade mecum*." \$2.00 each, and no further expense to use. One year's trial, fully guaranteed, and cost refunded if not satisfied. Experimental specialists in incubation, giving the latest and best methods with each Tester. Circular mailed for the asking. **MAGIC EGG TESTER WORKS, Dept. E** Buffalo, N. Y.. also Bridgeburg, Canada.

5th YEAR SEE THAT XX-2
POINTS THE WAY START RIGHT YOU END RIGHT

HIGH PRICE OF MARKET EGGS.

The price of eggs is exciting much comment at the present time and many ridiculous cartoons are appearing in the daily papers. At the same time there is general condemnation of cold storage, the one thing that has heretofore equalized egg prices between summer and winter.

It is within my recollection, just before the general adoption of cold storage for the preservation of food products, that, during the spring and early summer, eggs would be worth 8 to 10 cents per dozen. Then, in the midst of an ordinarily severe winter, the price would go up to 50 or 75 cents per dozen.

After cold storage had been proven effective for preserving eggs, the price soon became equalized, ranging between 15 and 25 cents per dozen the year 'round, with feed about half the cost of the present time.

So long as it is possible for any family, in town or country, to keep one or two dozen chickens in the back yard, with little or no expense for feed or care, it is no more possible for any person, corporation or combination to corner the egg supply than it would be to corner the bread supply so long as there is flour for sale in the market and housewives willing and competent to turn it into bread.

With the present high prices for feed there is little or no profit in eggs at 30 cents per dozen except in case of the back yard flock, fed principally from table and kitchen scraps. Here it is most all profit and it is surprising that more people do not put in a few hens instead of consuming an ancient product and kicking about the price.

Eggs will continue to be eggs, and will steadily advance in price just so long as people continue to do two things. First, sell their eggs during spring and early summer, because of good prices, instead of hatching and raising more chickens. Second, avoid the small expense and labor incident to the keeping of a small home flock.

There is no complaint from those who keep chickens about the high price of eggs. Such complaint comes exclusively from those who do not raise chickens; who don't want to be bothered with them; who want someone else to do it for them at a price less than cost of feed.

For several years there has been an increasing demand for eggs and a decreasing supply—the latter due to high prices for grain and other feed, unsuitable breeding and hatching seasons and good egg prices that tempted

the selling of eggs for culinary purposes rather than their use in incubation.

What is a good, fresh egg from well fed, healthy stock really worth? If we have been accustomed to paying ten cents a dozen, then we will consider twenty cents a dozen as extraordinary and inexcusable. If, however, we had been used to paying one dollar a dozen, then we would consider sixty cents a dozen a downright bargain.

Personally, I would much prefer a couple of good, fresh eggs at five cents apiece than ten cents worth of beefsteak. But, then, preferences do not count. We have to pay a premium if we want goods of any kind that are scarce, and just so long as the great majority of home owners prefer to consume rather than produce, then just so long will eggs maintain or advance in price.

GEO. H. LEE,
Pres. Geo. H. Lee Co.,
Omaha, Nebr.
(Manufacturers of Mandy Lee Incubators).

"Success With Poultry" is worth more than all other poultry books put together, if you want to learn how to make money with poultry. Price of book, \$1.00. For that amount (\$1) we will send book postpaid and a full year's subscription to the Poultry Keeper. This is the biggest value ever offered in poultry literature.

If you are interested in advertising send for a copy of our rate card, which shows our charge for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our classified ad department in the back part of each issue furnishes an easy way to get started at a low cost.

"THREE DOLLARS FOR PENNY"
You can make 50c to \$3 each on sick, chickens, turkeys or ducks. We buy them and cure them with 'Oculum.' You can too. 'Oculum' will tone your flock and give you 15 per cent more eggs free from Germs, fit for a King.
"Have used 'Oculum' two years. It is more meritorious than you claim. F. D. Sutton, Mngr Poultry Fancier.
"Have hens now laying, given up for dead and cured with 'Oculum' " Rev. H. R. Walker, Mobile, Ala.
"You have opened a gold mine for the chicken man." Jos. L. Hendry, Louisville, Ky.
"My hens molted in half the usual time and lay better." L. H. Molan, Pronto, Nev.
Dealers bottle, 50c or \$1.00. If skeptical, dime brings either size, pay balance if O. K. Agents Harvest-Booklet free. H. I. CO. Box S. Salem, Virginia.

What It Has Done for Others — the Rayo Will Do for You

Am much pleased with your machine I purchased last spring as a time and labor saver. 96% of fertile eggs hatched out every time. — Mrs. Bowles, St. Clairsville, Ohio.

Your Rayo is simply O. K. I just pulled off a hatch that clipped the best record here. I want you to know that I am more than pleased. — Oscar Dixon, Takamah, Nebr.

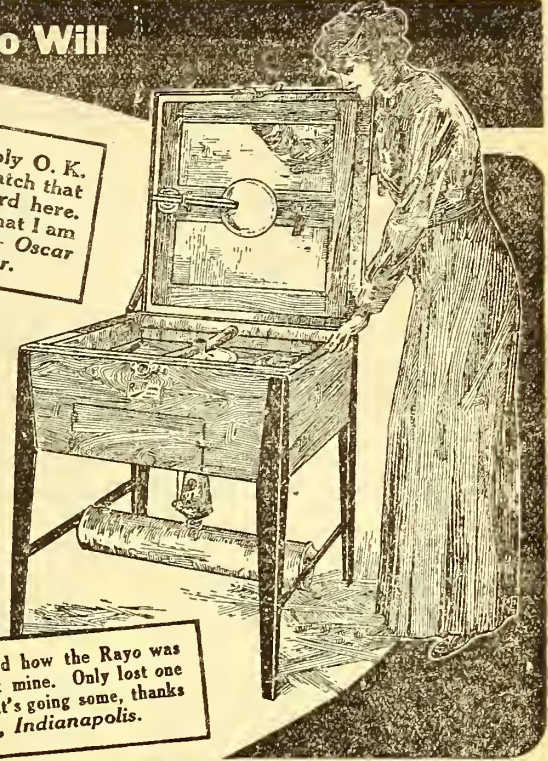
It's a fine hatcher and easy to take care of. Worth twice what you ask. — Grace Jones, Center Point, Iowa.

I made two hatches in the Rayo. I like it better than any other incubator I ever saw. I have a incubator of 100-egg size which took four times the amount of oil and looking after. — J. M. Hood, Albertville, Ala.

I will say that the Rayo is the best I have ever seen. I made three hatchings with it and have over 400 chickens alive up to date. — Ernest Johnson, Balaton, Minn.

I count on more chicks with a Rayo — and I get them. I make money, too, on the oil I save. — Roy Best, Waverly, O.

I am a mechanic and read how the Rayo was made. That's why I bought mine. Only lost one chick in my first hatch. That's going some, thanks to the Rayo. — F. L. Lee, Indianapolis.



Our Best Advertisement

The Thousands of Satisfied Users of RAYO Incubators Are Our Best Advertisement!

We've told you of the superior and exclusive features of Rayo construction over and over again. We've told you that because of this construction the Rayo boosts profits, slashes expense and cuts out the drudgery. We've told you, too, why the Rayo uses only one gallon of oil, where others use five. And we've told you that the Rayo is so nearly automatic that it practically runs without

attention, while others require constant looking after.

Now let some of our customers tell you what they think of the Rayo Incubator. Read the notations from letters printed above, also the few letters below. They back up all our claims.

You can be sure of buying the right incubator if you get the

RAYO Incubator

Hundreds of experienced poultrymen will have no other and you can be safe in following their lead. The Rayo is especially recommended to beginners on account of its simplicity, reliability and certainty of producing best results. For instance, here's a beginner who

Won Big Hatching Contest With a RAYO

"The Rayo I bought of you won for me in the contest conducted by Successful Farming, which included practically all of the best makes. I had only 71 fertile eggs in the machine but I got 71 nice, hearty chicks and raised 70 of them. It never varied 3 degrees, and only used seven quarts of oil for two hatches." — Mrs. Wm. Weaver, R. F. D. 1, Baltimore, Ohio.

An Expert Breeder Orders Another RAYO

"I just made my first hatch this season and hatched every fertile egg with the Rayo I got last season. Enclosed find an order for another machine, complete. Send it as soon as possible, for I am in need of it badly, and I would like to have the agency for same, as the machine I have has 'skinned' all." — David Crowe, Breeder of S. C. Rhode Island Reds, Hanna City, Ill.

Beats All His Neighbors' Hatches

"I am well pleased with the Rayo Incubator. I have no trouble from start to finish — no lamp to fill every morning, as with other machines. The Rayo heat is regulated in less than one hour, ready for the eggs, but with other makes of incubators I have been from 12 to 24 hours regulating the heat. This spring with the Rayo I hatched the highest percentage of fertile eggs in this neighborhood. Everyone who has seen my machine likes the looks of it at first sight." — James P. Cook, Morris Plain, N. J.

RAYO INCUBATOR COMPANY
1011 S. 13th Street OMAHA, NEBRASKA

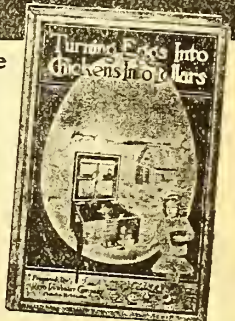
A Better Incubator At A Lower Price

The "Rayo" requires only one filling to a hatch. Eggs and thermometer can be seen through double glass top, which raises for airing, cleaning and turning eggs. Lamp under egg chamber gives perfect radiation. Double wafer thermostat acts on flame — produces exact heat needed — none thrown away. Automatic ventilator. Strong redwood case, covered with steel, enameled like mahogany, makes it fireproof and handsome.

Write for Book No. 17 and we'll send you RAYO free sample hatching chart, special low factory price and combination offers.

FREE Hatching Chart, Hygrometer and Money-Making Book

Absolutely free, a sample of the Rayo Patent Hatching Chart. It tells what to do day by day during hatch. We also give you a \$1.50 Hygrometer with each Rayo Incubator you purchase. **Book, "Turning Eggs into Chickens Into Dollars" FREE** and post-paid on request. This **FREE book** also tells all about Rayo Incubators and Brooders. Write for it and sample of only patent hatching chart in the world. Both are **FREE**. Get Book 17.



Ferris Leghorns for Winter Eggs.



If you aren't getting a good egg yield now when eggs are high, it is time to change your methods or your stock. In most cases where winter eggs are hard to get the stock is to

blame. No amount of care will make hens produce winter eggs when they have never been bred for eggs. If you have the wrong stock, change now before it is too late. **FERRIS IMPROVED WHITE LEGHORNS** have been scientifically bred for eggs for thirteen years and the **LAYING INSTINCT IS BRED IN THE BONE.** We trapnest all our breeding pens and breed from no hens that lay less than 160 eggs a year. We select for size, health, vigor and can furnish you the right kind of stock for egg production—and at low prices, too. **25 First Prizes at 8 Big Shows.**

This fall and winter Ferris Leghorns have won 25 first prizes at 8 leading shows in all parts of the country—the greatest record ever made by any White Leghorn breeder. Here is the list for September and October: Iowa State Fair, three firsts and silver cup for best cockerel in Mediterranean class; Maryland State Fair, three firsts and two seconds; West Michigan State Fair, 5 firsts and 2 seconds; Kansas State Fair, 2 firsts and 2 seconds; Alabama State Fair, 4 firsts and 3 seconds; Georgia State Fair, 4 firsts and 3 seconds; Mississippi State Fair, 2 firsts and special for best cockerel in show.

We are also showing at several other large shows but have not received list of winnings when this ad was printed. We will show at several more big shows during December and January. Write for complete list of winnings, and let us prove to you that Ferris Leghorns will win for you in strongest competitions.

Prices are reasonable too. We have thousands to select from and can furnish good breeding pullets and hens at \$2.50, \$3.50 and \$5.00, cocks and cockerels at \$5.00, \$7.00 and \$10.00. Exhibition birds of finest type—the large, long bodied kind, with extra low tails, good heads and perfect color. Just the kind you need to win and breed winners. Write now and let us quote you prices.

All stock is sold on a positive guarantee to please you or money refunded. Keep them three days, compare them with others and if they don't suit you in every way, send them back at our expense. We also ship C. O. D. if desired, in which case you need only send enough to pay express one way. All stock is insured for 30 days—we stand the loss if any die.

Eggs and Day-Old Chicks.

We are now booking orders for spring delivery. Thousands of fine hens in our bred-to-lay matings and 15 of the best exhibition matings that have ever been mated. Prices are remarkably reasonable and we replace all infertile eggs free, and guarantee safe arrival of chicks any distance. We ship 5000 chicks a week.

Get this Catalog Today.

Read the complete story of Ferris White Leghorns in the 132 page free catalog which we will be glad to send you. Learn how we develop laying qualities so that records of 160 to 200 per year are common, how we improved exhibition qualities until today Ferris Leghorns sweep everything wherever they are shown; how we feed, house and manage our stock. Fully describes all grades of stock, eggs and chicks and will enable you to get started right at small cost. Mail a postal today, the catalog will reach you by return mail. George B. Ferris, Ferris Leghorn Farm, 909 Union Ave., Grand Rapids, Mich.

SOMETHING NEW! A Grain Sprouter Made In Sections!



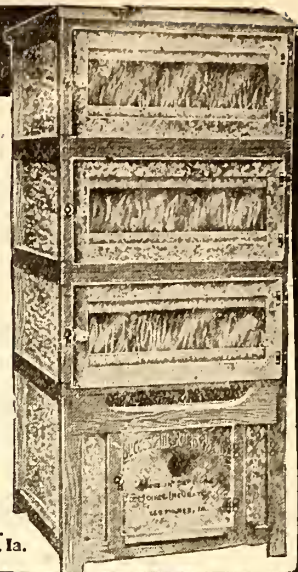
Doubles Your Egg Yield

Constructed of steel. Double steel construction. Made in capacities of from 50 to 100 lbs. Fits the needs of both little and big poultry raisers. Grows as your needs. A brand new idea in grain sprouters. Fully fire proof. Completely safe in every detail. No wood to rot. Lasts practically forever.

"Successful" Sectional Grain Sprouter

will enable you to get three bushels fresh, succulent, egg-making green food from one bushel of oats, wheat or rye. It sprouts grain in 24 hours. Then gives an inch of crisp green sprouts every day. With it you can make your winter chicks grow faster—get them ready for market sooner—when prices are highest. You can make your hens lay more—100% more eggs—lay when egg prices are highest. It's a wonder! Can't warp, shrink or swell as wooden sprouters do. Has large glass doors and metal trays. It will make money for you. Send today for Free Book.

Des Moines Incubator Co.
565 Third St., Des Moines, Ia.



ESSENTIALS FOR HEALTHY STOCK.

Too many poultrymen do not recognize the importance of the health and condition of their breeding stock from which they are to secure breeders for their future use. Unless the breeding birds are healthy, active and in the pink of condition, satisfaction cannot be secured in their offspring.

If chicks die in the shell, die soon after hatching, are weak and puny, or do not grow and mature as they should, do not blame the incubator too quickly, but first thoroughly investigate the conditions and surroundings of your breeding stock. What kind of housing and care are they receiving?

Breed for health, size and vigor, if you wish to be successful, and keep your birds healthy by good care, feed and housing.

Cleanliness is one of the most important factors. Do not give your fowls food or water that is not clean enough for you to eat or drink. Avoid all musty or sour grains. You cannot be too careful in the selection of your breeding stock, and since Mr. Rooster is one-half the breeding pen, be extra cautious in the selection of a male to head your pen. He should be not only a typical specimen of the variety he represents, but also should be in perfect health. Never use a male in the breeding pen (or female either) that has ever been sick.

I prefer to have the male well up to standard weight, but not over standard, since size comes from the female, and a male not too large will make a better breeder than an overgrown gawky bird. See that he is well matured, with keen, bright eye and healthy red comb and wattles. The female should be selected with as much care as was the male. Health and activity are the first considerations and they should always be up to standard weight. Do not use a female under standard weight if you wish to keep size in your flock.

I prefer to have the female two

years old, as they lay larger eggs and therefore the chicks will be larger, for a large chick cannot be hatched from a small egg. If pullets are used in the breeding pen have them fully matured and at least one year old; have them well built, with a broad, deep body. Discard the lazy hen, do not breed from her or you will be disappointed.

I would not use a hen in the breeding pen that always lays mishapen eggs, as I have found the thin shelled or long, rough eggs do not hatch well. They are often infertile and if fertile the chick usually dies in the shell.

It is preferable to have the birds on free range, but as this is impossible on a city lot, they must be provided with plenty of exercise. Give them all grain in deep litter and let them work for a living. Change the litter as often as it becomes soiled. Leaves are all right for litter, but I prefer good straw. It lasts much longer.

Provide your fowls with plenty of green food. I see that my birds have green food every day in the year.

Do not let your birds become over fat and they will not if they are fed in the right way.

If biddy seems always hungry do not chop her head off. The hungry hen is the laying hen, but she must be fed the right kind of food to keep her laying instead of putting on fat.

Do not push your growing pullets for egg production if you intend using them for breeders, but let them come to maturity before thinking about the egg problem.

Colorado. MRS. BAKER.

We desire to extend our readers the opportunity of giving their experience at poultry work and shall be glad to publish these letters. The letters can be gotten up in your own way and we will edit them properly before printing them in Poultry Keeper. Doubtless you have been interested in reading the letters which have been sent us by other subscribers, and they in turn will be interested in reading your letter.



56 BREEDS Chickens, Ducks, Geese and Turkeys, Hardy, northern raised, pure bred, of finest plumage. Fowls, eggs and incubators at lowest prices. America's greatest poultry farm. Send for large, fine 15th Annual Catalog and Poultry Book. R. F. NEUBERT, BOX 842 MANKATO, MINN.

WINTER EGGS.

With 60 cent eggs in the East and thirty-five in the country towns of the middle west states, the problem how to get the winter eggs is with us.

In the first place, is it the hen or pullet that gives the best results?

My experience has been that the March pullets have always laid the first and most eggs. They generally commence at Thanksgiving or earlier and lay until the holidays, then they become broody and with proper care are broken of their desire to sit in a few days and in a short time are laying again and continue until the last of February, when they are again broody and are given a clutch of eggs to hatch. It is not so much the kind of chickens you have, but the care you give them that gives results.

I was for years a breeder of the despised Cochin and I always could get more winter eggs than any of my neighbors.

I am a lover of the same Cochin to this day. I now have Rhode Island Reds and for an all-purpose chicken like them well. Our pens and houses are situated on a north hill-side, one of the coldest places in our town, so if I can succeed most anyone else ought to do better.

My pullets are March and April hatched. The pullets are penned by themselves as soon as the sex is known. They are given more work and ex-

ercise, in fact, are kept as busy as possible.

Their grain is fed in litter spaded in ground. They have table scraps, clippings from the lawn, refuse from garden, skim milk; in fact, any old thing that is handy, so it's a change and to keep them growing.

Then when the days begin to get cool I make the litter in the scratch pen deeper and feed the grain in the same. I throw in a few handfuls several times a day, so as to keep them busy, and at night always give them a good supply of whole grain. For the morning mash I save table scraps, all potato and apple or turnip parings, meat scraps, then in the morning when my breakfast is off the stove, I cook my kettle of scraps, add salt and pepper to taste, thicken with wheat bran and some cornmeal, and when cool feed in vessels.

I never give them quite as much at any meal as they would eat, except at night, then when I lock them up for the night, I throw in a few handfuls of grain in litter, so the early bird can get busy and the hustler is the bird that lays the egg.

Quite often on a cold, stormy morning when I am just a little late with the morning mash, I find quite a number of eggs at that early hour.

Now as the green stuff is all gone, I feed sprouted oats at noon. I think it one of the most satisfactory foods I know of. I use cats straw and al-

falfa hay for litter in pens, and they will eat all of the leaves and quite a good deal of the stem if it is cut small enough.

Oyster shell and grit is always by them, with plenty of fresh water. I use the open window with muslin over same. The roosts are hinged, so I can hang them up in daytime to give more room. I keep twenty-five pullets in a house 10x12, so you see I am crowded, but the pullets seem happy and contented.

E. G.

Tarkio, Mo.

Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 15th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting some one else to send in a subscription with you. Our special offer of three subscription for one dollar is one which it will be to your advantage to investigate.

\$8.50 Buys **150-Egg Incubator** And **150-Chick Brooder**

Just Think of It!—Why Pay More?

Here Is the Most Astounding Offer Ever Made for Chicken Raisers

Here is an offer you simply cannot afford to miss. This gives you everything you could want in a reliable hatcher at a price never quoted before for a machine fully guaranteed—shipped ready to use—no extras to buy. We charge only for actual cost of material and labor with one small profit, and depend upon enormous production.

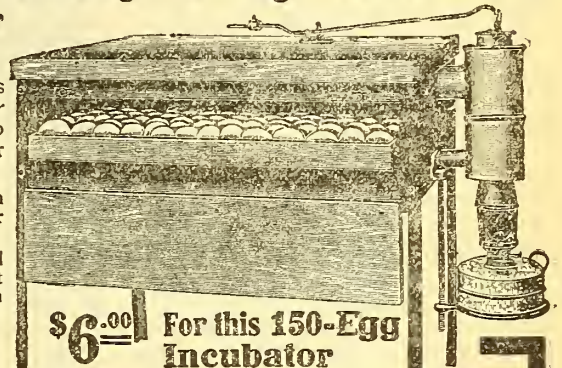
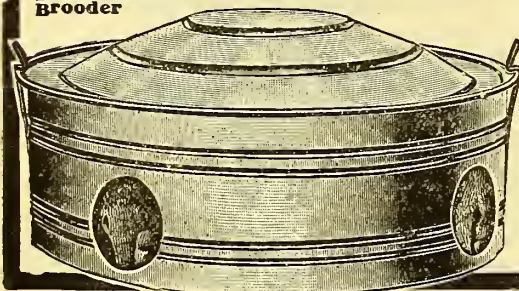
Low buying prices, our modern factory methods and our direct to you plan cuts the price. Stop! Think of what this means! Where else have you ever heard of such an offer?

The machine has the best regulator; dependable thermometer; strong, well built egg trays; all metal safety lamp with bowl stamped out of sheet steel; best lamp bracket; steel legs; best egg tester. Write for this wonderful proposition on

THE ROCKFORD Incubator and Brooder

Incubator alone, \$6.00. Metal Brooder, \$3.00. Both Incubator and Brooder, \$8.50

\$3.00 for this 150-Chick Brooder



\$6.00 For this 150-Egg Incubator

It comes to you all set up (not in knock-down form). Just fasten the legs and lamp bracket and start the hatch.

Money-Back Guarantee

You could not ask for better quality—to pay more is needless.

It is heated with warm pure air. Foul or impure air is carried off. No chance for lamp fumes to enter egg chamber. All parts are heated evenly. Side walls and top are made of 1 inch lumber and lined with heavy deadening felt and again lined with 1/2 inch lumber inside. Heat cannot get out—cold cannot get in—fuel is saved.

The Brooder is water heated—fire proof and weather proof—easily handled.

Write at Once for Full Facts

Don't let anything keep you from this remarkable proposition. The quality is so good—the guarantee so strong and the price too low to let anybody miss it. We guarantee the incubator to satisfy you in hatches and also guarantee the metal brooder to raise chicks to satisfy you or we return your money.

Write us at once so we can lay the whole proposition before you. Address—

The Rockford Incubator Co., Box 11 Rockford, Ill.

DIFFERENT METHODS OF FEEDING.

The Missouri Egg Laying Contest for the 1912-1913 contest, used the following rations except for the ten pens which were on trial feeds:

For dry mash: 100 lbs. bran, 200 lbs. middlings or shorts.

200 lbs. corn meal; 300 lbs. ground oats.

250 lbs. beef scraps; 75 lbs. alfalfa meal.

50 lbs. gluten meal; 25 lbs. O. P. oil meal.

8 lbs. fine salt; 35 lbs. powdered charcoal.

For grain food: Winter, 200 lbs. cracked corn; 100 lbs. wheat.

For summer: 100 lbs. cracked corn; 200 lbs. wheat.

Equal parts cracked corn and wheat in spring and fall.

Some of the dry mash moistened with buttermilk and fed once a day.

Grit, shell and sprouted oats, or other green food.

In addition to the general pens which were fed the above rations, ten separate pens were fed according to the methods used in other states, as shown below.

Pen No. 1 Storrs Connecticut, Or North American Contest. Dry Mash.

- Coarse wheat bran200 lbs.
- Corn meal100 lbs.
- Gluten feed100 lbs.
- Ground oats100 lbs.
- Middlings 75 lbs.
- Fish scrap 30 lbs.
- Beef scrap 30 lbs.
- Low grade flour 25 lbs.

Grain Scratch.

- Cracked corn60 lbs.
- Wheat60 lbs.
- Heavy white oats40 lbs.
- Barley20 lbs.
- Kaffir corn10 lbs.
- Buck wheat10 lbs.
- Coarse beef scrap10 lbs.

Pen No. 2.

Cornell, New York, Rations for Laying Hens.

- | | | |
|-----------------------|------------------|------------|
| By weight | | By measure |
| winter. | | winter. |
| 60 lbs. wheat..... | 32 qts. wheat | |
| 60 lbs. corn..... | 36 qts. corn | |
| 30 lbs. oats..... | 30 qts. oats | |
| 30 lbs. B. wheat..... | 30 qts. B. wheat | |

- | | | |
|--------------------|---------------|------------|
| By weight | | By measure |
| Summer. | | Summer. |
| 60 lbs. wheat..... | 32 qts. wheat | |
| 60 lbs. corn..... | 36 qts. corn | |
| 30 lbs. oats..... | 30 qts. oats | |

A mash consisting of the following, is fed in hoppers, kept open only during the afternoon:

- By weight, winter and summer—
- 60 lbs. corn meal.
- 60 lbs. wheat middlings.
- 30 lbs. wheat bran.
- 10 lbs. alfalfa meal.
- 10 lbs. oil meal.
- 50 lbs. beef scrap.
- 1 lb. salt
- By measure, winter and summer—
- 57 qts. corn meal.
- 71 qts. wheat middlings.
- 57 qts. wheat bran.
- 20 qts. alfalfa meal.
- 8 qts. oil meal.

It's a Pleasure to Farm in the South

NATURE coöperates with you at every turn in the Southeast. Crop failures are hardly known. You are favored with 200 to 300 growing days, which allow two and three crops from the same land each season. Expensive irrigation is unnecessary, as 45 to 60 inches of rain, well distributed through the growing season, fall annually. The assortment of crops raised in the Southeast is the greatest anywhere in America. From the tropical citrus fruits to the finest varieties of apples, peaches, pears, grapes and numerous other fruits and nearly every known variety of grains, vegetables, grasses and legumes can be produced somewhere in the Southern Railway territory. And with all these superior advantages Southeastern land now averages less than one-half the price of farms in other parts of America.

\$15 to \$50 An Acre Buys Excellent Homesteads

where the climate is exceedingly agreeable and healthful, where railroad communication is of the highest order and transportation to Northern markets but 24 to 48 hours. Life in the rural sections of the South is all that could be desired. Modern highways and telephones, the best of high and agricultural schools, good churches and trading centers—all these advantages are to be had in this growing section.

INVESTIGATE SOUTHERN CONDITIONS

Avail yourself of the low Homeseeker's Rates. Write for particulars. Learn of the favorable conditions in the South. Ask for the "Southern Field" magazine, state booklets on Virginia, North or South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee and Kentucky. Let us know the state and line of farming in which you are interested.

**M. V. Richards, Land and Ind. Agt. SOUTHERN RAILWAY
Room 81 Washington, D. C.**

Mobile & Ohio R.R.
Southern Ry.
Ga. So. & Fla. Ry.

BUFF WYANDOTTES

THE GREAT GENERAL PURPOSE BREED—BIG BARGAINS IN BREEDING STOCK NOW
Let me try to please you. Send for circulars containing best lot of testimonials put out by any breeder. Ten years a breeder of Buff Wyandottes.

ORIGINATOR "HIGH QUALITY" STRAIN.
J. E. WILLMARTH, AMITYVILLE, N. Y.

Ironclad

TRADE MARK.

**Wins in the Two
BIGGEST HATCHING
Contests Ever Held**

Why take chances with untried machines when for only \$10 we guarantee to deliver safely, all freight charges paid (East of Rockies), BOTH of these big prize winning machines full, equipped, set up ready for use? Why not own an Ironclad—the only incubator that has for two years in succession won the greatest hatching contest ever held? In the last contest conducted by Missouri Valley Farmer and Nebraska Farm Journal, 2,000 Machines were entered including practically every make, style and price. With 140-egg Ironclad—the same machine we offer with Brooder freight paid, for only \$10, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in the last contest.



140 EGG
Ironclads are not covered with cheap tin or other thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the Natural color—you can see exactly what you are getting. Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering, galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boiler, self regulator, Tyco's Thermometer, glass in door, set up complete ready for use and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this advertisement.

IRONCLAD INCUBATOR COMPANY, Box 157, RACINE WIS.

30 Days Free Trial
Money Back if not Satisfied

Both
for
\$10
Freight Paid
East of Rockies



140 Chick Brooder

J. T. FRENCH

BREEDER OF

Exhibition Barred Plymouth Rocks

OF THE HIGHEST QUALITY.

Winners at Toledo, Detroit, Cleveland and Chicago, and many other shows in strongest competition 36 prizes in one season. Stock of my raising has scored 94 points in competition.

Eggs, \$3.00 and \$5.00 per 15 straight.
833 WEST GROVE PLACE, TOLEDO, OHIO.

43 qts. beef scrap.
 1 half quart salt.
Maine Method Pen No. 3.
 Dry grain fed in litter.
 Early morning feed—cracked corn.
 10:30 A. M., fed, equal parts wheat
 and oats.
 Feed about two quarts to fifty
 fowls.

Dry Mash First Month.
 300 lbs. wheat bran.
 100 lbs. corn meal.
 100 lbs. cheap flour.
 100 lbs. meat scraps.

Dry Mash—Second Month.
 200 lbs. wheat bran.
 100 lbs. corn meal.
 100 lbs. cheap flour.
 100 lbs. gluten meal.
 100 lbs. meat scraps.

Third month, same as second, only
 add 50 lbs. linseed meal.
 Fourth month, same as the second
 month.

Fifth month, same as third month.
 After this, feed same as second
 month, and add 50 lbs. linseed meal
 every alternate month.

Green food: Sprouted oats, cabbage,
 mangels, etc. Grit, shell and charcoal.
**Canadian Method, Ontario Agricultural
 College Pen No. 4.**

In winter, two-thirds corn and one-
 third wheat.

In summer, one-third corn and two-
 thirds wheat.

Rolled oats in hopper.
 Nothing to drink except buttermilk.
 Grit, shell and charcoal.

Saylor Method—Pen No. 5.
 Dry Mash—
 15 lbs. ground alfalfa meal.
 15 lbs. corn meal.
 15 lbs. ground wheat.
 15 lbs. gluten meal.
 15 lbs. ground oats.
 10 lbs. oil meal or high grade beef
 scraps.

15 lbs. wheat bran.
 1 25c box Saylor's poultry powder.
 The above dry mash is fed in hop-
 pers. Three times a week feed dry
 mash in moist, crumbly form, to which
 add one-fourth teaspoonful Saylor's
 poultry powder to every five fowls.
 After third week, reduce moist mash to
 once a week. To keep them in healthy
 condition, every fourth or fifth week,
 feed this mash again for a week, add-
 ing one-fourth teaspoonful of the pow-
 der to every five fowls.

To give the fowls the proper exer-
 cise, feed the following grains in the
 litter: One-half ounce each of coarse
 cracked corn, whole wheat and hulled
 oats; also sprouted oats daily. Every
 other day, substitute one half ounce
 green cut bone for each fowl. For
 night feed, the fowls should be given
 green food, such as cabbage, mangels,
 etc., etc.

Keep oyster shell and grit before
 them always. Also fresh water, not too
 warm or too cold. Scald the feeding
 troughs frequently.

Corning Egg Farm Method—Pen 6.
 Grain winter. Grain summer.
 4 pts. cracked corn.....2 pts. corn
 2 pts. wheat.....4 pts. wheat
 2 pts. oats.....2 pts. oats
 Feed a little less than one quart to
 ten hens, only at night feed.
 Feed no grain in morning.

Wisconsin Wins In Big Hatching Contests EVERY YEAR

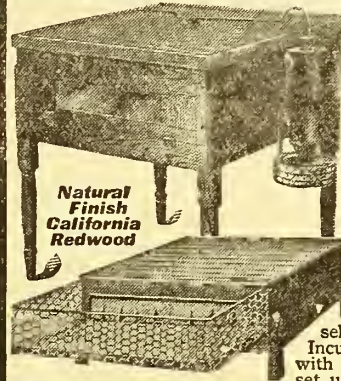


Mrs. J. McMahon, Veedersburg, Ind., won in Missouri Valley Farmer Hatching Contest, hatching 125 chicks from 126 eggs.
 Mr. C. B. Armitage, Atwater, Ohio, won in the Successful Farming Contest, getting 181 chicks from 181 eggs in two hatches.

Mrs. J. W. Mize, Vaughns Mills, Ky., won in the Successful Farming Contest, hatching 208 chicks from 208 eggs in two settings.
 Mrs. F. H. Lewis, Montrose, Pa., in 1913 won in Successful Farming Contest, getting 96 chicks from 96 eggs in one setting.

I stand ready to prove that Wisconsin Incubators are the best built and the best equipped machines on the market today. You can't get bigger or better hatches even if you pay twice the price. I build the outer walls of my incubators of Genuine California Redwood—costing four times as much as materials some manufacturers use.

130 EGG INCUBATOR } Both \$10
CHICK BROODER } For \$10
180 Egg Incubator and 180 Chick Brooder } Both \$11.50



Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others we will feel sure of your order. Don't buy until you do this—it pays to investigate before you buy. Money back if not satisfied. **THOS. J. COLLIER, Manager.**
WISCONSIN INCUBATOR CO., Box 78 RACINE, WISCONSIN

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 You can send in your order direct if you wish and save money. Money back if you are not pleased. The publisher of this paper will tell you I do just as I agree. You take no risk. I give 30 days trial and a 10 years guarantee.
Why Take Chances
 Find out what material an incubator is made of before you buy.
 Incubators have hot water heat, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Incubator and Brooder shipped complete with thermometers, lamps, egg-testers, all set up, ready to use when you get them.
 Write for FREE catalog and we will send you a sample of the Redwood our incubators are made of.

One pound of mash to each ten hens. Use Corning's mash and green cut bone.

Add five heaping teaspoonfuls of mustard bran to the mash for every ten hens.

Norwich Feeder—Pen No. 7.
 Use same rations as general rations for 1912 1913 contest, except that Norwich feeder is used, instead of feeding the grain by hand.

Feed of All Kinds Before Hens At All Times Pen No. 8.
 Fan of buttermilk and pan of water and keep record of amount of each kind of food consumed.

Varieties of food used: Wheat, corn, oats, rye, kaffir corn, buckwheat, rice, cowpeas, hulled oats, barley, sunflower seed, millet seed, cane seed, hard coal ashes, green food, bran, flour, dry beef scraps, alfalfa meal, corn meal, gluten meal, rolled oats, grit, oyster shells, charcoal, fish scraps, shorts, O. P. oil meal, ground oats.

Farmer's Method—Pen No. 9.
 Equal parts, bran, shorts and corn-meal in hopper.

In winter months, two-thirds corn, one-third wheat in litter.

In summer months, one third wheat, two-thirds wheat.

Grit and shell.

Green food.

Give buttermilk instead of water, twice each week.

Confined vs. Range Pen No. 10.
 This pen fed general rations for

1912-1913 contest, except birds confined to a "Morton" house for the entire year.

The final report of the Missouri contest given elsewhere in this issue of The Poultry Keeper, will show what the general results were from these different methods of feeding.

ANCONAS.

Why is it that there are not more Anconas kept or written about? They are pretty birds and good layers of large eggs, and small eaters. They are the most desirable kind for egg production, with perhaps one exception, as the White Leghorns seem to excel all varieties in this respect. I am just starting with the Anconas and find them nice little pets.

Mrs. Margaret I. Estey.

We would like to get a number of suitable short articles of about five hundred words each to use in our coming issues. If you are not now a subscriber or if you are now on our list, and will send us a suitable article on any subject relating to poultry, we will enter or extend your subscription for one year. Hatching and brooding will soon be in order and articles on these subjects will be especially timely. When sending in your article, clip this memo and send with it so that your subscription may be properly entered.



**Anybody
Can Hatch Chickens
With a
BUCKEYE**

That statement means exactly what it says. It makes no difference what kind of incubator you have ever used before, nor whether you have ever used any at all. When you buy a "BUCKEYE," you get absolutely the best there is in incubators. It will give you successful hatches every time. We are so sure about it that every machine we sell, no matter what the size or price, is absolutely

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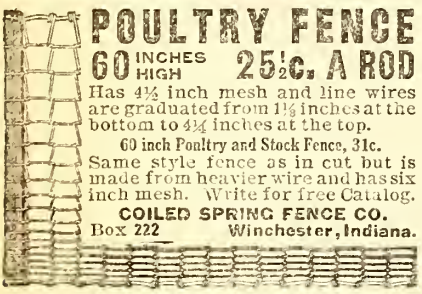
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To Hatch Every Hatchable Egg

Neither your dealer nor we would make such a sweeping guarantee if we did not know that the "BUCKEYE" will do all we claim. Made in five sizes—60-egg to 350-egg capacity. Over 325,000 in successful operation.

We want you to see the "BUCKEYE" before you buy. Let us send you the name of our nearest dealer where you can see the machine in operation. We will also send you our catalog, which tells why more than 1,000 dealers prefer to sell the "BUCKEYE." We are glad to answer any questions—we want to hear from you. Write us today.

THE BUCKEYE INCUBATOR CO.,
507 Euclid Ave., SPRINGFIELD, OHIO.

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POULTRY FENCE

60 INCHES HIGH 25c. A ROD

Has 4 1/4 inch mesh and line wires are graduated from 1 1/2 inches at the bottom to 4 1/4 inches at the top.

60 inch Poultry and Stock Fence, 31c. Same style fence as in cut but is made from heavier wire and has six inch mesh. Write for free Catalog.

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Barred Rocks**

BRED FOR
Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants.

INCUBATOR EGGS—\$5 per 100; \$45 per 1,000

Our farm consists of 145 acres of land all within the corporate limits of the village of Waterman and valued at \$200.00 per acre.

\$3,000 Invested in Barred Rocks and buildings. Booklet free.

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The Biggest Poultry-Profit Year **Why?**

I advise all my friends to get ready now to take advantage of the greatest demand for Poultry in many years and at the highest prices. There's a big shortage in pork and beef. Poultry raisers must make up the deficiency. The sooner you start the longer and bigger your harvest; the bigger your money roll at the end of the season. You can't depend upon the hen to produce your chicks—she's too slow; too bothersome; too unreliable.

The Sure Hatch Incubator
Is the Ever-Ready—Ever-Dependable Chick Producer
It is strongly built of California Redwood, triple-walled, water-heated, self-regulated, economical. Guaranteed for 5 yrs. Yet my direct-to-you factory price IS LESS than you're asked to pay for many poorly built machines. Poultry picks up what would otherwise go to waste on the place. It is a "pick up" for you, too.

No experience is necessary with my machine. It's so simple and absolutely self-regulating from start to finish, I guarantee my machine to maintain proper hatching conditions in a room where water freezes; and to hatch every egg that has the germ of life in it. I'm so sure that my machine will do all I claim for it that I'll send it to you on 60 days' free trial and pay the freight. You can try it at my risk. If not satisfied send it back and I'll refund your money.

You Need My FREE Uncle Sam Poultry Book
It's worth \$10.00 to anyone in the Poultry business. A big book of facts on Successful Poultry Raising from U. S. Government Experts. The only book that gives you all the vast fund of absolutely reliable, official information on Poultry and its proper care. It will start you right and make you big profits the first year. I will send it to you free with a Sure Hatch machine. Write for my Big Free Illustrated Catalog which tells all about the Sure Hatch Incubators and Brooders.

FRANK HAMMOND, Pres. & Mgr.
SURE HATCH INCUBATOR COMPANY
Box 2, Fremont, Nebr.

MONEY BACK GUARANTEE

GUARANTEED FOR 5 YEARS

EVERY FAILURE A SUCCESS.

Freight Paid

EVERY FAILURE A SUCCESS.

During the winter of 1909 my health began to fail and I decided to quit indoor work. My doctor stated that outdoor work was essential to recovery. Poultry for profit seemed alluring and I began at once to study poultry literature. However, being a little obstinate, I presumed that precautions as mentioned in the poultry books were not important.

I knew of an idle farm in one of our mountainous states, the farm lying in a valley, hemmed in by a mountain ridge, well wooded. This to me seemed an ideal spot, free from all contaminated soil, and would afford splendid range. I secured the farm, ordered a 300-egg incubator, one 3000-chick brooder, together with horse, cow and some farming implements and made my start on the poultry farm. My ambitions began to soar when I had the incubator in operation. My first hatch was disappointing, however, as I secured 100 chicks, 80 White Leghorns which was slightly better than a 50 per cent hatch. My troubles began. I was unprepared to take care of a large flock of "puff balls." They were full of vigor and it seemed that they were not content unless wandering near every old building and brier patch, wherein rats and weasels seemed to be in wait. Remember my reader, that the farm had been idle for a period of ten years, and old buildings and brier patches were in order.

I began to realize my mistake. I could not get rid of "enemies" until the old buildings and brier patches were destroyed and this could not be done in a short space of time. I found it difficult to care for a flock of chickens without the proper accommodations, namely, a brooder house. I at once made a yard about 20x30 feet of small poultry netting. In the center of the yard I placed my outdoor brooder. My chicks seemed to thrive. I was well pleased. My first chicks were nearly three weeks old when I received another lesson. During the night a heavy thunder storm came up, accompanied by a heavy downpour of rain. The

"outdoor" brooder was no more an outdoor brooder. A board warped, breaking a glass window, allowing the heavy rain fall to flood the brooder. It was with wet eyes that I gathered up 900 of my little flock and dumped them in a newly made grave. I now had but 30 chicks left, plus experience which is necessary to success. My second hatch came off about 50 per cent, not quite so good as the first. I attributed this to the fact that the eggs had been hauled a distance of seven miles in a road wagon over a rough road. This hatch as well as subsequent hatches were placed in a loft of an old building. This gave the chicks sunlight, but they did not seem to have the vitality of those having access to the soil. This fact became more apparent when the chicks were placed on the ground at four weeks. They were not active, and I was compelled to use all precaution to prevent colds.

In all I ran four hatches and having no preparations for caring for separate flocks according to ages, I experienced considerable trouble. I might mention that after my first experience I decided to change my locality before entering on my second hatching season, and for this reason I erected no buildings or runs permanently.

Sickness was unknown in my flocks. I attributed this to my original ideas; free range, fresh water placed in fountains that would not become exposed to the sun, variety of feed and plenty of it, taking care that grit and shell were in abundance.

By the middle of September I had remaining a flock of approximately 200 pullets and cockerels. At this time I secured a different location for continuing my poultry experiments, for such they seemed. After disposing of cockerels, except those desired for the breeding pen, and culling out my flock of pullets, the culling being just as essential as any other principle toward success, I had left 100 pullets. Incidentally I gathered my first egg at the end of five months and ten days. I was by no means discouraged. I not only had a flock of pullets to begin my second season, but knew that to

raise poultry it was necessary, first, to have a location, not only suitable as to elevation, drainage and soil, but protected from all animals that prey on young chicks. Second, that proper buildings should be erected before the chicks are hatched, great care being used in the construction of the buildings, as regards ventilation, sunlight and runways. Third, outdoor brooders are not advisable. Fourth, hatching eggs should not be handled too roughly. They should be turned, however, every twenty-four hours prior to incubation. Fifth, chicks of different ages in the same flock are damaging to the younger chicks. Sixth, young chicks must be given plenty of exercise and sunlight, and this on clean soil. Anything which will cause a loss of vitality in young or old chicks spells failure.

I will describe my second hatching season later, together with the lessons it taught. I will also include the laying season of my first flock of pullets, giving my method of feeding and other details.

C. T. THOMPSON,
Pennsylvania.

PROPER FEEDING FORMULAS.

Inquiries regarding a proper mash formula are sent in by the readers of Poultry Keeper and while these rations vary somewhat according to the availability of different feeds, the following rations for mash as well as scratch grain will give a very good idea of what eminent poultrymen really think of this subject. These rations were the ones worked out by the authorities at the Storr's Contest which has recently closed and will be found useful to those owning flocks for furnishing eggs for table use.

All pens were fed and handled in the same general way; that is to say, the same feeding formulas were used for all pens and all varieties. The management felt at liberty, however, to feed more or less according to the needs of the individual pens. A well known automatic feeder was used for the grain and an earthenware dry mash receptacle was used for the ground feeds. Mash, grit, shell and charcoal were given to the birds ad libitum but it was necessary to close the grain feeder a part of the time especially during the long days of summer. This daily attention to the hoppers would probably be unnecessary in larger flocks. Succulent food consisted principally of dried beet pulp for about six months. After this time sufficient natural greens were furnished by the barley and clover in the yards in which the hens were running so that none was added from other sources until along in the summer when some of the yards became more or less depleted. For about the last three months of the contest period green cut corn was used. The beet pulp, and other greens, for that matter were fed separately; that is to say, they were not incorporated in the dry mash. The formulas for the mash and grain rations were not changed in the second year, it being

deemed advisable to continue their use on account of the highly satisfactory egg yield obtained in the first competition. It will be noted from the formulas below that beef scrap appears in both the mash and the grain. It should perhaps be explained that all beef scrap was sifted, the coarse particles being mixed with the scratch grain and the remainder being used for the mash.

Dry mash: coarse wheat bran, 200 pounds; corn meal, 100 pounds; Gluten feed, 100 pounds; ground oats, 100 pounds, standard middlings, 75 pounds; fish scrap, 30 pounds; beef scrap, 30 pounds, low grade flour, 25 pounds.

Scratch grain, 60 pounds; wheat, 60 pounds; Heavy white oats, 40 pounds; Scratch grain, cracked corn, 60 pounds; wheat, 60 pounds; heavy white oats, 40 pounds; barley, 20 pounds; Kafir corn, 10 pounds; buckwheat, 10 pounds; coarse beef scraps, 10 pounds.

UNNECESSARY LOSS OF CHICKS.

Editor, Poultry Keeper:

Just a few words of appreciation. I had a terrible slaughter of innocents this summer and knew that there was "great fault" somewhere. I had about 475 chicks; 250 being one week old, 150 fourteen days old and 75 nearly three weeks old. I saved about 75. I studied and studied the situation and in one of the summer issues, I found

Costs One Cent

Get "The Golden Egg" and Your Hens Will Lay an Egg a Day

For only one cent you can get this wonderful poultry money-maker. Your hens will lay more eggs—larger eggs. Lazy hens will start laying. You can get fertile eggs. You can get eggs for early setting. Get plenty of eggs when they sell at highest prices.

Invest a Cent and Double Your Egg Yield

Get as many eggs in winter as in summer. It's all a question of feed. The Humphrey way makes chickens pay. You can cut your feed bill in half and at the same time get twice as many eggs. Let me tell you how. You can force your hens to lay as many eggs this winter as in the summer time by using a Humphrey Green Bone Cutter. Write for free copy of "The Golden Egg." Tell me how many hens you have and get some money-making facts from me by return mail. Send postal today.

HUMPHREY
Glass Street Factory
Joliet, Illinois



Big Winter Eggs Out of Clover. How? Ask Me.

an article from one of your contributors which told of trouble with a lot of incubator hatched chicks. He found blue mold in the chick food. It set me to thinking and searching.

I had an accident in the family in the spring and the care of an invalid made me order "sight unseen" some cracked wheat. I inquired about the history of the wheat and found that it had been damp and had probably molded both in the stack and bin. It taught me this; to see and know what your wheat has been through and see that its treatment has been perfect. I have also found other valuable helps and hints in the columns of the Poultry Keeper.

Irene M. Kennedy.

Montana.

SPECIAL CLUBBING OFFER.

By special arrangements with the publishers we can furnish any poultry paper at one-half price, providing the order includes a year's subscription to Poultry Keeper at regular price. For instance, for 75c we can furnish a full year's subscription to Poultry Keeper and your choice of Reliable Poultry Journal, American Poultry Advocate, or any other 50c poultry paper. Make up a list of the papers you desire and let us quote you a reduced price on the lot. Address Poultry Keeper Publishing Co., Quincy, Illinois.



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Rose and S. Comb Browns, Rose and S. White Leghorns. Big eggs—big birds, 242 to 244 egg strains. S. C. Reds, Rocks, W. Wyandottes. Eggs, \$2, \$3 and \$5. Catalog.

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Greider's Fine Catalogue



and calendar of fine, pure-bred poultry for 1914. This book contains many pages of poultry facts. 70 different varieties, some shown in natural colors. All illustrated and described, tells how to make hens lay, raise and care for them, all about the famous Greider Incubator and Brooders. Shows photo of the largest poultry farm in Penn. Prices of breeding stock and eggs for hatching and supplies within reach of all. A perfect guide to all poultry raisers. Send 10c for this noted book on poultry.

B. H. GREIDER, Box 104 Rheems, Pa.

CAPON TOOLS



CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

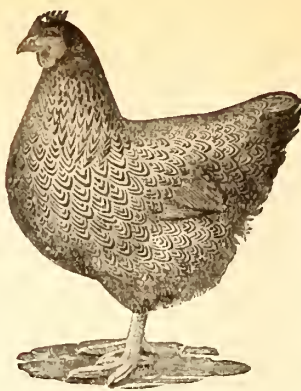
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Postpaid \$2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. Wealsomako Poultry Marker 25c. Gape Worm Extractor 25c. French Killing Knife 50c. Capon Book Free. G. P. Pilling & Son Co., Philadelphia, Pa.



PROFIT IN CAPONS.

The wise farmer, looking to profit sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75 we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.



Regal Partridge Plymouth Rocks

"The Trapnested Pedigreed Strain"

Our stock will please you. Write us to-day. We still have some very fine cockerels at \$15.00 to \$25.00 each. Pullets \$2.00 to \$10.00 each. Eggs for hatching, \$7.50, \$5.00 and \$3.00 per 15.

The Oakes Experimental Poultry Yards
Box P. K. Tipton, Indiana

SUCCESS WITH INCUBATOR.

I was tired chasing contrary old sitting hens to make them return to their nests, of washing the eggs after they would break two or three out of a sitting, as I keep heavy hens, and they break the eggs with their weight, so I saved up enough money to send for a cheap incubator. I was well aware that the best was the cheapest, but a farmer's wife sometimes can not have the best, for many expensive tools must be bought for farm work and leaves not much money for the farmer's wife. The incubator arrived, I had never seen one like it, and no one had an incubator within five miles.

Everyone I told that I had bought an incubator prophesied how I had fooled away my money. Some told of hatches of one frail chick; others of the demise of 75 in less than two weeks after hatching. So it was with great sorrow I viewed my new incubator, for I was sure I had wasted my money. I supposed because it was cheap, it would require a great deal of attention, so during the first hatch I was with it most of the time during the day and each hour of the night, fearing cooked eggs. The day came for them to hatch and chick after chick rolled out of its shell, kicking merrily as soon as they were dry. I took an old tub, set a jug of hot water in the center, wrapped the jug in a cloth and a cloth in the bottom of the tub and put the chicks in the it and covered the tub with a cloth. The directions that came with the incubator were very stinted but I read all I could find about incubators.

As soon as the little chicks were hatched I thoroughly washed the incubator tray and filled it with eggs for the second hatch. I did not watch the incubator so much and the hatch was even better.

For my brooder I took a dry goods box about 14 inches deep and four feet square, nailed on legs and made removable cover, cut a round hole in center, shoved a ten quart granite pail from the bottom and kept a lantern set under that on a stool. I slipped a cover of an old cushion over the pail in the inside of the brooder, covered the floor an inch deep with fine chaff.

An air space was cut, covered with wire netting. Two boxes five feet long

and 17 deep and wide, set side by side and a door sliding from the brooder opened into each for a feeding place. The bottoms of these boxes were covered with newspapers, which were changed each morning.

I fed them bread crumbs, infertile eggs (for 75 chicks one egg a day) for a few days. Scalded milk and also water were kept before them all the time. I gave them sand the first day and each day oatmeal and cracked wheat was their main food for two weeks, then bran and cracked wheat and hominy meal. All was fed dry and how they grew! Not one died of that hatch and I fed the other two hatches that came off the same way.

When the next hatch came off I moved the chicks out where they had lots of room and a brooder was made with a removable top and I would put a jug of hot water in each night and spread an old quilt in over that and pat it down like a tent, then put on the cover and they were contented and warm.

I took great delight with my incubator chicks. They were so tame and thrifty and I think it less work to care for an incubator than to care for a lot of old contrary sitting hens.

MRS. HELEN McMAHAN.

Ohio.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year if sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, if desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote you promptly.

REARING CHICKS IN A BROODER.

There are more people to quit the poultry business because they lack sense and judgment in brooding their chicks, than from any other reason. Whereas, if they would use good, sound, common sense in operating their brooders, and not try to put a hundred chicks in a brooder, which was made to accommodate fifty, there would be more successful poultrymen today.

When I started to rear chicks by artificial methods, I was under the same impression. I thought that a brooder which had twelve square feet of floor space, was large enough to accommodate at least seventy five chicks, but I soon found to my sorrow, that such was not the case. No matter how large the brooder is, it is not safe to trust more than fifty to its care.

Twenty-four hours before I expect my hatch, I put about two inches of litter in the brooder. Then I light the lamp and watch the thermometer from time to time and regulate the heat so that the thermometer registers 100 degrees. I keep it at this temperature the first day, then gradually reduce it so that the thermometer registers 95 degrees by the end of the first week, and reduce it five degrees each week after, until the chicks need 10 artificial heat.

When the chicks are twenty-four hours old, I take them from the incu-

bator, put them in a basket and cover them so no draught will strike them on the way to the brooder. I place fifty under the curtain in each brooder, allowing them no food until they are forty eight hours old. I place a fountain of warm water in each brooder and teach two or three of them how to drink.

When the chicks are forty-eight hours old, I give them a nursery food consisting of hard boiled eggs and stale bread, which I run through a chopping machine. This I moisten with a little sweet milk, so that it will be soft and crumbly, but not sloppy. I feed this five times a day, a little each feeding. The last feed at night, I give them all they will eat up clean. On the third day I sprinkle a little commercial chick food in the litter. I give them a little less nursery food and a little more chick food each day, so that by the end of the first week they are getting all chick food.

At the beginning of the second week I give them some green food, such as cut clover or lawn clippings once a day, feeding a little at a time until they get used to it, then I give them all they will eat. I also place a little fine beef scraps on the floor each day, and keep grit before them all the time.

When the chicks are six weeks old I gradually change the chick food to cracked corn, one part, by measure, whole wheat two parts, and pinhead oats one part, always putting it in

the litter to make them work for it. This I feed morning and night. At noon I give them a moist mash, consisting of (by measure) one part corn meal, two parts wheat bran and one part ground oats.

Since adopting this method of brooding and feeding my chicks have not only developed in size, but have made the best of layers and breeders.

WM. H. THOMPSON.

Pennsylvania.

"OCULUM."

The H. I. Co., Salem, Va., have a novel method of demonstrating the exceeding merit of "Oculum." They buy sick turkeys, ducks and chickens, cure them with "Oculum" and resell them. There's no "fake" in this method. They buy fowls with cholera, roup, sore head, gapes and leg weakness. In white diarrhoea, canker, black-head, their ad in this issue on page 256 they offer to send for a dime either a 50c or \$1.00 bottle to any one on trial.

Try "Oculum" and you will be agreeably disappointed with results.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, do not neglect to renew and do us the further favor of getting someone else to send in a subscription with you. Our special offer of three subscription for one dollar is one which it will be to your advantage to investigate.

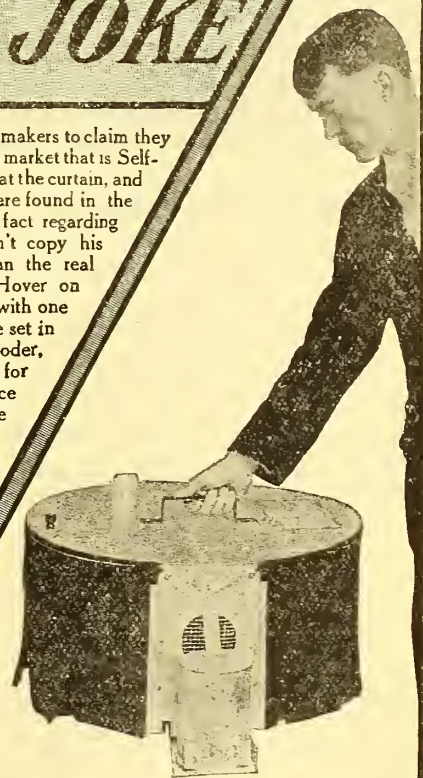
A BIG JOKE

It's a big joke on the other Hover makers to claim they have the only Portable Hover on the market that is Self-ventilating and Self-regulating. Warmest at the curtain, and a lot of other claims, when these features are found in the Ideal Portable Hover. Another indisputable fact regarding this Hover is its Originality, the inventor didn't copy his neighbor and then try to make a bigger noise than the real owner. The Ideal is next to the oldest Portable Hover on the market. It's the first one that could be picked up with one hand and carried any place with lamp burning. It can be set in any room suitable for brooding young chicks. Use it in a Brooder, Colonyhouse or Layinghouse, sets on level floor with no bridge for chicks to climb. The Double Drum Hot Air Heater will produce 15% more heat from the same amount of oil than a Hover using a single Drum Heater. This makes it a great Hover for Winter use. Our Automatic Lamp was especially designed for a Portable Hover; the oilfont is on the outside of the lamp box, feeding cool oil to the wick and just enough to keep it covered at all times, this makes it possible to place the burner close to the floor allowing the use of a tall chimney with a large airburning space around the lamp flame and still this chimney is not pushed up into the Heater to become overheated and cause trouble. This Lamp will never cause trouble by smoking. The Hover is all metal, but the double curtain is 24 inches in diameter, and will brood 100 chicks, and it is the lowest priced machine on the market. We have a Special Offer for you this month.

Used on Ohio State Farm. 17 Ideal Hovers were used on the State Farm at Dayton, Ohio, last season with wonderful results, the picture in this advertisement shows two Ideal Hovers used in an A shaped hoghouse on that Farm.

Queen Incubator and Ideal Hover. We sell the Queen Incubator, which we consider the best low priced machine on the market, and we make you a Special Combination Price on this and the Ideal Hover. We want you to write us at once for circulars of our Hover, Incubator, Oatsprouter, and Poultry Supplies, we will tell you all about our 12 months' course in Practical Poultry Keeping. Free to our customers and if you will mention this paper when writing, we will inclose a copy of "How to raise 90% of your Chicks." Write today. Dealers wanted to handle the Ideal Hover.

New Carlisle Mfg. Co., New Carlisle, Ohio
Successors the Duplex Incubator Co.,



**Pick it up and carry any place
with lamp lit**

WE PAY FREIGHT

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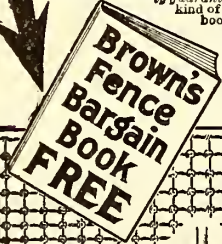
Let us prove to you on highest quality Poultry and Garden Fencing ever made. Genuine Basic Open Hearth Wire. Heavily Double Galvanized by the Brown Special Process, and held together by a tie that can't slip. Brown's Fence doesn't rust or break—it doesn't sag or bag. It is always neat and trim. And our prices are even lower than others ask for cheap, flimsy netting. Get our book and see for yourself.

Sample Free Also

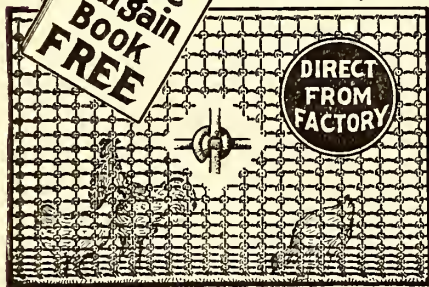
Test it any way you like. Brown's Poultry Fence has top wires No. 9½ gauge—intermediate wires in same big proportion. Bottom wires spaced only one inch apart—absolutely chicken tight—rabbit proof. Only one-half the posts needed—no top or bottom railing necessary. Why pay more for other fence that can't compare with Brown quality?

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The Brown Fence & Wire Co. Dept. 57 Cleveland, Ohio



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Good layers, fine stock, satisfaction guaranteed.

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\$2. for \$1.25

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All for\$1.25

This is one of the best offers ever made to poultry readers. It gives the best practical book on money-making poultry and two poultry papers at a greatly reduced rate. Address.

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GROW BIG, LUSCIOUS STRAWBERRIES
You can raise large crops of delicious berries from a small piece of ground if you start right—with hardy, prolific, carefully grown plants selected from **ALLEN'S TRUE-TO-NAME VARIETIES**. All standard early and late strains for every soil and climate requirement. **WRITE FOR 1914 BERRY BOOK.** Allen's Berry Book is full of valuable information on how to grow berries and small fruits profitably. It lists and describes Strawberries, Blackberries, Raspberries, Grapes, Currants, Asparagus, etc. Copy sent FREE upon request.
W. F. ALLEN, 145 Market St., SALISBURY, MD.



HATCHING.

The first thing needed in hatching is fertile eggs from strong, healthy stock in order to get the best results. I find that eggs from the housed hen do not possess near the vitality that those from the free range hen. The hen that was forced to her utmost capacity of egg production through the whole winter, will not lay an egg possessing near the vitality of those that were on the "strike" the whole winter.

It is the strong egg that is hatched most successfully and the chick therefrom grown with best results. For my part I prefer clean eggs that were never washed, from about three to five days old, well shaped, not all together round nor too pointed at one end. If you intend to hatch with the hen secure all strong shell eggs. Of course it is best to use good shelled eggs all around, but the hen is apt to break a weak shelled egg before the incubator.

For my part I prefer the incubator far ahead of the hen. It quite frequently happens that "biddy" gets tired hatching and sometimes unnoticed she will leave her nest, with eggs to take care of themselves. Hence no chicks out of that hatch.

However, this can be prevented sometimes by keeping her clean from mites, which is one of the most essential things in hatching with the hen. But this will not always prevent their leaving the nest, as some hens simply get tired hatching and off they go. The heavy breeds like the Rocks, Rhode Island Reds, etc., make the best sitters.

With the incubator you will not experience this trouble, but naturally you will want to keep on the lookout or attend to your machine. However, the work is more consolidated; with a 140-egg machine you have the work of about ten hens at one place. Next you will want a machine with a good regulator, one that you can depend upon that will regulate properly. This you can ascertain by watching your first hatch closely. For my part, I prefer the hot water machine; others prefer hot air, so that part is a matter of opinion like in all other machinery.

Start turning the second day, turn every day up to the eighteenth day, being careful not to handle the eggs too roughly in turning, as one will be liable to hatch crippled "neeps" when eggs are turned too roughly. Take out all unfertile eggs, as they only cause extra work in turning the eggs. This may be done about the seventh day. It may be done sooner or later as the operator desires. The machine should be placed in a room where the temperature is the most uniform. A room that is hot in day time and cold at night will require a little more atten-

tion of the machine on the part of regulating the heat. Make sure that there is oil in your lamp at all times and keep your wick well trimmed. Next when the hatch is coming off keep your machine closed up, as opening the egg chamber at that time is liable to cause a chill, thus killing a lot of your "downy" little fellows in the shell just as they are ready to step out.

It is conceded the best plan to let them remain in the nursery until they are ready for feed, which may be given when from thirty-six to forty-eight hours old. **J. E. R.**

East Berlin, Pa.

THE KIND OF INCUBATOR YOU WANT.

If you haven't an incubator, you are behind the times. In these days you must beat the hen to get profits. An incubator spells speed and efficiency and in the race of competition, old mother hen is left behind. She is reliable, all right, but she is too slow.

Old hen doesn't get broody until May or June and you want winter hatches if you are going to make money in the poultry business. A hen will hatch about twelve chicks, but a good incubator will hatch anywhere from 85 per cent to 100 per cent of the fertile eggs you put into it.

The average poultry breeder doesn't need too large an incubator. He requires either a 70-egg or 150-egg size. For unless one has a large flock of chickens, it takes too long to save up enough eggs for a big machine.

Furthermore, the average poultry breeder doesn't want to invest too much money at the start. The big incubators are expensive. And certainly anyone who is not a large poultry raiser should begin on a small scale.

The natural conclusion is to get a 70-egg or 150-egg incubator, well made, strong, well equipped; one that has had just as much care expended on its construction as the larger machine. It is a mistake for anyone to think that all the care and skill should be put into the large machines, and the little ones made any old way. The 70-egg machine is just as important to the small breeder as the 500-egg machine is to the big fellow.

Let the poultry man be sure of the following points: The machine should be airtight, so as to let no cold in and no heat out. The material should be strong and the leg firm. More than one hatch has been spoiled by wobbly legs. Look at the thermometer, lamp ventilation system, egg trays and egg taster. Get an incubator that stands high enough from the floor so that you don't have to break your neck to look at the thermometer. You want a machine that will allow you to look into it without getting down on your knees.

It is safer to buy a machine like the Reliance, a machine with a guarantee behind it, than one that hasn't. You are entitled to all you can get for your money. You don't want to pay more than you have to, nor more than the machine is worth. Nor pay for wasteful methods of manufacture or excessive selling and advertising costs.

The Reliance Incubators at \$5.75 and \$3.90 will come more to meeting your ideal both in results and in price. Either price machine will satisfy all your requirements and insure your success. This concern is located at Freeport, Ill., and also manufacture bargain Grain Sprouters and Brooders. When writing for literature, address Reliance Incubator Co., Dept. E, Freeport, Ill., and mention this paper.

FIRELESS BROODERS.

Many people in buying fireless brooders imagine that they are capable of raising the chicks as successfully as the heated brooders in cold weather. This may be all right if the brooder is run in a heated room.

I read so much about the success of fireless brooders that I determined to use one in the same way as I would a heated brooder. I started my incubator early in March and hatched a good percentage of the eggs.

A finer lot of chicks never lived. I then took them out of the incubator and put them in the fireless brooder, which had been previously warmed by the stove. The brooder was then placed out in the brooder house, of course, and this was not heated.

I took very good care of the chicks, but after the first day some started to become listless and on the third day I lost a few; by the fourth day most of the flock had a diarrhea. Within about ten days the entire flock was dead. I then decided that fireless brooders did not answer the purpose for raising early chicks in a brooder house.

In a week I took off another hatch of 35 chicks and this time kept the brooder in an attic room heated to 70 degrees. This brood succeeded pretty well and in the early part of June were placed out of doors. In the summer I had very good luck with the chicks raised in fireless brooders outside.

For anyone who wants to raise early chicks I would advise heated brooders, hot water or hot air, are pretty good.

If they are to be raised on a large scale hovers will be found very satisfactory. I certainly have had better results with heated brooders, and I think that these come closer to nature's way.

For anyone who raises chickens on a small scale, a good big dry goods box covered with some roofing paper is very satisfactory. On one side the brooder can be placed and the other side can be the exercise room. The box should be partitioned down about half way and a piece of felt can be tacked on to cover the lower half.

The felt should have slits cut about one inch apart, so that the chicks can pass through easily. Then take sand and cover the floor with a layer about one inch thick. This should then be covered with cedar shavings or finely cut alfalfa one-half to one inch thick. I have used finely cut alfalfa and clover and have not any fault to find with these.

Always remember that the brooder is just as important as the incubator, because the number of chicks you hatch will not gain you any profit if you can not keep them warm and happy and bring them to a marketable age.

As I think a few words about the proper feed for chicks may be in order. I will give below the system of feeding which I use for the first days: The chicks should not be fed until they are 24 to 36 hours old. Feeding before 24 hours leads to bowel trouble and

Help Your Hens Molt

Help them
get over it quickly—
help them lay while molting
—make them more profitable to
you and save yourself time and ex-
pense by feeding—Pearl Grit.

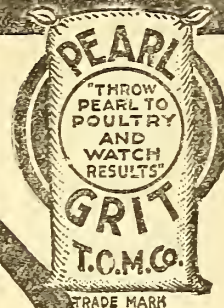
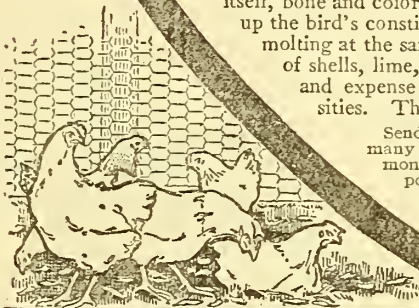
It's a double purpose grit. It does all other grits will do and more too. It is clean, white, hard and sharp. It thoroughly grinds the bird's food and aids digestion.

Pearl Grit

is rich in egg and strength producing materials. Furnishes lime for shells, sulphur and carbohydrates for the egg itself, bone and color for beautiful plumage and builds up the bird's constitution so it can withstand laying and molting at the same time. Pearl Grit takes the place of shells, lime, magnesium, etc. It saves you time and expense in furnishing these egg-making-necessities. There's no other grit like it.

Send for free valuable booklet telling how to cure many common diseases among poultry with common remedies. Most valuable, most beautiful poultry booklet ever issued. Also tells the story of Pearl Grit.

The Ohio Marble Co.
13 S. Cleveland St.
Piqua, Ohio



often death. Nature has provided the chick with food for at least 24 hours by the absorption of the yolk into the chick's abdomen just previous to hatching, and it is absolutely necessary that this is digested before any food is given. For the first meal a hard boiled egg chopped fine, shell and all, mixed with three times its amount of stale bread crumbs. Stale bread soaked in milk or skim milk is also very good. After soaking, the milk must be squeezed out until the bread crumbles easily and when the chicks are a few days old you should begin to feed a little grain. There are many good prepared chick feeds on the market. You can also scatter pinhead oatmeal or rice in the litter.

New York. ANTON SMITH.

PRODUCTIVE POULTRY HUSBANDRY.

The above is the title of a new book just received from the J. B. Lippincott Company. It is by Harry B. Lewis, poultry husbandman of the New Jersey agricultural college and contains 536 pages, 8vo. There are 329 illustrations in all, covering all phases of the poultry business, including houses, fixtures, incubating and brooding, marketing, advertising, judging, diseases and many other subjects not included in the lower priced books. The price of the book is two dollars net, and orders for copies of it may be sent to the Poultry Keeper office.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

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The best book on poultry ever published, one which embraces every branch of the poultry business, is Success With Poultry. From the first chapter, "How to Get Started," to the different chapters on every phase of poultry for profit, this is a book that is of greater value than any other ever published.

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POULTRY GROWERS**
\$1,000.00
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BUFFALO, N. Y., U. S. A.

It's come—the Poultry Raiser's Harvest Time—the time when biggest sales, richest profits, knock at the door of every poultry grower. Poultry and eggs are in highest demand everywhere—all that can be supplied—at top prices. It's a nation-wide demand, fixed—one that will continue for years.

The enormous shortage of beef cattle, of sheep and swine, that *must* be faced this year and for years to come has skyrocketed meat prices and, *more than that*, the demand is *far ahead* of the supply. There's just one direction for people to turn in this emergency—AND THAT'S TOWARD POULTRY AND EGGS.

Please grasp the *bigness* of this wonderful chance. Then ask yourself, straight *self-to-self*—“Am I going to fail utterly or to have miserable setbacks in meeting this splendid money-making opportunity?” “Am I going to handicap myself with *poor tools*, when *real* incubators and brooders and other poultry equipment will insure my getting on the market early with the choicest poultry meat—the biggest egg production?” “Am I going to *fail* to *meet up* with this unequalled opportunity?”

Now, *if ever*, you want to give this business your *best efforts*. You want to give yourself a fair, square chance to prosper by using *only* poultry equipment of *proved* reliability—by relying on the name that stands *first* in the service of the most successful large scale poultry raisers—the World's Standard—



CYPHERS Quality Proved by Big Continuous Hatches

Mrs. R. H. Pote, R. F. D. 3, San Diego, Cal.—“I have four Standard Cyphers Incubators—three 390-egg and one 244-egg capacity. For my first hatch I set 400 eggs in a large machine, tested out 53 as infertile, leaving 322 eggs, and got 333 fine, strong chicks. In another machine I set 440 eggs, tested out 38, and got 372 chicks. In the other large machine I set 400 eggs, tested out 60, and got 306 chicks. In the 244-egg machine I set 260 eggs, tested out 31, and hatched 200 chicks. Remember, these were all my first hatches, and I had never run an incubator before. From the 390 egg machines I have never had less than 300 chicks. I find the Cyphers very easy to run and regulate and I had no trouble whatever with them.”—June 23, 1913.

Illside Farm, Joseph S. Roe, Breeder of White Wyandottes, Silver Campines, Houdans, White Leghorns and Ornamental Bantams, Lafayette, N. J.—“I have been operating two 244-egg, one 144-egg and one 70-egg Standard Cyphers Incubators, all of which have given splendid satisfaction. Here are some of my recent hatches, good average results from tested eggs: 160 eggs, 145 chicks; 162 eggs, 147 chicks; 82 eggs, 79 chicks; 157 eggs, 146 chicks; 175 eggs, 167 chicks. From personal experience I have found that there is no incubator that will hatch as many strong, livable chicks from a given number of fertile eggs as will the Cyphers.”—July 24, 1913.

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Don't start out with *small ideas* during this great poultry money-making period. Time is too precious to experiment. Don't buy an incubator you have to coax and cuddle and stay up nights with! Remember Cyphers is Standard wherever incubators are known. Remember Cyphers Company products are the right tools—the proved tools, safe and dependable. Let us help you win the *fullest* measure of real success.

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We want to *help all poultry raisers*—we want them to have the benefit of our knowledge and experience whether or not they are Cyphers customers.

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More Poultry Money

Because we are far-sighted enough to realize that every step that advances the poultry industry—advances *our* interests in the long run.

That's why we've a big Free Correspondence Department in charge of Poultry Experts. We *gladly* answer in detail, give experiences and advice to *anyone* anywhere who writes us for poultry counsel. No charge whatever.

Our Free Bulletin Service preserves in permanent form, for the benefit of our customers, the experiences and facts developed at the Cyphers Company's \$75,000 Experiment and Demonstration Farm. *Any* reader of this paper is entitled to a choice of *any three* of the Bulletins listed below. Simply write to our home office, Buffalo, N. Y., for the numbers you want, or have your name listed to receive the entire set.

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Tells how to successfully brood and rear chicks—how to insure the highest percentage of life and vitality. Every poultry man and woman should possess a copy of this valuable book. Write *today*. Book mailed FREE of all charges.

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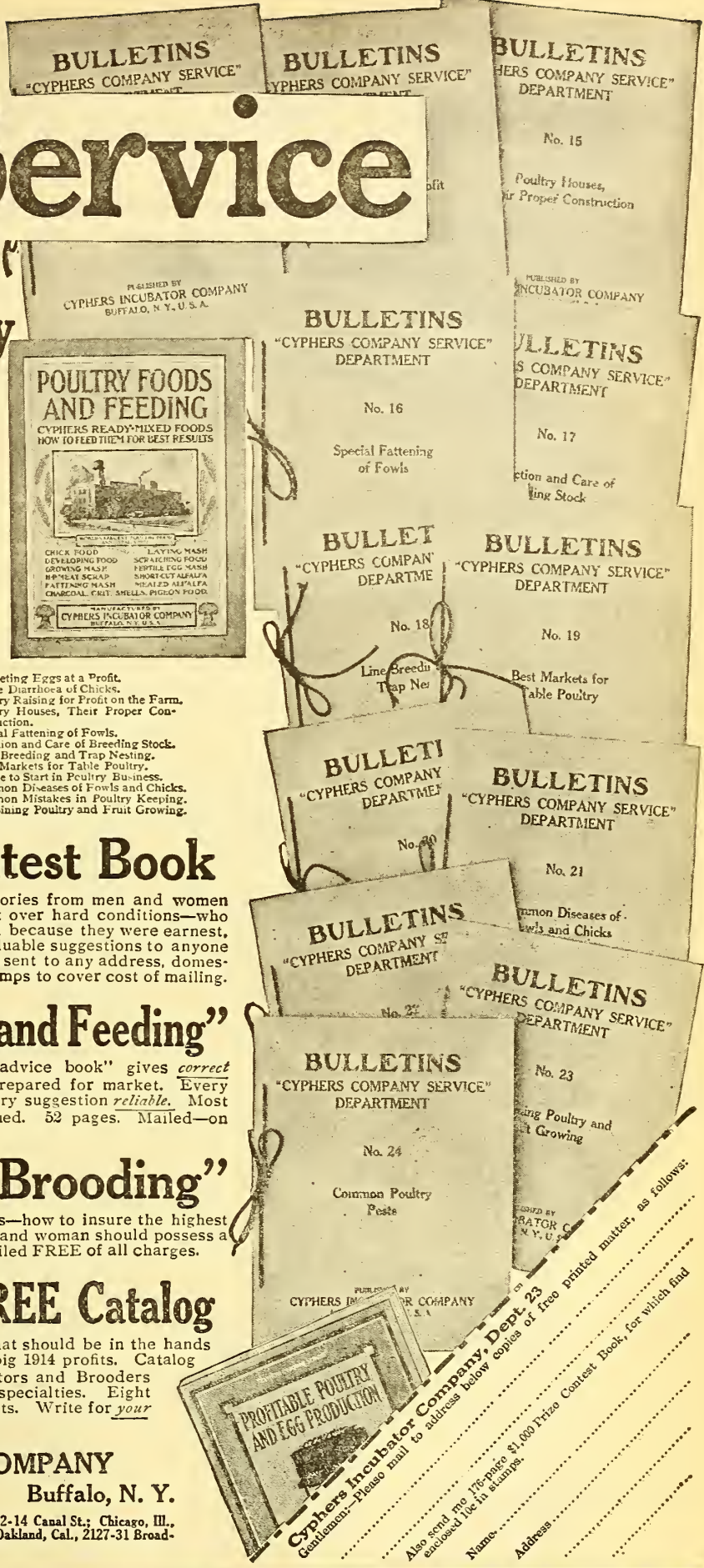
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Send your name and address to the following address: **Cyphers Incubator Company, Dept. 23**, Buffalo, N. Y. Please mail to address below copies of free printed matter, as follows:

Also send me 17c piece enclosed in stamps.

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SHOWS WHICH HEN LAID THE EGG. No Watching! No Freight!

PLANS TRAPS, RECORD SHEETS.



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GETTING THE PULLETS TO LAYING.

By L. E. Keyser.

We all want winter eggs and it is time even the latest hatched pullets were laying. Some, however, have not reached this stage because they have not matured as they should. Many people raise a nice bunch of pullets but fail to get eggs from them during the early part of the winter. This is mainly because the pullets have not been grown right. When they are fully ripe for the work when winter sets in we can practically control winter egg production up to the capacity of the pullets. The method of feeding maturing pullets has a very marked effect on their development. Whether we feed a dry or a moist mash has an influence, though I cannot see why it should. The fact that we add a little water to the same feeds should not make any difference. Water adds to or takes nothing from the nutritive properties in the feed, and if the pullets are fed all they want it does not seem as though it would make any difference whether the mash is wet or dry, but it does.

Pullets fed a dry mash from a hopper mature more uniformly and come to laying quicker than those fed a moist mash of the same ingredients at stated intervals. At least, that was the case with my pullets this fall. To a pen nearer the house I fed a moist mash and to those farther away I fed the same ingredients dry from a hopper. The reason I fed a moist mash to the one lot of pullets was because I had no hoppers in this pen and thought perhaps they might come on a little quicker if the mash were moist, but this was not the case. The pullets fed a dry mash commenced laying fully a month earlier than those fed a wet mash. Not all of them for the first egg came from the wet mash pen, but the majority of hens in the dry mash pen were laying before I received more than one egg per day from the wet mash pen. All the pullets in both pens were hatched at the same time and were apparently equals when divided at about three months of age.

One pullet in the wet mash pen laid early in September, and it was late in the month before I began to receive eggs from the dry mash pen, but when they began to come they came in appreciable numbers and up to November 1 they had laid more than three times as many as those in the wet mash pen, though both pens contained the same number of birds.

Now, I do not claim that this great difference is due solely to the fact that the mash was dry, but rather to

pullets in the pen got all they wanted uniformly. In the wet mash pen the weak ones did not get what they wanted, so did not develop as fast or as fully as they should, while the stronger ones ate more than was good for them, and their growth and development were likewise retarded.

To secure early winter eggs we must properly develop the pullets. It is just as important that they be fed right during the period of growth as it is that they be fed an egg producing ration after they reach maturity, and here is where the hopper-fed pullets had the advantage. They all ate just what they wanted and matured uniformly. When one was ready to lay the others were. It was not more than ten days after I received the first egg before I was receiving the average egg yield.

I think much of this difference which was laid to strain and individual trait is due to the fact that all pullets in a pen do not receive the same nourishment, consequently do not make the same growth toward laying maturity. Of course, there is a difference in pullets, but why some pullets of the same breed, strain and hatch require six to eight months before coming to laying, while others will reach this stage in five months seems to indicate something more than mere individual difference.

When hatched in the spring, before June 1, I have always felt reasonably sure of securing eggs from my pullets in 150 days. Not one or two eggs, but at least 75 per cent of the pullets will be laying. In this I have seldom been disappointed, and I believe that it has been largely due to the fact that I rear my chicks in small flocks, and that the pullets have equal chance. Then I have not used as breeders those which were late in coming to laying, and unless the pullets are exceptionally well developed I discard those which commence laying much under five months of age.

Uniform development is a most desirable trait. It is a satisfaction to know when you take off a hatch just when you can depend on receiving eggs from the pullets in that hatch. I think hopper feeding has helped us to solve the problem of uniform maturity. It will also allow us to run our hens and that some will not mature properly on account of not getting their share of the feed. That is one argument against large flocks of chicks and hens, we could not so feed them that all would get their share, and there would be a large number of stunted chicks and poor laying hens if we kept a large number together. Hopper feeding has

solved this problem.

The result of my experiments this season has taught me a lesson, and never again will I raise chicks or grow pullets without keeping feed before them all the time. A good dry mash in a hopper will compensate for what the birds fail to get from the litter. I know I can grow better chicks because there will be none over or under fed. All have an equal chance and get just what they require.

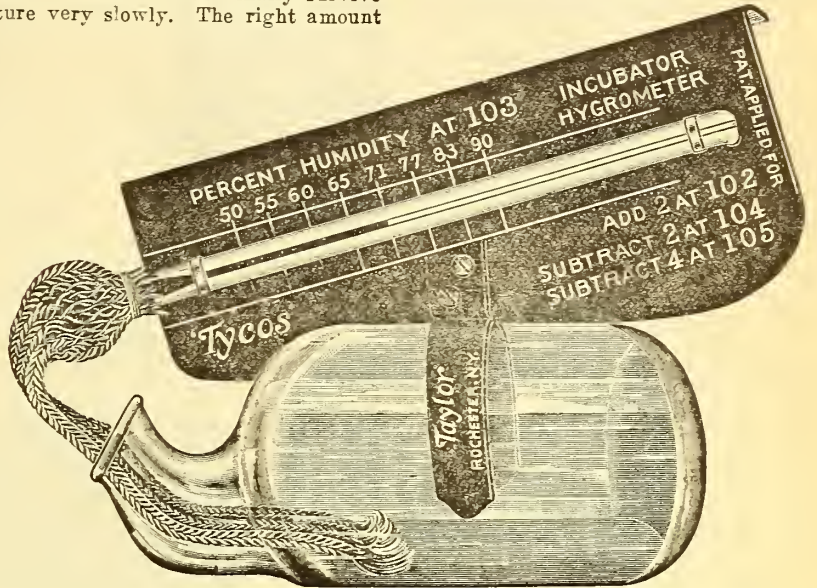
It is the same with hens. How else can we feed five hundred hens in one flock? If we attempt to feed this number a moist mash from a trough there will be such a mobbing that not half of them will get what they require, no matter how careful the feeder may be or how large the quantity of feed. Success with large flocks means hopper feeding of a mash, at least. We can scatter grain enough to keep them busy. So far I have not come to a belief in hopper feeding grain except to growing pullets.

HOW TO SOLVE THE MOISTURE PROBLEM.

One of the most perplexing problems of the incubator operator is how much moisture—if any at all—should be placed in the egg-chamber during incubation. Unless one has some accurate instrument for determining the varying conditions of the egg-chamber from day to day, there is great danger of supplying too much or too little moisture. This results in many drowned

or suffocated chicks in the shell, or chicks hatched with weak, crooked legs. A large percentage of the chicks from such a hatch are stunted and they are always more susceptible to disease. Those that do finally survive mature very slowly. The right amount

This instrument indicates accurately the amount of moisture in the egg-chambers so you may correctly regulate the supply. Every operator of an incubator should have one or more "Tycos" hygrometers.



of moisture in the egg-chamber of your incubator means bigger hatches of strong, lively chicks with hardy constitutions.

If you would determine the actual moisture requirements in your hatcher use a "Tycos" incubator hygrometer.

W. J. Campbell, the Single Comb White Leghorn breeder, West Greenwood Poultry Yards, Nashville, Tenn., says:

"The 'Tycos' hygrometer has proven entirely satisfactory and I don't

(Continued on page 374.)

Keep More Healthy Birds

Make Less Work—More Profits

If you believe that healthy birds in your poultry yard make wealth in your bank book—insist upon having Kentuco Ware. You can raise *more* birds—keep them *healthier*—and save money on feed with

KENTUCO Poultry Ware

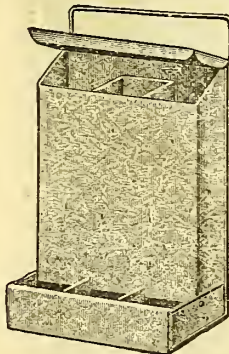
We have experimented repeatedly to get these results for you. For example, study the Kentuco Grit or Food Box illustrated here. We made and discarded no less than 15 different styles before this style was accepted. Now, we know of no other feed box in the world that can equal its service. Food or grit cannot clog in the reservoir—it cannot be wasted or polluted in the tray—you cannot pull box apart.

Kentuco Fountains are galvanized *after* they are made. That's why they are *entirely* rust-proof.

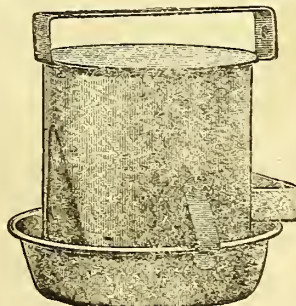
Ask your dealer for Kentuco articles. Their prices are no higher than those asked for most poultry ware, yet benefits of service are incomparable.

Write us for the big folder which tells the real facts about poultry ware. Also ask for the Kentuco Jar Fountain—free. Address

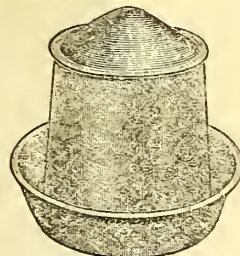
Kentucky Stamping Co.
110 N. 15th St. Louisville, Ky.



Kentuco Grit or Food Box
Prevents birds from wasting feed—there is always feed in the tray.



Kentuco Sanitary Wall Fountain
Can be taken apart and cleaned with a brush. No other fountain in the world like it.

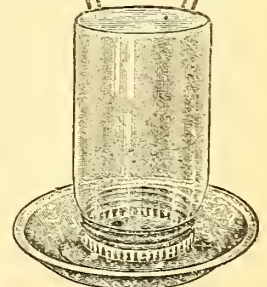


Kentuco Two Piece Fountain
Absolutely rust-proof. Cone top keeps birds from perching on it and polluting water in the tray.

This Fountain Given Away

Kentuco Jar Fountain

If you will pay the postage and packing, we will send you this metal base for this handy jar fountain free. This is just to let you know more about the Kentuco Poultry Ware. Send eight cents in stamps.

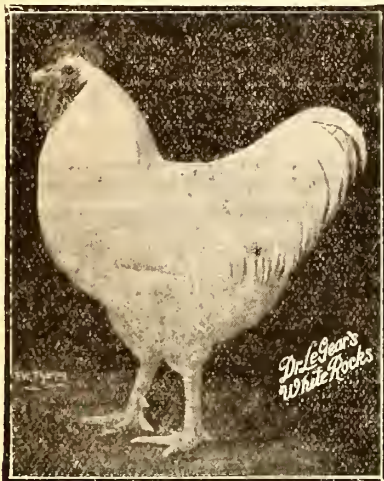


MORE EGGS, MORE MONEY
 Feed **CRYS-CO.**
 A purified shell grit (cubical) guaranteed
 99% Pure Carbonate of Lime.
 Need no oyster shells or other grit, better results, less cost. Fine
 for little chicks. Highest endorsements. Write for booklet.
 W. A. REBERTZ, A. O. P., St. Louis, Mo.

WHITE ROCKS THAT WIN THIS TIME GREATER THAN EVER.

Dr. LeGear's White Rocks just made another record winning at two big shows at the same time. We had a separate and complete string of our famous White Plymouth Rocks at each of the two big poultry shows held in St. Louis at the same time, November 24 to 30, 1913. Any one familiar with showing birds at big shows, will readily understand what it means to be able to select two strings of high class show birds at one time from one flock. No other White Rock exhibitor showed his birds at but one of the below named shows, therefore, we had to put half of our "strength" against all competitors "full strength." With all these disadvantages, and in strong competition Dr. LeGear's White Rocks won more ribbons than all competitors combined.

At the great St Louis Coliseum Poultry Show we entered 25 birds and



First Prize White Rock Cock at the Great Coliseum Show, St. Louis, Mo., Nov., 1913. Bred and owned by Dr. L. D. LeGear, St. Louis, Mo. Farm Kirkwood, Mo.

won 1st, 2nd and 3rd cock; 1st, 2nd and 5th cockerel; 1st hen; 2nd and 3rd pullet; 1st and 2nd pen Also cash special for best display, and cash specials for champion male and champion female.

At the St. Louis Poultry, Pigeon & Pet Stock Association Show we entered 21 birds and won 1st and 2nd cock; 2nd and 3rd cockerel; 2nd and 3rd hen; 1st and 4th pullet; and 1st pen. Also special prize for best display and the Useful Poultry Journal's silver cup for the champion female.

Every bird we showed or own is absolutely our own raising. We have on hand several hundred as good White Rocks as ever grew on one poultry plant during one season. We hatch eggs only from our best pens, consequently our quality is the best. Dr. LeGear's poultry remedies are used exclusively and constantly on Dr.

Regal Catalogue is Ready

I have just received from the printer my new Catalogue and Mating List for 1914. It is illustrated from cover to cover with photographs of my famous winners and snapshots- of my breeding pens and plant. It has a number of articles on feeding and rearing chicks, also on the score of breeding stock. It also has a description of my matings for 1914. If you will send me your name I will forward you a copy free of charge.



1500 Cocks, Hens, Cockerels and Pullets for sale 1500

SPECIAL—100 Exhibition Cockerels and 200 beautiful Pullets ready to now win the blue ribbon for you. 100 well matured Cockerels from my heavy laying Dorcas line, \$10, \$15, \$20 and \$25 each. Dorcas Pullets, \$5, \$8 and \$10 each. Stay White utility Cockerels, \$3 and \$5 each

John S. Martin

Box 408.

PORT DOVER, CANADA.

Acme Incubator Lamp Wick



NEVER
 MELTS
 DOES NOT
 BURN OR
 CRACK

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Practically indestructible. Keep lamps well filled with oil and wicks do not need trimming, running uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and risk keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two, 15-16 inch wide; or Number three, 11-12 inch wide. Price, ten cents each. Special rate made on large lots. For your Lamp. Address.

Poultry Keeper Publishing Company, Quincy, Illinois



Lady "Ideal." First Prize White Rock Hen and Champion Sweepstakes bird at the Missouri State Fair, Sedalia, Mo., 1913. Bred and owned by Dr. L.D. LeGear, St. Louis, Mo. Farm at Kirkwood, Mo.

LeGear's White Rock farm, consequently disease is almost unknown, and the birds are all vigorous, healthy and beautiful.

Bred and owned by
DR. L. D. LeGEAR,
713 Howard St, St. Louis, Mo.
Farm at Kirkwood, Mo.

SHOWING OF A HOME FLOCK.

Editor, Poultry Keeper:—

Noticing your request for egg records and experiences, I am sending you the following:

I commenced keeping hens three years ago for the sole purpose of securing fresh eggs instead of having to buy bad eggs in the spring and summer, and storage eggs in the winter. I am certainly glad that I started, for I have not been without fresh eggs a single time.

I have paid out since starting \$216.75. This is for houses, fences, coops, stock, feed, etc., and includes \$27.00 for cockerel purchased last spring.

Used in the kitchen and sold stock and eggs to the amount of \$237.00. I have on hand as follows, not at cost, but what they would bring if sold in a bunch:

2 hen houses, coops, fencing, etc.	\$40.00
25 bushels kaffir	25.00
200 lbs. corn chop	3.10
500 lbs. wheat	7.50
500 lbs. bran	3.30
10 bushels oats	5.00
90 lbs. grit	.90
50 lbs. bone meal	1.00
50 lbs. beef scraps	1.50
Bone cutter	10.00
2 cocks (1 cost \$27.00)	2.00
8 cockerels	8.90
15 hens	15.00
25 pullets	25.00

Total on hand, \$147.30, plus \$237.00 equals \$384.30, less \$216.75 amount paid out, leaves a profit of \$167.55. This is an average of \$3.72 per hen per year.

From December 1, 1912, to December 1, 1913, I gathered 2970 eggs, which averages 198 eggs per hen per year.

I feed as follows: In the morning wheat is scattered in straw about 12 inches deep. At noon, sprouted oats, and about thirty minutes before roosting time I feed all the kaffir corn they will eat. I keep grit, shell, and dry mash before them at all times. The mash is composed of seven parts bran, two parts corn chop, and one part beef scraps. I feed fresh cut bone twice a week.

I sprout oats in the basement in a sprouter I made. I have five trays made from 26 gauge galvanized iron 30 inches long, 14 inches wide, 3 inches deep with the bottoms perforated with 1-16x1 inch slots about 1 inch apart each way.

I have a rack to hold the trays about 6 inches apart, one above another. Under the bottom tray is a pan, the bottom of which slopes to a hole in the center. I pour water in the top tray and it soaks down through all the trays and runs into pail under center of bottom. Every third day I fill a tray with oats and feed about one-third tray each day. In this way the oats

stay in the sprouter about two weeks, and in this time the sprouts will be 2 inches long.

I was down to the Mt. Grove, Mo., experiment station one day last July. They are certainly fixed up fine for the poultry business. It was a day well spent, as there is lots of valuable information that may be gained by going through the plant.

I raise only S. C. Buff Orpingtons, as I think they are the best all around breed, and do well in close confinement.

My stock are first class show birds as well as good layers. I raised one

pullet that scores 94½, and took fifth out of sixty entries at the Kansas State Poultry Exhibition last January. I have no birds that scored less than 92½.
GEO. W. MARTIN.
Kansas.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this journal is published, namely, "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

Certainty in Chick Raising



New Automatic Regulator

You get it only in the Mandy Lee Incubator, the machine which does not leave you to guess or experiment, but is operated by plain, simple rules.

Mandy Lee Incubator

One scientific incubating principle distinguishes the Mandy Lee from all other incubators:

The Mandy Lee not only employs heat, moisture and ventilation, as other incubators do, but it recognizes a certain definite relation of the incubating requisites to each other. It ascertains the amounts with certainty. It regulates and adapts heat, moisture and fresh air to each other, creating the ideal hatching condition.

Everything Completely Automatic

The Mandy Lee maintains true hatching conditions like human intelligence—day and night, while you work or sleep. Mandy Lee is the incubator of certainty. Even a beginner cannot go wrong. Convenient sizes, 60 to 300 capacity. Write for latest book explaining the great new scientific features.

GEO. H. LEE CO., 937 Harney Street, Omaha, Neb.



Our Big Dollar Offers

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HERE ARE 12 DIFFERENT CLUBS. ANY ONE SENT TO YOUR ADDRESS FOR \$1.00.

Poultry Keeper .. . \$.50	Poultry Keeper .. . \$.50	Poultry Keeper .. . \$.50
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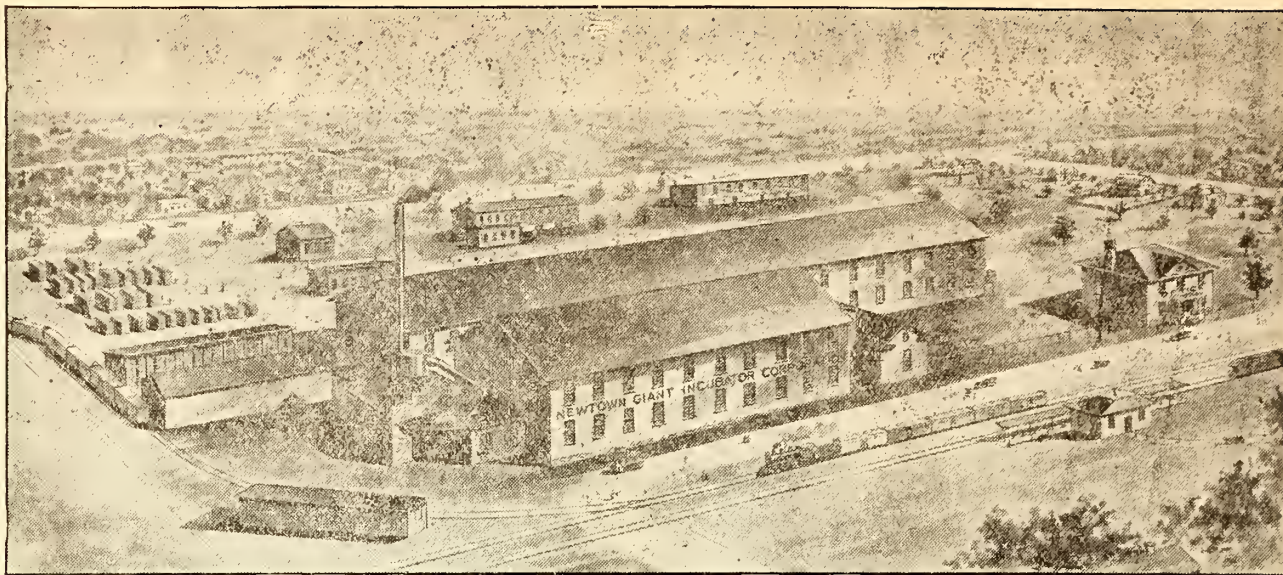
Poultry Keeper Publishing Co., Quincy, Ill.: Enclosed find \$1.00 for which send the following publications for one year to the address below:

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TYCOS HYGROMETERS.

(Continued from page 371.)

see how any one can run an incubator without it. The difference in the number of chicks in one hatch will more than pay for it.

"It solves the moisture question, which is the main cause of so many chicks dying in the shell. Any time I can recommend either the "Tyco's" thermometer or hygrometer, will be only too glad to do so"

Another breeder, Mr. A. M. Becker, the Single Comb White Orpington specialist, of Atlanta, N. Y., says:

"I would not take a great deal for my "Tyco's" hygrometers. They give me at least 25 per cent better hatches of larger and stronger chicks."

The "Tyco's" hygrometer is made by the Taylor Instrument Companies, Rochester, N. Y., manufacturers of the well-known line of "Tyco's" incubator thermometer and hygrometers. Their free book, "Thermometer Facts Worth Knowing," gives full description of "Tyco's" hygrometers and thermometers and tells how they are made. It will be sent free to any reader who will mention "Poultry Keeper." We suggest that you write for a copy of this valuable little booklet today.

We have had considerable demand in the past for egg record blanks. The subject of trap-nesting is so important and the matter of weeding out unprofitable birds so well understood now, that we have issued some egg record blanks, which we will offer as a premium in connection with a year's subscription to Poultry Keeper at fifty cents a year, we to send, post-paid, twelve egg record cards, without additional charge. This offer is good on new subscriptions, or on renewals.

If you are interested in advertising send for a copy of our rate card which shows our charges for what is termed "display advertising." We are glad at all times to furnish beginners full particulars about how to reach the trade with stock or eggs. Our classified advertisement in the back part of each issue furnishes an easy way to get started at a low cost.

BIRD'S-EYE VIEW OF THE NEW PLANT OF THE NEWTOWN GIANT INCUBATOR CORPORATION AT HARRISONBURG, VIRGINIA.

We have pleasure in laying before our readers a bird's-eye view of the new home of an old friend.

For a number of years, the Newtown Giant Incubator with which readers of our advertising columns have grown familiar, has been manufactured at Newtown, Pa., near the city of Philadelphia. The machine was perfected and patented by the Newtown Producing Company, by whom it has been manufactured all these years. Recently, however, with the introduction of many most valuable improvements came a reorganization of the company. New capital went into the enterprise, a new name was adopted, and, last but not least, a new and more advantageous manufacturing location was secured.

The fact that the business of the Newtown Producing Company has developed in such a phenomenal way that it has outgrown its Newtown quarters. It was a case of move or build a new plant. With this problem before them, the management began to consider also the securing of better advantages in the way of raw materials.

The solution of all problems was most happily found in the location at Harrisonburg, in the Shenandoah valley in Virginia, and the plant as it now appears above is the completed and permanent home of the Newtown Giant Incubator Corporation by which name the company is known.

The management claims that in its new location the Giant Incubator Corporation has the largest and most complete manufacturing establishment in the country. It is understood that the citizens of Harrisonburg held out strong inducements to secure the location of the enterprise in their city. Much of the new capital which has gone into the Corporation is located there.

The proprietors are in a happy frame of mind. Great as the business of manufacturing Giant Incubators had become, they look upon it as in reality just beginning. They are starting out at Harrisonburg with renewed energy and enthusiasm. With their new location, new and up-to-date factories, new capital new men and their superior shipping facilities and abundance of labor and excellent lumber right at hand at hand, the business of turning out Giant Incubators and Brooders will go on stronger than ever. The new coal burning Giant Colony Brooder, which has suddenly become so popular, and the Newtown Trap Nests will receive special attention in the new location. The business will likely be extended in other directions. The company already has plans for building portable brooders and hen houses.

Producers can confidently invest in Newtown equipment, because of its proven superiority and the excellent results Newtown Giant

Incubators and Brooding Systems have given thousands of owners, during their many years of use, in all parts of this country and abroad.

They are investing in 1914-Improved Giant Incubators, Brooding Systems and other products with full confidence, because they know the established high Newtown standard and the certainty of worthiness the name Newtown implies; and because they know that every feature of each product has been proven thoroughly practical and efficient on the large poultry plant at Newtown, before being offered to the public.

The poultry and baby chick business and the extensive growing of ginseng, former features of the Newtown Producing Company business will remain at Newtown, Pa., and we understand will be carried on by the old Company.

The Newtown Giant Incubator Corporation extends a cordial invitation to all friends and patrons to visit them at their new home at Harrisonburg, Virginia.



62 Varieties Pure bred Chickens, Ducks, Geese and Turkeys. Northern raised, hardy and fine plumage. Prize winners at the world's largest shows. Lowest prices on stocks and eggs, incubators, brooders and poultry supplies. Large Ills. Catalog for 4c.

C. M. ATWOOD, Box 3 Dundee, Minn.



50 Best Paying Varieties Pure-bred Chickens, Ducks, Geese and Turkeys. Hardy, Northern raised, highest quality. Fowls, Eggs and Incubators AT LOWEST PRICES. Large poultry book of valuable information 4c. Poultry Headquarters.

W. A. WEBER, Box 942 Mankato, Minn.

WE PAY \$80 A MONTH SALARY and furnish rig and all expenses to introduce our guaranteed poultry and stock powders. Address **BIGLER COMPANY, X372 SPRINGFIELD, ILLINOIS**

LAND AND WATER FOWLS, all breeds and varieties. Fine guaranteed stock, reasonable. Special price on show birds. Send for free catalog.

WAITER SEIDEL, Prop. Northwestern Poultry & Fruit Farm, Box K, Eleroy, Ill.



Box 518.

Adjustable clinch — no better poultry bands made. 25 for 20c; 50, 25c; 75, 50c; 100, 65c; 200 \$1.00. No stamps accepted.

FRANK CROSS, Mfr. Montague, Mass.

Money Making Poultry



Our specialty: Leading varieties pure bred chickens, turkeys, ducks and geese. Prize winners. Best stock, and eggs. Lowest prices, oldest farm, 29th year. Fine catalog free.

H. M. JONES CO., Box 150. Des Moines, Ia.

SUCCESS WITH POULTRY

Contains MORE AND BETTER Practical, Reliable Information on the general subject of

Poultry for Profit

Than any other book published. It treats of every branch of Practical Money Making Poultry

And gives the cream of established facts. The book was especially compiled to help those who are about to embark in the poultry business. It is printed on embossed book paper, handsomely illustrated with new half-tones and etchings.

It contains 128 pages (9x12 inches in size) and cover, and is the best poultry book yet published. Contents (briefly stated) are as follows:

HOW TO GET STARTED LEADING STANDARD BREEDS

CHARACTERISTICS OF BREEDS

PRACTICAL POULTRY HOUSES (Plans)

FOWLS: CARE AND FEEDING INCUBATOR CELLARS BROILERS AND BROILER RAISING

CARE OF BROODER CHICKS PEKIN DUCKS FOR PROFIT FOWLS: CARE AND FEEDING MODEL BROODING HOUSES (Plans)

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ARTIFICIAL INCUBATION

5000 DUCKS WITH STANDARD-BRED POULTRY

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CAPONS AND CAPONIZING

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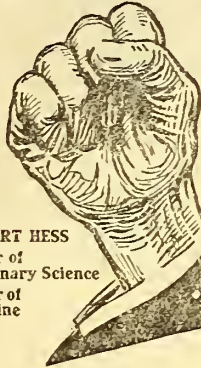
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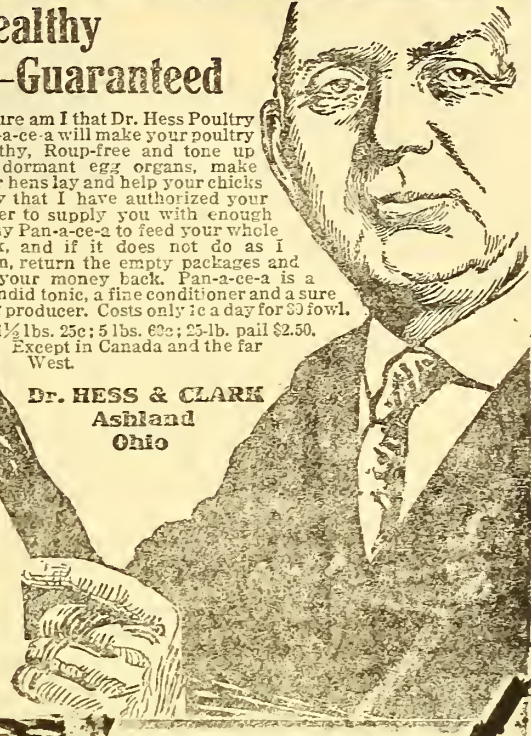
GILBERT HESS
Doctor of
Veterinary Science
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So sure am I that Dr. Hess Poultry Pan-a-ce-a will make your poultry healthy, Roup-free and tone up the dormant egg organs, make your hens lay and help your chicks grow that I have authorized your dealer to supply you with enough of my Pan-a-ce-a to feed your whole flock, and if it does not do as I claim, return the empty packages and get your money back. Pan-a-ce-a is a splendid tonic, a fine conditioner and a sure egg producer. Costs only 1c a day for 30 fowl.

1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50.
Except in Canada and the far West.

Dr. HESS & CLARK
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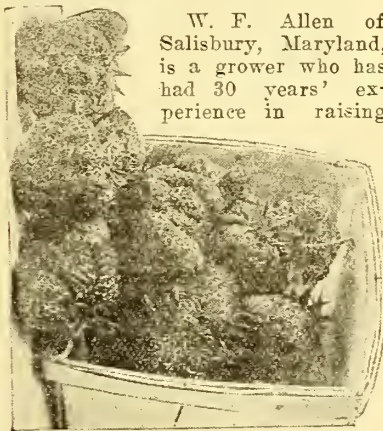
Dr. Hess Poultry PAN-A-CE-A



PLAN NOW FOR THAT STRAWBERRY BED.

Don't neglect to set out a nice bed of strawberry plants this coming spring. A small patch of ground will produce plenty of this delicious fruit for your own table and a good surplus to sell at a fine profit.

It does not require a lot of work to grow big, luscious strawberries if you set out plants selected from healthy, vigorous stock. A few minutes work with the cultivator occasionally will keep a large berry patch free from weeds and make the plants thrive and grow luxuriantly.



W. F. Allen of Salisbury, Maryland, is a grower who has had 30 years' experience in raising

strawberries. He grows true-to-name plants of all standard varieties—early and late strains—and takes special care to ship only healthy, thrifty plants from carefully cultivated, prolific bearing stock. All shipments are correctly packed so the plants will arrive in fresh condition. Mr. Allen has over 120 acres devoted

to growing strawberry plants in his nurseries, besides many acres of blackberries, raspberries, grapes and other small fruits. He has a new 1914 berry book which tells how to plant and cultivate small fruits and which lists and describes the many different varieties he grows. This book is full of valuable information for the farmer, gardener and fruit grower and we advise our readers to write for a copy. Address W. F. Allen, 145 Market St., Salisbury, Maryland, and he will send a copy of this book free.

PREFERS BUFF ORPINGTONS AND PARTRIDGE ROCKS.

We started with 11 Rhode Island Reds a little more than two years ago. A little later, we got a few Buff Orpingtons, I think four and we preferred them to the Reds and raised quite a few. We cannot give the exact number for the first year, but our egg record was 105½ dozen. The next year we had both kinds and our record was 193½ dozen. We decided to get rid of the Reds as our Buff Orpingtons were a better laying strain, but we intended breeding two kinds so we purchased a fine pen of Partridge Plymouth Rocks which are of a fine laying strain and won premiums at our County Fair this fall. Will give the record of 47 birds for 1913. They have laid so far (Nov. 18.) 376 dozen and we expect quite a few more eggs this year, as the pullets are beginning to lay. We have selected this breed for the reason that our customers say that they are the choicest meat and we intend to raise broilers together with day old chicks.

Mrs. M. V. Bowman.

Ohio.

**PROTEIN AND LIME CONTENT
OF POULTRY FOODS—IMPORT-
ANCE OF WHOLESOME
FOOD.**

Continual reading other's opinions causes me to want to butt in occasionally. Hope you won't get disgusted at me.

So much is being said about grit and lime, but there is no distinction being made as to the kind of lime.

Oyster shells are chiefly carbonate of lime and bones are chiefly phosphate of lime. Now here is a pretty broad statement:

"As long as people depend on oyster shells for their 'lime' they are going to have a lot of chicks dead in the shell."

Why? In analyzing bones or flesh of any animal or bird any chemist will tell you he finds no carbonate of lime.

People commonly say their shells are not rotten enough when their birds are penned up because they don't get exercise enough.

Hens on the range get a large amount of phosphate of lime from the insects they obtain, therefore the shell gets some of this, then during incubation a chemical change is taking place in the shell as well as within the egg. This phosphate of lime is being drawn off from the shell and being deposited in the bone frame of the chick, which makes it stronger, the shell less resistant, therefore exclusion is much easier.

Now the question arises with the reader, how are we going to supply this bone ash or phosphate of lime?

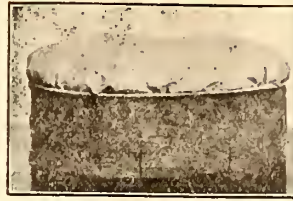
Some people use green cut bone, which, when fed fresh, will make your hens lay a lot of eggs for a while, but my experience is that they get too much protein, which eventually overtaxes their digestion and puts them out of commission. Then a lot of the bone ash is bound up with fiber, so it is unavailable and is voided undigested. So a very common way is to burn the bones. But at that it is guesswork to a certain extent, as different bones have different analysis.

Another thing our pure food commissioners report does not specify in giving the analysis of various food-stuffs, the amount of bone ash and ash other than bone ash.

You must not get it confused. All bone ash is ash, but all ash is not bone ash.

Then, too, our hens do not get enough of this bone ash during molting season. Some writers tell us the feathers are chiefly oil and recommend feeding freely on oil meal during molting. Chemical analysis of feathers show that 90 per cent is bone ash.

In reading bulletins from the various experiment stations you never see any reports from their chemists, on any tests whatever. Many of them just shovel in the protein and say that an egg contains much protein. I wish some of them would try feeding some hens on a ration of which they have noted the constituents for a while then analyze the voidings to see just what has been digested and just



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what has been assimilated, just the same as our bacteriologists do when they want to see how our machinery is working.

This is the only way I can see how we are going to find out just what the food requirements of our fowls are.

I want to relate a little experience of my own before I forget. Last January I bought a hen from E. S. Cole, of Ohio. This hen, he said, last year laid 268 eggs. Was fed all the beef scraps she wanted, one-half ounce of green bone per day, with stimulants, tonics, blood meal, etc., in her mash. From this hen I set 55 eggs last spring and had two chicks hatch. She was in the same pen with another hen that produced 56 chicks from 65 eggs. This shows they were fed right this year and no blame can be laid to the male bird, simply her breeding capacity had been impaired by the excessive feeding of the highly concentrated foods.

I had the pleasure of visiting the Medlothian Farms at Tinley Park this fall, but was disappointed to find that Lady "Showyou" had been devoured by a mink just two days before. I asked her attendant how her vitality and stamina was, and if they had to keep her up on tonics and stimulants. He said, "She was pretty well all in."

Now I think if we would get closer together with our ideas or thoughts rather, instead of everybody springing something new, we would be better off. Just stop and think for a minute and you will agree that there are a lot of right ways. Every poultry publication is full of systems, and they are just a little different. I have been on quite a few poultry farms and it is quite amusing to have them write of what success they are having and how fine their birds look. How much stamina and vitality they have, that their birds have all the vigor possible, then see them when you go to their plants and see for yourself. Hear them explain why this is not right and what's the matter with that.

Let me tell you Mr. Beginner, don't allow your temperature to go too high and get the fever too strongly right at the jump.

A bulletin entitled, "The Role of Inorganic Phosphorus in the Nutrition of Animals," published and given out by the agricultural experiment station of Madison, Wis., put me to thinking more about this bone ash proposition than anything else ever did, and anyone raising stock or poultry should have it (a postal will get it). After reading this over carefully I remembered that one of the first things I learned in school was that the five elements of food were protein, fat, carbohydrates, phosphor-

ous and lime, and remembered that I had never seen the last two mentioned on a bag of feed, then I began to wonder where I could get this.

Now, if these are the five necessary elements of food, how do these people claiming to have a balanced ration so proportion the contents to get out a 100 per cent mixture with the right proportions of each of these five elements without an excess of one or a deficiency in another, and how are they going to prove that they have a balanced ration?

Some will say they have the best balanced ration, others say they have a perfect balanced ration.

In the December number of Poultry Keeper a writer gives a balanced ration for a hundred hens. He also says vegetables and animal protein are not the same. I have talked to many doctors, chemists and druggists regarding this and all say that true protein in animal and vegetable products is the same and has the same effect on the metabolism of the fowl.

I wrote an article last summer in the Poultry Keeper regarding this and want to say that I am as radical as ever on the meat scrap proposition, and will say in conclusion, that if you would obtain the highest degree of profit and pleasure from your fowls, whether your flock be large or small, you must guard against the too common error of improper or guess work feeding, which has started many a poultryman on the backward road, that leads to failure. If the abandoned poultry farms which are offered "For sale cheap" could talk, they would say with one accord, that improper, ignorant and guesswork feeding has been the cause of their abandonment; if the thousands of hens which have failed to produce profitably could speak the human language they would call out with a deafening roar that would impress their feeders: "We can't make eggs out of fiber and convert musty, infected refuse grains and refuse bacteria laden, unhealthy, tainted and spoiled meats, which sicken us and impair our powers of digestion and assimilation, into that highly refined egg."

"Mr. Feeder, you take some of that good 3c meat scraps which you feed us, and which is made from tubercular cattle, condemned horses, dogs, cats, etc., make yourself a nice little meat cake out of it (be careful not to make it too big) fry it nicely, eat it for breakfast, and then for dessert, take a little alfalfa stems steamed in water and eat it out of an old musty, dirty trough, that is scrubbed out about once a month. For dinner make yourself some cakes out of musty corn, burnt wheat, refuse screenings, wild

buckwheat and other weed seeds. Do this a few times, after which you will see to it that you supply us with the components of egg in pure, healthful, digestible sources, and in such correct proportions as to enable us to utilize them.

"Use the same good judgment in supplying us pure and healthful food as you would in supplying yourself, and we will make your poultry business the most profitable branch of agriculture."

I know very well you, reader, want to travel the road which points to success and to make a success of the poultry business as in any other business, you must adopt a system and stick to it, but do some thinking before you adopt this.

One more word about protein feed. When meat starts to decompose it is the turning of nitrogen to ammonia. Do you think ammonia would be very nutritious?

All the chemicals in the world won't make it good enough for you to eat. Then why expect a hen to make a filter out of herself and produce you a wholesome egg?

Remember your finished product depends on your raw material, and if you don't shovel coal you can't keep up steam. A hen can't make eggs out of fresh air and scenery, either, and this is what some farmers expect. Illinois. CHRIS McINTIRE.

PROFIT IN CAPONS.

The wise farmer, looking to profit sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75 we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

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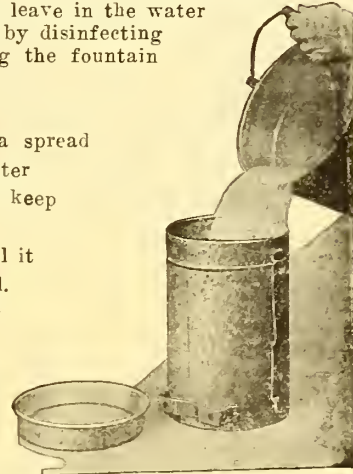
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THE SECOND NATIONAL EGG LAYING CONTEST CLOSES.

The English Pen of S. C. White Leghorns Wins First, and a R. C. White Leghorn From Missouri Makes the Best Individual Record All Hens Average nearly Ten Eggs More Than Last Year—Wyandottes in Second, Third and Fourth Places—Facts Worthy of Your Consideration and Records Which it Will Pay You to Attempt to Duplicate.

A gain of nearly ten eggs per hen was made in the second National Egg Laying Contest, which just closed at the Missouri State Poultry Experiment Station at Mountain Grove. The hens averaged over 143 eggs per hen, which is twice the number of eggs laid by the average farm hen. This increase would indicate that poultrymen everywhere are devoting more time and attention to selection for egg production and constitutional vigor. We believe we will see this average increase from year to year. We had at this station over 100 hens which made an average of 225 eggs per hen last year. We had several flocks of thirty to fifty hens, each of different varieties, which averaged 150 to 175 eggs per hen. We believe that the average poultryman has just begun to realize the possibilities of careful breeding and selection. Last month we predicted that before long the 300-egg hen was a possibility and would be heard from in the near future, and this month the news comes from a reliable source that one hen has laid 303 eggs in 365 days.

A dainty little R. C. White Leghorn pullet No. 55, from Maryville, Mo., worn and ragged because of her year's hard work, and weighing only 2 3/4 pounds, won the prize for the best individual record, with 260 eggs. She laid twelve times her own weight in eggs. She manufactured more pounds of eggs from her body weight than any hen in existence. A S. C. White Leghorn from England was second, with 258 eggs; a Buff Wyandotte from Vermont was third, with 255 eggs; a Buff Wyandotte from Missouri was fourth, with 253 eggs; and a S. C. White Leghorn from England was fifth, with 246 eggs.

The S. C. White Leghorns from Catforth, England, made the best pen record, with 2,073 eggs. Seven of the ten in this pen laid over 200 eggs each. One of the hens in this pen died, and one was out of condition for some time, and nearly all went into a moult about two months before the contest closed, and these things all tended to lower their record, but in spite of these facts, they were 189 eggs in the

lead of their nearest competitor. Buff Wyandottes from Missouri won second prize, with 1884 eggs to their credit. Silver Wyandottes from Iowa were third, with 1877 eggs. White Wyandottes from Arkansas were fourth, with 1,759 eggs, and R. C. White Leghorns from Missouri were fifth, with 1,724 eggs.

There is nothing especially sensational about any of these records, and we are glad that there is not. They are just such records as any poultryman can get who practices good sensible methods of housing and feeding, and who devotes some thought to selection and breeding. Sixty-four hens laid over 200 eggs, or over 10 per cent of all which were entered in the contest went over 200 eggs. A pen of S. C. Rhode Island Reds from Florida won the silver cup for November by laying the most eggs that month.

The standing or rank of the varieties for the two years' contests, has been as follows: Average eggs per hen.

	1912	1913
All S C White Leghorns.....	143	173
All Silver Wyandottes.....	160	172
All Buff Wyandottes.....	00	167
All Black Langshans.....	156	160
All Black Minorcas.....	145	158
All White Wyandottes.....	125	151
All Anconas	139	149
All Barred Plymouth Rocks.....	126	148
All R. C. White Leghorns.....	127	146
All S. C. Brown Leghorns.....	122	144
All R. C. Reds.....	150	142
All White Orpingtons.....	150	140
All Plymouth Rocks.....	120	139
All S. C. Reds.....	156	139
All Buff Orpingtons.....	147	134
All White Plymouth Rocks.....	118	132
All S. C. Buff Leghorns.....	115	128
All Black Orpingtons.....	155	128
All Part. Plymouth Rocks.....	124	110
All Partridge Wyandottes.....	99	110

The hens consumed about 36 pounds of grain each, or about one pound more than last year, and about the same amount of dry mash.

The egg yield by months has been as follows for the two years:

	1912	1913
November	3,118	1,711
December	5,082	5,215
January	3,203	7,016
February	6,442	8,666
March	10,828	12,889
April	12,458	12,997
May	11,478	12,455
June	9,798	10,411
July	8,875	9,697
August	7,015	7,691
September	5,716	6,424
October	3,832	4,652

Totals87,843 99,814

A pen of Black Langshans, owned by L. E. Meyer, of Bowling Green, Mo., made the best pen record for a single month, laying 248 eggs in March. The following pens and varieties won silver cups for the various months:

- Nov., Pen 43, S. C. Reds, Florida
- Dec., Pen 2, S. C. W. Leghorns, Eng.
- Jan., Pen 2, S. C. W. Leghorns, Eng.
- Feb., Pen 56, W. Orpingtons, Kentucky
- March, Pen 57, B. Langshans, Missouri
- April, Pen 26, B. Wyan., Missouri
- May, Pen 9, S. C. B. Legh., Mo., tied
- May, Pen 39, B. P. Rocks, Iowa, tied
- June, Pen 1, Anconas, Missouri, tied
- June, Pen 11, Black Minorcas, Ia., tied
- July, Pen 1, Anconas, Missouri
- Aug., Pen 10, R. C. W. Leghorns, Mo.
- Sept., Pen 2, B. Wyandottes, Missouri
- Oct., Pen 26, B. Wyandottes, Missouri

It will be seen from the above that the Missouri breeders have made considerable advancement during the past year, and are holding their own with the world. Eight out of twelve months Missouri pens either led or tied for that month. Missouri hens win first and fourth, and Missouri pens win second and fifth prizes. The State Labor Bureau has recently reported that the surplus poultry and eggs shipped in this state during the past year amounted to over \$48,000,000. The Missouri hen is not doing so bad after all. We are glad to have the outside world come in and compete with us. The next contest includes hens from many states, and the best from many foreign countries. We are informed by their government authorities that Australia and New Zealand are sending their best. The Rhinelanders are said to be the best that could be obtained in Germany, and have won many prizes in that country. We know that the Campines from England and South Africa are to compete. The best to be had in Canada, Vancouver Island and the United States are entered, and on the average the birds all appear to be better in every way than those entered in previous contests. The ones which win in the next contest can truly claim the championship of the world. No such collection of high bred-to-lay pullets were ever before assembled at one place in the world. Barring accidents, we look for some especially good records for the next year.

In the feeding test where pens of five S. C. White Leghorns and five Buff Orpingtons were fed for a year, the results were as follows:

Pen 63, Maine method.....	Eggs. 1598
Pen 62, New York method.....	1522
Pen 67, Norwich feeders	1510
Pen 70, confined continuously.....	1495
Pen 64, Canadian method.....	1480
Pen 68, feed at all times.....	1408
Pen 69, fed farmer's ration.....	1402
Pen 65, Saylor method	1399
Pen 66, any egg farm method.....	1318
Pen 61, Connecticut method.....	1232

The following prizes were won for the year:

- Best Pen Record—\$50.00. Eggs. Pen 2, S. C. White Leghorns.....2073
- Second Best Pen Record—\$25.00. Pen 26, Buff Wyandottes.....1884

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Pen 20, White Wyandottes.....1759
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Hen 55, Pen 10, R. C. W. Leghorn 260
- Second Best Individual Record—\$15.00.
Hen 62, Pen 2, S. C. W. Legh., Eng 258
- Third Best Individual Record—\$10.00.
Hen 860, Pen 30, B. Wyan., Ver. 255
- Fourth Best Individual Record \$5.00.
Hen 600, Pen 22, B. Wyan., Mo. 253
- Best Pen Record of Each Variety \$5.
Pen 1, Anconas, Missouri.....1711
- Pen 2, S. C. White Leghorns, Eng. 2073
- Pen 9, S. C. B. Legh. Fulton, Mo. 1532
- Pen 100, R. C. W. Leghorns, Mo. 1724
- Pen 11, Black Minorcas, Iowa.....1685
- Pen 18, S. C. Buff Leghorns, Mo. 1468
- Pen 19, Silver Wyandottes, Iowa.....1877
- Pen 20, White Wyandottes, Ark. 1759
- Pen 21, Part. Wyandottes, Mo. 1310
- Pen 26, Buff Wyandottes, Mo. 1884
- Pen 43, S. C. Reds, Florida.....1585
- Pen 32, W. Plymouth Rocks, Mo. 1389
- Pen 33, Barred P. Rocks, Ill. 1631
- Pen 40, R. C. Reds, Mo. 1467
- Pen 47, Buff P. Rocks, Mo. 1509
- Pen 42, Partridge P. Rocks, Mo. 1276
- Pen 57, Black Langshans, Mo. 1609
- Pen 58, Buff Orpingtons, Mo. 1509
- Pen 59, B. Orpingtons, Canada.....1571
- National Black Langshan Club Cup for Best Black Langshan Pen Record.
Pen 57, Missouri.
- National Black Langshan Club Cup for Best Record Blk. Langshan Hen.
Hen 735, Missouri.
- White Orpington Club Cup for Best White Orpington Pen Record.
Pen 56, Kentucky.
- A. P. A. Specials By the Missouri Branch.
- \$7.50 best pen record, Missouri.
 - \$5.00, second best pen record, Missouri.
 - \$2.50, third best pen record, Missouri.
 - Hens That Have Placed Their Name on

the Roll of Honor By Laying 200 Eggs or Over and Won Medals Are As Follows:

- | | |
|--|-----|
| Hen 55, R. C. W. Leghorn, Mo..... | 260 |
| Hen 62, S. C. White Leghorn, Eng..... | 258 |
| Hen 860, Buff Wyandotte, Vt..... | 255 |
| Hen 600, Buff Wyandottes, Mo..... | 253 |
| Hen 61, S. C. W. Leghorn, England..... | 246 |
| Hen 66, S. C. W. Leghorn, Eng..... | 243 |
| Hen 77, Ancona, Mo..... | 236 |
| Hen 2028, R. C. Red, Mo..... | 235 |
| Hen 211, S. C. W. Leghorn, Mo..... | 233 |
| Hen 3807, Silver Wyan., Iowa..... | 232 |
| Hen 939, W. Orpington, Ken..... | 232 |
| Hen 3810, Silver Wyan., Iowa..... | 229 |
| Hen 20911, S. C. Red, Florida..... | 228 |
| Hen 64, S. C. White Leghorn, Eng..... | 226 |
| Hen 151, S. C. W. Leghorn, Calif..... | 225 |
| Hen 529, Black Minorca, Iowa..... | 224 |
| Hen 512, Buff Wyandotte, Mo..... | 223 |
| Hen 735, Black Langshan, Mo..... | 221 |
| Hen 601, Silver Wyandotte, Ia..... | 220 |
| Hen 520, Buff Wyandotte, Mo..... | 220 |
| Hen 311, S. C. W. Leghorn, Eng..... | 219 |
| Hen 69, S. C. W. Leghorn, Eng..... | 219 |
| Hen 72, Ancona, Mo..... | 218 |
| Hen 4, S. C. Buff Leghorn, N. Y..... | 218 |
| Hen 3802, Silver Wyandotte, Ia..... | 218 |
| Hen 689, White Wyandotte, Ark..... | 217 |
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DON'T FEED CORN.

At this season of the year, when so much is said and written about feeding for eggs, it is indeed surprising to find so many advocates of so generous a percentage of corn in the feed. From personal experience, I have found that if one has his fowls in proper condition when they reach maturity, corn should be fed only at rare intervals. I am well aware, that many poultrymen of prominence will disagree with me.

The other day, I purchased a book that is highly advertised. My first hour's reading, disclosed so strong an advocate of corn, that I have never finished the book. Why should I ever finish it? Corn in the proportions that that book advocated has in the past spoiled some very fine hens for me. So since it is off in that one point, I will not trust it in any other.

Thinking that perhaps some poultry breeders have been trying the use of corn, with poor results, thinking that since so many advocate it that they must use it, it is the object of this article to tell them that at least one breeder is getting results with using only one small fraction of corn. Last January with the thermometer running 30 below zero, our pullets gave a 70 per cent egg record. The only corn that was used was in a wet mash fed once a week, which consisted of one-third cracked corn. If this is enough corn in the upper Peninsula of Michigan, in the winter, it should be enough anywhere.

If your birds are the bred-to-lay kind, and brought into maturity in good condition, then with oats in the morning and wheat at night, and a dry mash all the time, your hens will lay, other conditions being right. We make a dry mash as follows: 6 parts of bran, 3 parts of flour middlings, 1 part of beef scraps, and one-half part oil meal, with 3 table spoons of mustard, alternated with 3 spoons of ginger to one-half bushel of the dry mash. Plenty of fresh water with the chill off, and some vegetables, will give you the winter eggs.

Some may say that this is not a balanced ration. Perhaps not, but then we are after eggs, and it has proven satisfactory for us. Certainly the birds must be a strain that lay, and chicks fed right and properly housed.

Dry mash is really the essential to heavy egg production in winter. To get eggs it is necessary for the hens to eat a great deal. Dry mash being before them all of the time, they can eat as much as they need. Since it is dry, they cannot swallow it readily but eat slowly, thus mixing it with saliva, hence it digests readily.

Wheat is the best of all grains for chickens, and by many is not used because of the price. Then some buy wheat screenings because they are cheaper, or else shriveled wheat. My experience has been that good wheat is the cheapest in the end and that corn is too high at any price to feed to chickens.

MERRITT E. SIBOLE
Michigan.



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Your name and the name of two of your friends will bring you the most surprising incubator offer I have ever been able to make. I want every poultry keeper to know of the big profits possible with the Ideal Incubator. That's why I've planned this great offer. This year I am going to sell three hatchers where I formerly sold one. On three machines delivered freight paid to your station, I'll make an offer that is simply astonishing. Send me your name quick for the details of my plan.

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ABOUT BUCKEYE REDS.

Editor, Poultry Keeper:

I see numerous inquiries in The Poultry Keeper in regard to the Buckeyes. Your answers have been very good, but not explicit enough. The Buckeye, formerly known as the Buckeye Red, is one of the newer breeds in the Standard of Perfection. For several years there was no organized club and the breed was apparently at a standstill, but in the last year there has been a reorganization of the American Buckeye Club and the good work is already producing results. A letter to the secretary, A. H. Weisburg, Nevada, Mo., accompanied by 2 two cent stamps, will get the catalogue of the club, containing a history of the breed by the originator, Mrs. Nettie Metcalf.

The next Standard will contain several changes, but no very important ones, as the breed is now in the estimation of any one who breeds it, just right.

I am not over-enthusiastic about the breed, as any Buckeye breeder will tell you, but a bird that combines early maturity, heavy winter laying qualities, more breast meat than any other American breed, good forages, easily kept in confinement, small pea comb that never freezes, together with the fact that they are the only non-fading red, is good enough to tie to, and if you wish to breed for the fancy, you do not have to compete in the show room with the old breeders who have had years of show room experience.

Get in the game now and by securing the proper foundation stock, you can secure your share of the ribbons. We have no millionaires in our club who advertise birds as worth \$10,000, but we have a bunch of lovers of beautiful fowls, who are breeding better and better birds every year and they are every all boosting the Buckeye. The beginner will not make a mistake in selecting this breed, and the old breeder who is dissatisfied with his breed can not do better than to make this bird his final choice. I bred at different times several different breeds, but when I saw the Buckeye it was all off. I have bred it exclusively for several years and it will be the only breed that I will ever breed.

B. L. McDILL.

Indiana.

SAVE MONEY ON POULTRY FENCE.

Our readers who have had dealings with the Brown Fence and Wire Co. will be glad that we are giving this additional publicity to a worthy concern and those of you who are not acquainted with the advantages offered by them, will be glad of this brief introduction. The Brown Fence and Wire Co. make the famous double galvanized Brown poultry fence. It costs no more than common chicken netting, lasts many times as long, requires no top or bottom boards and about one-third as many posts. The peculiar and exclusive method of double galvanizing the wires makes Brown poultry fence rust resisting until long after "cheap" fencing is a tangled mass of broken down wires. The heavy top and bottom wires make running boards unnecessary, while the extra weight and strength necessitate the use of comparatively few posts. There is no question in our minds as to the quality of the products manufactured by this company. For 32 years Mr. Brown has been in the wire and fence business and is held in the highest regard by all who have ever had dealings with him. The guarantee of quality is the fact that nearly 500,000 farmers are on his books as customers, who have purchased over 25 million rods of fence from him. Our readers who are, or will soon be in the market for fence, will do well to write a postal for the new catalog issued by the Brown folks. In addition to poultry and farm fence of every size and style, they carry a complete line of farm gates, self raising gates, lawn fence and lawn gates. They sell direct from factory, prepay all the freight wherever you live and guarantee perfect satisfaction in every way. Address them as follows: The Brown Fence and Wire Co., Dept. 57, Cleveland, Ohio, and their latest catalog, containing their lowest prices freight prepaid, will come to you by return mail.

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To any poultry papers, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and periodicals, and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.



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Our question and answer department is conducted for the benefit of Poultry Keeper readers and all questions will be answered free of charge. If you are having trouble of any kind or need advice concerning the management of your birds, let us help you. Questions should be sent to reach us not later than the 12th or 15th of the month to insure answers in the next issue. All questions received later than this will be held over to the subsequent issue.

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In the spring of 1911 I was attacked by Muscular and Inflammatory Rheumatism. I Suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally I found a remedy that cured me completely and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism and it affected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. After you have used it and it has proven itself to be the long-looked-for-means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free. Don't delay. Write to-day.

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Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid, 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Be sure to state what you want the Aluminum Champion Band. Guaranteed satisfactory. Poultry Keeper Publishing Co., Quincy, Ill.

The data covering the two years' work, pictures and measurements of the winning hens, and facts relative to housing, feeding and breeding for egg production, are now being compiled for a bulletin, but same will not be ready for distribution before March or April, 1914.

The following gives the pen number, the name and address, the number of eggs laid by the leading hen in each pen of each variety, and the total eggs laid by the entire pen for the year.

Pen	Leading	Pen		
No.	Variety	Address	Hen Laid	Record
S. C. White Leghorns.				
		Eggs	Eggs	
2,	England	.....258	2072	
8,	California	.....225	1717	
14,	Pennsylvania	.....186	1381	
Buff Wyandottes.				
26,	Missouri	.....222	1884	
30,	Vermont	.....255	1661	
22,	Missouri	.....253	1458	
Silver Wyandottes.				
19,	Iowa	.....232	1877	
23,	Illinois	.....215	1674	
27,	Missouri	.....217	1591	
White Wyandottes.				
20,	Arkansas	.....217	1759	

24,	New Jersey	.....197	1427
28,	Arkansas	.....211	1331
E. C. White Leghorns.			
10,	Missouri	.....260	1724
16,	Missouri	.....174	1389
4,	Missouri	.....198	1258
Anconas.			
1,	Missouri	.....236	1711
7,	Oregon	.....188	1396
13,	Ohio	.....167	1341
Black Minorcas.			
11,	Iowa	.....224	1635
17,	New York	.....215	1531
5,	Missouri	.....181	1503
Barred Plymouth Rocks.			
33,	Illinois	.....200	1631
39,	Iowa	.....184	1560
45,	Iowa	.....212	1237
White Orpingtons.			
56,	Kentucky	.....232	1631
60,	Missouri	.....180	1298
52,	Illinois	.....204	1265
Black Langshans.			
57,	Missouri	.....192	1609
49,	Missouri	.....221	1583
53,	Indiana	.....194	1581
S. C. Reds.			
43,	Florida	.....228	1585
37,	Missouri	.....196	1500
31,	Missouri	.....192	1061
Black Orpingtons.			
59,	Canada	.....214	1571
55,	Ohio	.....193	1246
51,	Missouri	.....189	1014
S. C. Brown Leghorns.			
9,	Missouri	.....198	1532
15,	Alabama	.....173	1421
3,	Missouri	.....215	1366
Buff Plymouth Rocks.			
47,	Missouri	.....214	1509
41,	Iowa	.....207	1482
35,	Missouri	.....174	1164
Buff Orpingtons.			
58,	Missouri	.....190	1509
54,	Missouri	.....166	1303
50,	Missouri	.....201	1193
Buff Leghorns.			
18,	Missouri	.....191	1468
12,	New York	.....218	1232
6,	Missouri	.....162	1038
R. C. Reds.			
40,	Missouri	.....235	1467
34,	Missouri	.....179	1456
46,	Indiana	.....182	1340

White Plymouth Rocks.		
32, Missouri	.....203	1389
38, Missouri	.....172	1297
44, Wisconsin	.....185	1254
Partridge Wyandottes.		
21, Missouri	.....167	1310
29, Missouri	.....199	983
25, Missouri	.....164	982
Partridge Plymouth Rocks		
42, Missouri	.....192	1276
36, Indiana	.....172	1146
48, Illinois	.....162	886

I hereby certify that the above is a correct final report of the Second National Egg Laying Contest, which closed at the Missouri State Poultry Experiment Station, Mountain Grove, Mo, on November 15th, 1913.

T. E. QUISENBERRY,
 Director State Experiment Station,
 Mountain Grove, Mo.

GETTING PLENTY EGGS DURING THE WINTER.

That's the problem that faces every poultry raiser—hens have a knack of taking it easy during the winter when egg prices are way up.

Dr. Gilbert Hess, one of the foremost veterinarians in the United States, has solved the problem—he makes his biggest profits from his hens during winter because he sees to it that the egg supply is plentiful.

The doctor states—and rightly so—that hens, being cooped up, deprived of

exercise and the lack of green stuff will not lay in winter. The egg organs become dormant—inactive—and the hen consequently puts on fat instead of turning her feed into eggs.

Being a poultry raiser of considerable success, Dr. Hess himself, delved into the winter egg question many years ago. He was a veterinary scientist and a doctor of medicine also and therefore was fully capable of finding where the trouble was and applying the remedy.

He compounded a number of bitter tonics and well known correctives, proceeding on the idea that hens must have a tonic during the winter to tone up and invigorate the dormant egg organs and keep them healthy. His now famous preparation is known as Dr. Hess Poultry Pan-a-cera and is sold by over 28,000 dealers throughout the United States.

Dr. Hess stands behind his Pan-a-cera with the most liberal guarantee we ever heard of. His message to you states that his dealer in your town will supply you with enough pan-a-cera for your whole flock, and if it does not make them lay and keep in healthy condition, he has authorized that dealer to refund your money.

In view of such a liberal guarantee we urge our readers to put Dr. Hess' Poultry Pan-a-cera to the test. The doctor informs that the use of his preparation is very economical—a penny's worth being enough for thirty fowls per day.

ABOUT HIGH PRICED EGGS.

As you are probably aware, West Virginia does a poultry business of close to four million dollars annually. Huxsters cover the country and the railroads bring thousands of eggs and poultry to Parkersburg to ship to Pittsburg by rail and boat, so we are up against the Pittsburg market all the time, so thank Providence for the Ohio River. Eggs are now (Nov. 13.) retailing for 35c to 38c per dozen. Eggs are always high here, but I never knew them so expensive so early in the fall. Eggs were 32c before the snow, twenty miles out in the country and no way to get them to Parkersburg except by wagons. No wonder eggs are high in the cities when they bring such prices right in the heart of the egg country. Milk goes up to 10c a quart November 15th. The more incubators, the higher the price of eggs; the more electricity, the higher the price of horses.

H. T. Farrow.
 West Virginia.

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To any poultry papers, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and periodicals and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

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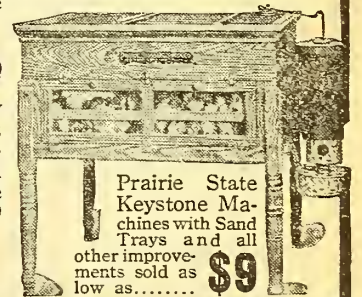
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Attention is called to the poultry books advertised on the outside cover page of this issue. These books are elegantly printed books and are authority on the subjects treated. A little time and effort on your part in soliciting subscriptions to the Poultry Keeper will enable you to earn copies of these books.

A copy of either of the following books will be sent to you on receipt of one subscription to the Poultry Keeper at the regular price, fifty cents per year.

Egg Record and account book, 32 pages, 6x10.

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The Bantam Fowl, 70 pages, 9x12.

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Any of the following four books sent for three subscriptions to Poultry Keeper at fifty cents each.

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Rhode Island Reds, 88 pages, 9x12.

Turkeys; Their Care and Management, 96 pages, 9x12.

Any of the following four books sent for four subscriptions to the Poultry Keeper at fifty cents each.

The Leghorns, 140 pages, 9x12.

The Plymouth Rocks, 144 pages, 9x12.

Successful Poultry Keeping, 176 pages, 9x12.

The Wyandottes, 160 pages, 9x12.

These offers are not intended to interfere with the regular offers we carry offering the books in combination with single subs to the Poultry Keeper, but mean new subscriptions which present readers secure for us. If you are interested in any of these books, the above offer will enable you to get them without expense to yourself. Show this offer to your friends and get them to help you.

POULTRY IN WINTER.

It is easy enough to keep the hens laying through the spring and summer, but the work done by the hens during the winter months when eggs command a high price determines largely the per cent of profit from the flock for the year. Any hen will lay in summer when the air is warm, green grass and insects plentiful and conditions natural and right for egg producing. Conditions in winter are not natural for egg production and if left in this condition hens will not lay.

Begin now and fix things up neat and cosy for the coming winter. If you have let the chicken house get

down until it is rickety, full of leaks and in a dilapidated condition all 'round, get to work and build a new one. It should be light and dry and as warm as it can be made and not gather moisture. If properly ventilated there will be little dampness.

Feeding for Eggs.

No ration should be made up wholly of grain. Feed some bran or shorts and skim milk. Milk will, in a great measure, take the place of other animal food. Many large egg yields have been secured by the use of milk without other animal food.

Scratching Shed.

See that your hens have a scratching shed. Cover the floor with litter. Straw, leaves or litter of any sort that is dry will do and then throw the morning grain into it and the hens will lay more eggs if they are made to exercise in this way.

Be sure the hens have plenty of pure water and pure air night and day is absolutely essential to good health, and, therefore to good egg production. Adopt a system of ventilation that will avoid drafts and yet give pure, fresh air at all times. Work hard for winter eggs.

Selling Poultry.

Now is a good time to sell all the old stock not needed. Save lots of pullets for laying and by so doing realize quite a profit this winter. Hens and young birds are bringing good prices now.

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Mississippi.

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SUCCESSFUL Incubators and Brooders

This announcement isn't put here to make claims—exaggerated statements—or to sell you an incubator and then not stay with you and show you how to make money with it. Time enough to give you direct factory prices this year on many sizes from \$6.75 and up when we get together and you see what Successful Incubators and Brooders and Gilcrest can do for you working with you on his Successful Lessons in Poultry Raising to suit your needs and experience. First price—simplicity—dependability—time saving—big hatches—big broods raised—cash in your hand profits are what you want to know.

But Gilcrest gives you, besides what others do, the personal attention and advice in his free lessons that no other maker ever has or ever can the way he can and will. Get these lessons—before you start—when you start—while you are hatching—how to make the biggest hatches and raise biggest broods—how to get biggest prices and sell for cash your whole year's output.

Successful Grain Sprouter—made in sections—supplies your fowls year round with green food that makes 'em lay—just when egg prices are highest.

Gilcrest has mighty attractive poultry, too—high grade stock and eggs of all leading varieties—land and water fowls.

NOTE:—Our famous little booklet—"Proper Care and Feeding of Chicks, Ducks and Turkeys" is worth its weight in gold. Sent for 10 cents. But our big catalog is FREE. Send for it.

J. S. GILCREST, Pres. and Gen'l Mgr.

Des Moines Incubator Company, 47 Second Street, Des Moines, Iowa



This or This?



With X-Ray Incubator only One gallon for entire hatch.

With other incubators Five gallons required for hatch.

Let X-Ray Incubator Save You 4 Gallons of Oil on Every Hatch

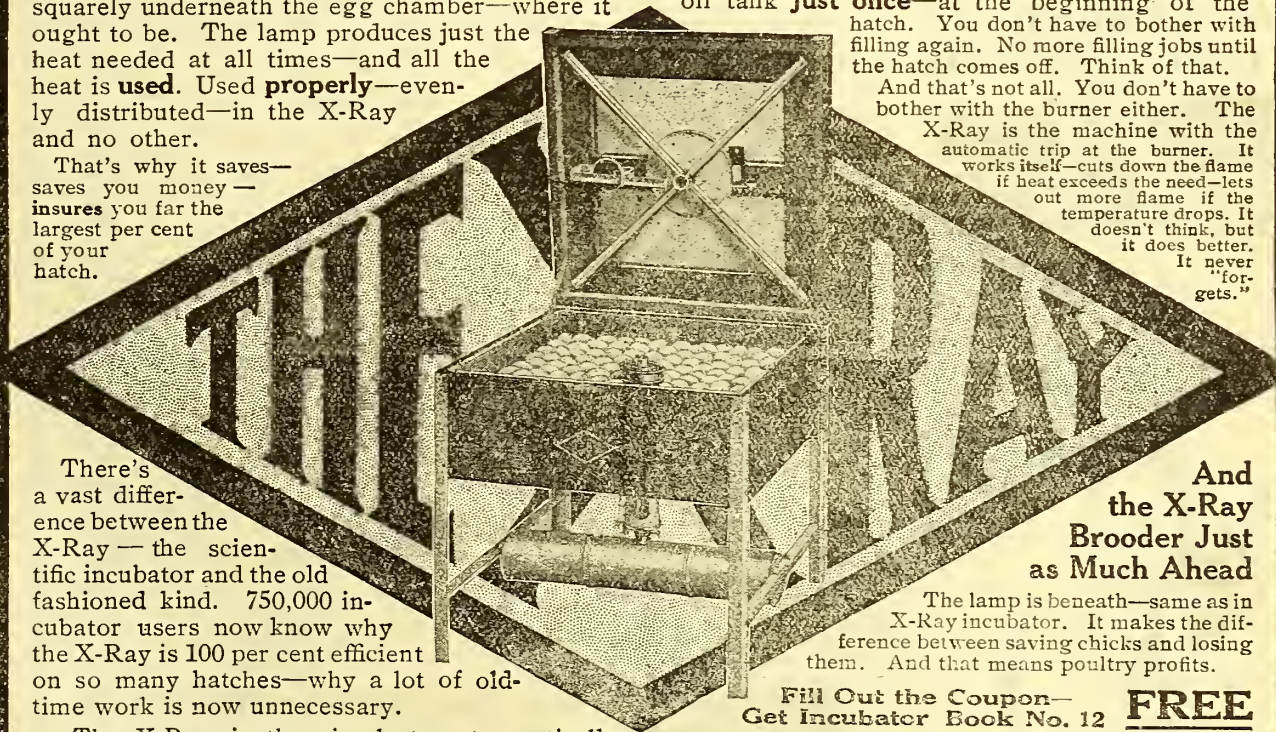
The X-Ray actually makes this saving for you. Saves you 75c to \$1.25 on every hatch—four to six dollars a season on oil.

It is the only incubator in the world that can do it. Why? Because the lamp is **underneath**—squarely underneath the egg chamber—where it ought to be. The lamp produces just the heat needed at all times—and all the heat is **used**. Used **properly**—evenly distributed—in the X-Ray and no other.

That's why it saves—saves you money—insures you far the largest per cent of your hatch.

There's no cold side. There's no overheated corner—just the right hatching temperature in every nook. It saves you oil. It saves you eggs—and that's not all. It saves you a world of work and worry. You fill the big 4 to 8 quart oil tank **just once**—at the beginning of the hatch. You don't have to bother with filling again. No more filling jobs until the hatch comes off. Think of that.

And that's not all. You don't have to bother with the burner either. The X-Ray is the machine with the automatic trip at the burner. It works itself—cuts down the flame if heat exceeds the need—lets out more flame if the temperature drops. It doesn't think, but it does better. It never "forgets."

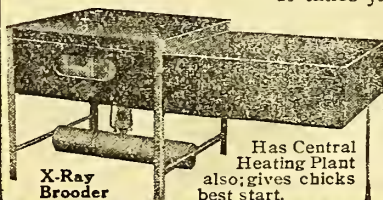


There's a vast difference between the X-Ray—the scientific incubator and the old fashioned kind. 750,000 incubator users now know why the X-Ray is 100 per cent efficient on so many hatches—why a lot of old-time work is now unnecessary.

The X-Ray is the simplest, yet practically every feature is a special feature. Go over it, notice the two double glass panels in the top. You can look at the eggs any time without raising the lid or letting in cold air. Ventilate or turn eggs simply by raising lid.

It takes just 15 minutes to raise X-Ray to hatching temperature. 4 to 8 hours for others.

Our new factory at Des Moines is the largest exclusive incubator factory in the world, the most modernly equipped. Come and see it if you can.



X-Ray Brooder

Has Central Heating Plant also; gives chicks best start.

And the X-Ray Brooder Just as Much Ahead

The lamp is beneath—same as in X-Ray incubator. It makes the difference between saving chicks and losing them. And that means poultry profits.

Fill Out the Coupon—Get Incubator Book No. 12 **FREE**

Fill out the coupon below. Do it today. Get our big Incubator Book. We'll guarantee that it is the most interesting work on Incubators you ever read. Shipped direct from factory. No agents employed. Send order direct to me.

We pay the freight.

X-Ray Incubator Co., Des Moines, Ia.

Send Me Your X-Ray Book No. 12

NAME _____
 P. O. _____
 R. R. NO. _____
 STATE _____



"If Chicken Chowder won't make your hens lay they must be roosters." Full particulars and 48 page poultry hook free for the asking. Purina Mills, 303 S. 8th St., St. Louis Mo.

HOW TO GET MORE EGGS.

Mack's Poultry Powder will get them for you. It is not a medicine. Will make your lazy hens lay and your best hens better layers. Guaranteed to contain no adulterations—is all powder. Once you try it you will always buy it—nothing like it on the market. Sold only by parcel post, package 50c. Mack's Poultry Powder Co., 514 Holmes St., Wilkins Sta., Pittsburg Pa.

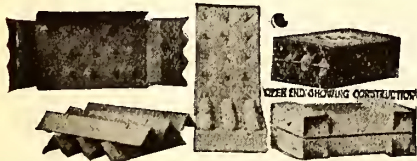
Special Notice

EVERGREEN TERRACE POULTRY AND FRUIT FARM. For Sale—10 acres all kinds of fruit, with a well established trade of eggs for hatching and stock for breeding. Last year's sales, \$3,900. Modern improvements—gas, hot and cold water, only 5 minutes to P. O. Electric street cars. Normal school. The Model village of N. Y. State. Wishing to move to Calif., I will sell the place and business at a very low price. Cockerels, sons and grandsons of "Golden Princess" that laid 291 eggs in a year, and eggs for hatching, the kind bred to lay and pay.

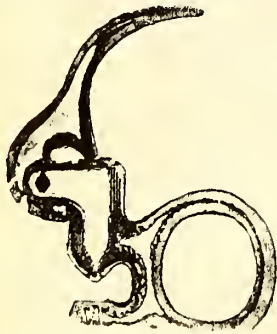
IRA P. WATSON.

Box 17 Fredonia, N. Y.

BUY DIAMOND EGG CARRIERS



It is a fact and not a boast that eggs get the maximum protection in the Diamond Egg Carriers. Order today. Sample 25c. 15 egg size, doz. \$1.50, \$11.00 hundred. Parcel post boxes, all sizes. 1 to 12 dozen. Poultry Supplies. **DIAMOND BOX MANUFACTURING CO.** Room 316, 219 N. 2nd, Minneapolis, Minn.



P. K. MARKER.

There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 65c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

QUESTIONS and ANSWERS

MATING AND HOUSING.

- I have seven White Leghorn yearling, two R. I. Reds and several mongrels, but good layers. What kind of a male would be best to mate with them? I have a R. I. Red cockerel, but would like to know what would be best for all 'round purposes.
- Would a run 100 by 1 feet be large enough for 60 to 100 chickens, and would a coop 6 by 8 feet be large enough for them to roost in?
- Do chickens and ducks do well together?
- Are thoroughbred chickens better than crosses? J. T. Lehl, Utah.

1. The male to use depends upon the object for which you are keeping your hens. If you wish to work for a pure breed and white eggs it would be best to secure a White Leghorn male and set only eggs from the White Leghorns. These can easily be told by the color of the shells. If you wish to continue a mixed flock and care for table poultry, then the Red rooster will be as good as any. Using him you will increase the size of your fowls.

2. This will be large enough for the growing chicks until they are three months old. One hundred hens should have a house 20x20 feet, though one 16x20 will answer. The size of the run is not material. The larger it is the less work it will be to keep it clean.

3. Chickens and ducks should never be kept in the same house or given the same yard. On free range it is possible to let them run over the same ground, but it is not a good plan.

4. Yes. The longer a character is maintained the more constant it becomes and consequently the qualities you desire are perpetuated. Crossing means reversal and degeneracy.

SWEET POTATOES—ABOUT CHICKS.

- Do sweet potatoes make a good feed for laying hens?
- Do chickens hatched in an incubator make good layers?
- What makes the mortality so heavy among my incubator hatched chicks? I get a good hatch and for the first three or four weeks, they grow like weeds. Then they begin to die, and sometimes as many as ten die in one night. Some will drag their wings a day or so; some stand and sleep. They eat greedily all the time but get poorer and weaker until they die.
- What makes them puff around their craws. They seem to get full of wind between the flesh and hide. It does not seem to be painful but gets larger all the time until they die. Subscriber. Laurel, Miss.

1. They can be used to a limited extent in three ways. They may be boiled and mixed with a wet mash, fed raw ground or whole as green feed. If whole, the hens will not eat them very readily until they get used to them.

2. As good as any. The winners at the first Connecticut Laying contest were hatched in an incubator. If they are properly hatched there is no difference between incubator and hen hatched chicks.

3. It is because we do not care for them rightly. In large flocks incubator chicks do not get enough mineral matter, while a few chicks with a hen find all that is required. Droopy wings are usually due to a rapid growth of feathers caused by a concentrated diet. The body does not keep pace with the growth of feathers. Cutting the wing feathers sometimes retards this growth or causes it to be directed to the body. Bone, meat and green feed in the diet will usually prevent this.

4. The exact cause of air under the skin has not been satisfactorily explained. The remedy is to pierce a small hole with a needle and let the air out. If it again accumulates cut out a small diamond-shaped piece of the skin with a sharp pair of scissors and anoint with vaseline.

ROSE COMB BUFF ORPINGTONS.

Can you tell me if there are any such fowls as Rose Comb Buff Orpingtons and where? Also give standard weights, color of legs and skin. Mrs L. E. G. Mason City, Iowa.

There is such a variety though it is not Standard in America. The Orpingtons are all bred with both single and rose combs in the hands of the originator. They are not Standard so have no Standard weights or description, but should be the same as the S. C. Orpingtons which have white or pinkish-white shanks and white skin. The weights are: Cock, 10 lbs; hen, 8 lbs; cockerel, 8½ lbs; pullet, 7 lbs.

LEG WEAKNESS.

I have two very fine chickens, a stag and a pullet, pit games, that I value very highly. They are seven months old and have lost the use of their legs. At first they were lame in one leg. It seemed to be at the knee joint, although there was no swelling. In a few days they were both down in both legs, and sit down all the time. They seem to feel well, combs red, and they are talking all the time. Have fed no corn, giving them only wheat, bran and shipstuf, together with lots of green stuff and cannot understand what the trouble is. I lost one last summer, four months old, the same way after I had doctored him four or five weeks. They seem to lose the use of legs from the knee down. Have been in this condition for two weeks and there is no improvement. No one around here seems to know what the trouble is. I hardly think this could be caused from inbreeding, as the one I lost last summer was a complete outcross. They are big and husky and the stag is the largest I have raised this year. L. M. Hannihal, Mo.

This is leg weakness and is usually caused by too stimulating a diet, though long confinement on board floors is often accountable for it. Place ten grains of baking soda in a pint of drinking water and night and morning administer a strichnine pill (1-60th grain). You can find these pills at the druggists.

LOOKS LIKE CHICKEN POX.

One of my six months old pullets has a very bad eye. It is swelled shut and has several black looking scales on it. Her nostril is closed on that side, but she has has no cold or symptoms of roup. Could not have been picked as they do not fight.

Ship Day Old Chicks in This Safe Box

We ship thousands of baby chicks each season from Tywacana Farms to all parts of the country in the strong but light and compact



The most satisfactory box for shipping chicks. It has adjustable ventilating regulator which meets varying weather conditions more satisfactorily than any other device. Chicks do not trample, smother or get chilled. Made of double, reinforced corrugated cardboard—it is

Strong—Simple—Safe—Sanitary

The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar. Both chick and egg boxes are shipped to you flat and are easily set up and packed for shipment to your customers.

Write today for Free Booklet describing the Wright Boxes for shipping chicks and eggs.

TYWACANA FARMS POULTRY CO. A. E. Wright, Supt. Box 57 Farmingdale, Long Island, N.Y.



What do you suppose it is? I am greasing it every night with lard, but it does look as if the eye is permanently injured and grown shut. Can you give me any advice through your next month's issue.

Mrs P. T.

Atchison, Kansas.

This looks like a case of chicken pox and if it is it will be well to guard against the spread of the disease. Separate the bird from the others and treat by applying undiluted Zenoleum with a brush, being careful not to get any in the eye. If you cannot get Zenoleum handily use carbolated vaseline and remove the scales as they yield to gentle rubbing. This treatment will be found to be efficacious in case the disease is not chicken pox.

FEEDING QUESTIONS—CAMPINES.

1. What is the best way to feed alfalfa meal, dry or wet and in what quantity?
2. How much of either barley or buckwheat should be fed to 100 hens and pullets for laying? Which is the better to feed, when only one is fed with other grains?
3. How much of each oats, wheat, cracked corn, barley or buckwheat should be fed to 100 hens and pullets a day, allowing 20 lbs. whole corn at night, with dry mash of ground oats, one part; and one half part each ground wheat and middlings; bran and corn meal, one part each; three-fourths part beef scraps and one-fourth oil meal, before them all the time. Can this dry mash be bettered for Leghorns?
4. Publish the Standard for Campines.

C. J. R.

Jenera, Ohio.

1. Alfalfa meal can be placed in either a dry or moist mash. It is as well to feed this way as any. It can make about ten per cent of the mash by weight.
2. Neither of these grains alone is a complete feed. It is better for the hens not to have an entire meal of one grain. If the hens are fed twice a day they should have about twelve pounds of either. We cannot feed hens by rote or rule as to quantity. A hen will eat more some days than others. Pullets will eat more than hens and large hens require more than small hens.
3. Why don't you mix your grains in the right proportion for a good scratch grain? It will save you lots of labor. If you want to feed all whole corn at night make a scratch grain for morning feeding by weight in about the following proportions: Wheat, three parts; cracked corn, two parts; and one part each of oats, bar-

ley and buckwheat. Scatter enough of this in deep litter to keep the hens at work for an hour or more. Your mash is good but rather concentrated. If you wish to feed alfalfa meal add one-half part to the mash as you have it proportioned.

4. The Campines have not been admitted to the Standard. We have no copy of the club standard but you can probably get one by writing the secretary, Mr. M. R. Jacobus, Ridgefield, N. J.

OFF-COLORED COCKERELS.

I want to advertise some White Leghorn cockerels for sale and would like your opinion first in regard to them. They had a wide range of cornfields this fall and eating too much corn has caused their plumage to turn a little yellow, also their earlobes. They are a fine lot of cockerels, of a heavy laying strain and I do not want to send them out in a condition that might disqualify them. Please answer in next issue of Poultry Keeper.

C. F. S.

Dundee, Mich.

The birds are off color, a very common fault with White Leghorns, if you can call it a fault. There is nothing you can do to remedy this unless you bleach them, and that would be "faking." Unless there are positively foul feathers the birds are not disqualified and are just as good for breeders of utility stock, though they will stand no chance in the show room. This yellow tinge to plumage and lobes is not due wholly to yellow corn. Some contend that corn makes no difference in this. It is natural to the breed. Fowls having yellow legs must have a yellow pigment and it is bound to crop out in the feathers.

STALE BREAD.

Kindly let me know if stale bread is good to feed and the best way to feed it.

J. M.

Elkhart, Indiana.

Stale bread will make a good body for a wet mash. Ordinary baker's bread has very little nutriment and other more nourishing ingredients should be added, such as corn meal, beef scraps, etc.

CAPONS.

1. How much more does a capon bring per pound on the market than a hen?
2. How much should a R. I. Red capon weigh at ten months old? How much more does a R. I. Red capon weigh than a R. I. Red cockerel does at ten months?

3. Could you give me the address of a produce house in Kansas City? J. I. C.

1. That depends on the market and the season of the year. At the present writing in the New York market capons and roasting chickens are quoted at 24 to 25 cents and fowls (hens) 14 to 19. Live hens are selling at 16 cents and old roosters at 10 cents.

2. This depends on the manner in which they are grown. A capon will not weigh materially more than a cockerel. He may gain a pound or more, but he will do it on less feed, as the cockerel will run off his flesh unless confined. Cockerels cannot be kept until ten months old and marketed to advantage, as when he becomes hard and staggy he will go into the rooster class and bring a low price. Red cockerels should be marketed when about twenty weeks old and weigh four pounds. The capon can be kept until ten months old and will weigh eight or nine pounds. A cockerel should weigh seven to eight pounds.

3. We do not know of a produce house in that city.

BEEF SCRAPS.

Is it necessary to feed meat or beef scraps to chickens in order to get the maximum number of eggs the hen will produce? Is there anything that can be used as a substitute? If not, how much should be fed to a White Leghorn pullet or hen?

F. M.

Cleveland, Ohio.

Meat of same kind is necessary. Animal protein is more fully digested than the protein found in grains. Milk and blood meal furnish this in a good form but it is not quite so handy to feed as beef scrap. Green cut bone is good but is not as safe to feed. The quantity to feed to a Leghorn hen will depend on the quantity of other feed the hen will eat. A good plan is to let the meat compose about ten per cent of the mash feed, whether the mash is fed dry or moist.

CUTTING SPURS.

I desire to ask about cutting the spurs off a rooster. We had a neighbor who cut the spurs off his roosters, and they grew back longer than ever. This is rather remarkable, we think, and would like to have you inform us as to the best method to remove spurs, about an inch long from a two year old R. I. Red cock.

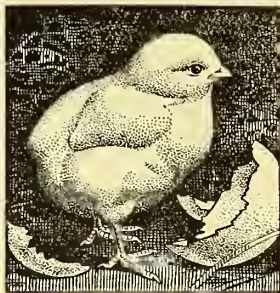
J. T. P.

St. Louis, Mo.

Day-Old Chicks of Quality

THAT WILL

Live, Thrive, Grow ^A/_D Win for You



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| S. C. Rhode Island Reds. | S. C. Black Minorcas. |
| R. C. Rhode Island Reds. | White Plymouth Rocks. |
| S. C. Buff Orpingtons. | Barred Plymouth Rocks. |
| S. C. Black Orpingtons. | Buff Plymouth Rocks. |
| S. C. White Orpingtons. | S. C. White Leghorns. |
| White Wyandottes. | S. C. Brown Leghorns. |

Eggs for Hatching in any Quantity. Sent Prepaid

Shipments guaranteed to reach destination safely. All dead chicks replaced. Book your order now. Our equipment includes the highest priced machines on the market, backed by our twenty years' experience in hatching and breeding enables us to furnish you chicks that are well hatched, vigorous, strong and healthy. Hundreds of satisfied customers. Our aim is to furnish you the best chicks, not the cheapest in price. Poorly hatched chicks always prove expensive items. Start right by sending for our chicklet catalogue today.

Our Show Record Includes Chicago, New York and Indianapolis Winnings.

Many first prizes have been won by our birds at these National Shows in the past. Our breeders are placed in condition for producing strong, healthy, fertile eggs by December 1, consequently for the present we will not exhibit, but can furnish you Baby Chicks that will grow into winners for you. Our chicks are well hatched and we can quote you extremely low prices on them. Be sure and get our catalogue. Sent free upon request.

Goshen Poultry Farms. Route 3. Goshen, Indiana

Old Trusty Takes All The Mystery Out of Making Big Profits With Chickens

WHY Experiment When You Can Be Sure?

Right now is the time to "stop, look and listen" before you buy your new incubator.

No matter what incubator you may be thinking about buying, you can not get away from this fact—the Old Trusty outsells all others three or four times.

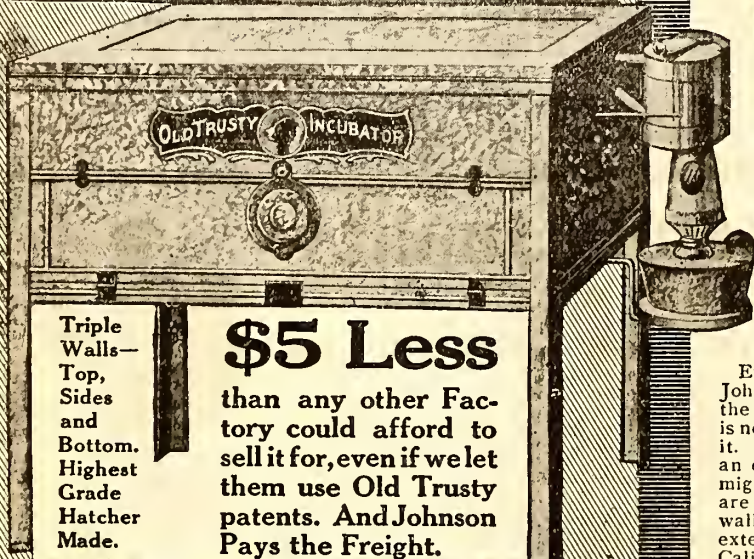
Half a million people have bought this hatcher. I don't know how you would reason it out, but I believe that if that many people can decide on the Old Trusty, to keep their chicken profits up and their expenses down then their choice ought to be a pretty safe one to go by.

You cannot afford to experiment. Life is too short to be fussing around with uncertainties. You want profits. You are entitled to them and you get them quick and in big volume with the



M. M. JOHNSON

H. H. JOHNSON



Triple
Walls—
Top,
Sides
and
Bottom.
Highest
Grade
Hatcher
Made.

\$5 Less

than any other Fac-
tory could afford to
sell it for, even if we let
them use Old Trusty
patents. And Johnson
Pays the Freight.

OLD TRUSTY

Three or Four Times as Many
In Use as Any Others

—Big Hatches in Coldest Weather

The difference between the Old Trusty and all others is that it is simple—practical—and proves its worth right at the start. You can get good hatches with it at any time of the year—winter or summer. Your success does not depend upon your mastering a string of highfalutin instructions. Let others go in for experiment, but you get an Old Trusty and go in for profits.

Every buyer of an Old Trusty saves \$3 to \$5 because of the Johnson factory—the largest exclusive incubator factory in the world. But price is not my argument, for the Old Trusty is not built to meet a price. It is built as good as we can make it. Just to look at the picture the first thing that occurs to an experienced incubator user is that the top is clear. A mighty fine convenience for holding trays, etc. But there are many other good features such as the case with triple walls on all four sides, top and bottom. The iron is an exterior protection, the asbestos is an insulation and the California redwood forms the inner case. This wood, as you know, gets along without warping, shrinking or cracking.

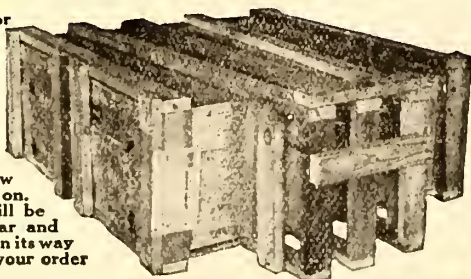
Your Old Trusty Is Crated—
All Ready to Ship

Prompt shipments are the regular rule here. Your Old Trusty will be on the way to you, freight prepaid, the same day your order reaches us. You can start your hatch right away. Bear in mind, the Old Trusty does not have to be rebuilt when it reaches you. Only the legs are removed, just to save space in shipping.

Address a Postal or a Letter or
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to use
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and screw
the legs on.
Yours will be
put in car and
started on its way
the day your order
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Yours! The Book that Gave 500,000 People Real Profit Making Ideas on Poultry

LET Me Mail It
To You Quick—

I don't care what your ideas about making chicken profits may be, you can better yourself by reading a few chapters in the Old Trusty Book. It makes no difference whether you have been thinking about getting a new incubator, get the Old Trusty book anyway. You are interested in poultry or you wouldn't be reading this paper. You cannot fail to be more interested, and in a practical way, too, after reading the Old Trusty book. From cover to cover, it's all about chickens. It tells the inside facts on just the things you are vitally interested in. It shows the *real* ABC of making Poultry Profits.

Send In Your Name
At Once—**FREE**
The Book Is **FREE**

100,000 more people will be making profits this year with Old Trustys. And poultry profits will be better than ever.

I will be glad to refer you to any Old Trusty owner anywhere. No matter how old his or her machine may be. The hatchers we sold ten years ago outlived our ten year guarantee. I've guaranteed them for another ten.

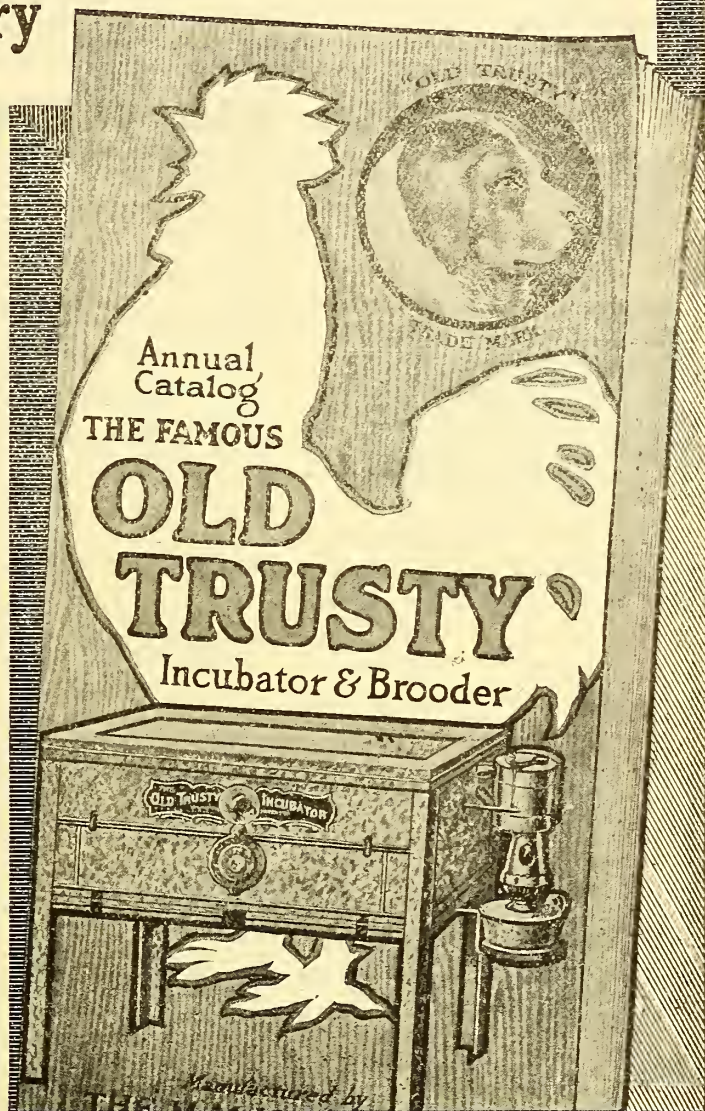
Get My Offer Based on
100,000 Sales This Year—
Now Is the Time to Start!

Let me quote you on an Old Trusty, delivered, freight paid, to your station. Get your Old Trusty working right away—no need to wait till Spring. Old Trusty hatches in winter as well as in summer. Start NOW. You can have chicks making money for you when spring comes.

Remember, you make no experiment when you get an Old Trusty working. But whether you buy now or not, let me mail you the Old Trusty Book *free*.

Simply fill in the coupon and mail it. Or, if you prefer, write me a letter or a postal. Address

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Please send me Old Trusty Book and quote me price for Old Trusty delivered to my station.

Name.....

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J. F. SIEMS, Inventor and Patentee

foreign countries the end of the hatching process.

Natural Hen Incubator ^{200-Egg Size} Costs Only \$3.00

Don't Throw Your Money Away: Other Incubators Cost 4 Times this Price

Over 600,000 Sold—Many are pushing the old-style hot boxes aside with their dangers and unsatisfactory hatches. With the **Natural Hen Incubator** there are no more smoking lamps and death dealing fumes, no overheating, no sudden cooling, no expense for oil, no sleepless nights, no more spoiled hatches. People are learning to know that the **Natural Hen Incubator** way is the right way. There is no way to beat nature. Imitations only result in failures and costly mistakes.

The **Natural Hen Incubator** is unlike any other incubator. With it you not only hatch more and better chicks, but they will be stronger and more vigorous and develop more rapidly and make better fowls. The Government is behind it. It is fully protected by patents in the U. S. and in other countries. It is the only patented incubator in the world which uses the living hen from the beginning to the end of the hatching process. Thousands of voluntary testimonials.

Notice the Words of Praise

J. L. Beach, Morgantown, W. Va., writes: "Your Natural Hen Incubator is a most useful invention. I am recommending it to everyone that is interested in chickens. It fills every claim you make for it."

Captain G. S. White, Vinita, Okla., writes: "This is the best thing in the chicken line ever offered." Another: "The Natural Hen Incubator is the surest and best of all incubators."

If you want the incubator that will hatch the most and best chicks, the **Natural Hen Incubator** is the incubator for you. No freight to pay. Agents wanted. Send today for FREE Catalog with Special Introductory Offer and make success sure.

NATURAL HEN INCUBATOR COMPANY, 1349 Constance Street, Dept. 1, LOS ANGELES, CAL.

J. D. Haley, Cottonwood, Texas, writes: "The Natural Hen Incubator is simplicity itself and the greatest help to nature ever conceived by man."

Professor C. L. Willoughby, University of Florida, writes: "It is useful, safe and economical." Another: "Out of 160 eggs I hatched 150 chicks. It is the grandest thing I ever saw."

Take a fine saw and saw the spur half an inch from the leg. If it bleeds sear with a hot iron or lunar caustic. Take a sharp knife and round the end of the spur. The spur will grow again. This is the method employed by cockers, and the stub of the spur is left to hold the steel gaff. It would not do to cut too close as this would cause pain and profuse bleeding.

THE COMB AND THE EGG.

1. How many points on B. P. Rock cock and hen combs?
2. Please give analysis of an egg and whether there is any difference in large or small eggs. R. A. W. Virginia.

1. Five in both cases.

2. The analysis of eggs varies somewhat. We have not seen a complete analysis. Here are the nutritive properties, being the average of one hundred eggs taken from as many different flocks: Exclusive of the shell the egg contained 63.4 per cent water; albumen or protein, 13.3 per cent; fat and oil, 16.8 per cent; mineral matter, 1 per cent. It is divided about as follows: Shell, 11 per cent; white, 56.5 per cent; yolk, 32.5 per cent. The shell is nearly all carbonate of lime. The mineral matter consists of phosphate of lime, salts, sulphur, iron, etc., but the exact proportion of these substances we do not know other than combined they make up one per cent of the whole. Large eggs contain more water than small eggs. In the dry matter of eggs laid by hens of normal size there is not much difference in the large and small egg.

WEAK CHICKS.

I am a reader of your paper and would like to have you advise me what to do to avoid the trouble we had with our chicks last spring. When a few days old many of them would stagger around in an unsteady way, then later get down on their sides and get to look so miserable that I drowned many of them, thinking they would never be any good although they ate well. They were Buff Orpington stock hatched in an incubator, kept in baskets in the kitchen at night, and on the grass during the day when the sun shone. They had water and stale bread soaked in milk at first. Bran formed a part of their feed, with some barley and oatmeal, smearcase, and later, whole wheat. Some of the survivors seem a little deficient yet, with defective eyesight. We change males every year. We mix bran middlings, oil meal and curd of sour milk and give them whey for drink. Is this good for hens? R. L.

There are several causes for the condition you mention. It may be that the chicks are naturally weak, inheriting this weakness from their parents. A too concentrated a diet, lacking in green feed and bone, Lice or a chill. Any of these will cause the chicks to become weak. We should not use oil meal for young chickens. The sour milk is good for them and should always be fed sour but not after it has spoiled.

PIP.

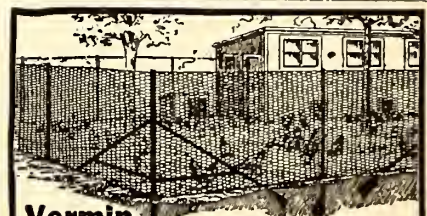
Please tell me what to do for pip on poultry tongue. I cannot raise chickens, turkeys, ducks or guineas on account of pip and have lost about \$100 worth a year. D. R. Leesville, S. C.

Pip is the result of a cold. The nostrils become clogged and the bird breathes through the mouth and this leads to a dryness and hardening of the tip of the tongue. Damp or ill-ventilated quarters are the source of colds. Treatment is simple and consists first of all in bettering the conditions to which the fowls are subjected and thus removing the cause of the disease. The fowls should be placed in a warm, dry coop, where the sun can shine in freely, supplied with small quantities of tempting food and clean water in clean vessels to which may be added fifteen grains chlorate of potash to the pint. A little onion in the food is also an advantage.

LIMBERNECK.

A valuable rooster had an attack of limberneck and was partially cured. He has no control over his head or neck. He is easily frightened and when he becomes frightened his head jerks around from side to side, in fact he cannot control himself, but turns round and round. Would be pleased to know of a cure. A. D. Velpen, Indiana.

Treatment in a case like this which has become chronic will be rather unsatisfactory, as it must be continued for a considerable period and medicine regularly administered. Then there is very little encouragement to treat such a bird as he will only be fit for the pot when he is cured. He is probably in condition for that mission now. You would certainly not want to breed from a bird which has been sick, even if he is cured. We get enough weak and diseased chicks when we breed from the healthiest parents. However if you wish to try to administer night and morning a piece of asafoetida the size of a pea. If this does not effect a cure in a couple of weeks we would not bother with him.



Vermin Proof—Sanitary Poultry Yards

are a reality with Carbo Steel Posts in the yard. That's one reason why they are used and endorsed by poultry fanciers, leading agricultural colleges—on Ames Agricultural demonstration farms—used by United States Government.

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Special Price List on Request Units for 5 ft. fence 45c. Carried by 12,000 dealers—one near you. Send postal for dealer's name and users' offer P, before building a poultry yard. CARBO STEEL POST CO. 897 Rand-McNally Building Chicago, Illinois

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J. W. MYERS, Pres. Reliable Incubator & Brooder Company, Box A-15 Quincy, Ill.

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AND ALMANAC FOR 1914. There is nothing in the world like it. It contains over 200 large pages, handsomely illustrated. A number of most beautiful Colored Plates of Fowls, true to life. It tells all about all kinds of Thoroughbred Fowls, with life-like illustrations, and prices of same. It tells how to raise poultry successfully and how to treat all diseases common among them. It gives working plans and illustrations of convalescent Poultry Houses. It tells all about

Incubators and Brooders

It gives full instructions for operating all kinds of incubators. This chapter is marvellously complete and worth dollars to anyone using an incubator. It gives descriptions and prices of incubators, brooders and all kinds of Poultry Supplies. In fact, it is an encyclopedia of chickendom, and will be mailed to anyone on receipt of only 15 cents. Your money returned if not pleased. The Globe Incubator. Best in the World. C. C. Shoemaker, Box 928 Freeport, Ill.

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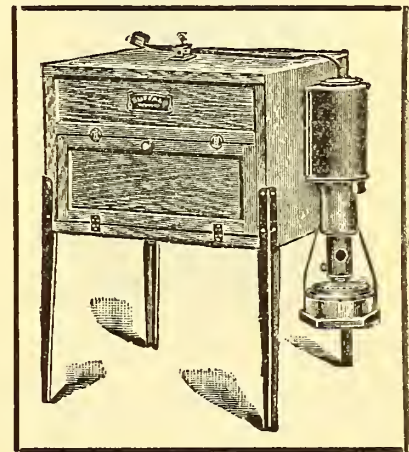


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The Cyphers who is "The Recognized Authority on Artificial Hatching"—The Cyphers who made Commercial Hatching possible—The Cyphers who discovered the Cyphers Principle—The Cyphers whose Incubators Circle the world—The Cyphers who will sell you his latest creation, the "Buffalo" at

HALF THE STANDARD PRICE

Every vital Principal that made my original Cyphers a world success is embodied in the "Buffalo." The same three-compartment heater; the diffusive ventilation; and sensitive and accurate regulation; combined with heavy insulation and durable construction. For Durability, Reliability and quality, the "Buffalo" is a wonder. "Buffalo" Incubators insure you big hatches of strong chicks that live and are easily raised to make money for you. 80 per cent of the output of "Buffalo" Incubators are sold to poultry raisers who must make a success of their work to live. 80 per cent go to men who know; who have used my incubators in the past; who would use no others. You can't make a better selection.



THE BUFFALO HANDY HOVERS

The Buffalo Handy Hovers are just what their name implies.

The Buffalo "Handy" is a floor level hover. You can set it any old place.

Sanitary—All galvanized iron.

Heats Easily—Walls are heavily packed with good insulating material.

Uses But Little Oil—Flame burns with a white light, which indicates complete combustion.

Hottest at Outer Circle—heat is brought lowest at that point.

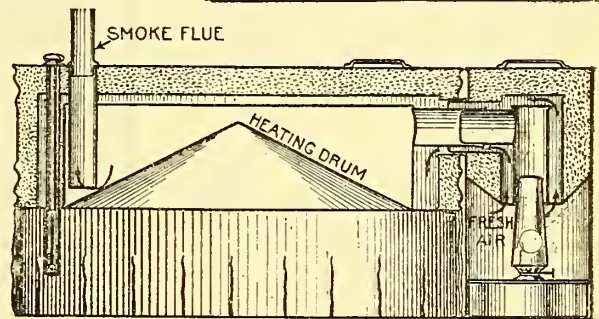
Perfectly Ventilated—heater is double with fresh air flue.

Handy—just pick it up and set it aside to clean the floor.

Lamp flame can be seen without stooping. Lamp compartment or heater is attached to hover with "rolled-edge slip-joint," and is quickly detached for tending lamp.

Has all the good points of others, with thick walls and complete combustion added. Others are thinly insulated and are hard to heat. Other lamps burn a yellow flame, and waste oil. The Buffalo Handy Hover will heat 10 degrees hotter with same oil consumption; and in a room too cold to use any other hover.

Send postal for fuller description.



Buffalo Handy Hover 100 Chick Capacity.

CHAS. A. CYPHERS

President Buffalo Incubator Company

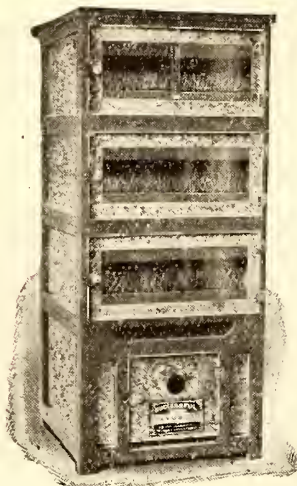
467 Dewitt Street

BUFFALO, N. Y.

A VERY STRONG GUARANTEE.

which must interest every one of our and that is the Des Moines Incubator Co., guarantees the feeding of sprouted oats as produced in the "Successful" Sectional Grain Sprouter will materially increase the egg yield from your hens during the winter months and at the same time decrease the cost of feeding them. This guarantee is backed personally by Mr. Gilerest, who for twenty years has manufactured the well known "Successful" Incubator and Brooder.

We give herewith an illustration of this wonderful green egg making and



cheap feed producer, which is different from all other makes. It is built in sections, with double steel trays, rendering it indestructible and absolutely safe anywhere in the house. Every poultry raiser should strive to obtain as many eggs as possible from his hens especially when this can be done by lowering the cost of feeding at the same time.

They want you to send for their illustrated descriptive matter showing the sprouter and sprouts in their natural color. See their ad. on another page or write now to the Manufacturers, Des Moines Incubator Co., 565 Third Street, Des Moines, Ia.

HERE IS THE ADDRESS.

Last month we published a small one half inch advertisement for one of our patrons offering a four months' trial subscription for 10 cents, but inadvertently left off the name of the publication giving only the name of the postoffice where this journal is published. The full address should have been Poultry Post, D.26, Goshen, Ind. We are glad to call the attention of our readers to the same advertisement properly inserted in this issue. Their offer of four months' trial subscription still holds good and we hope everyone of our readers will take advantage of it. They will also gladly send you a sample copy free upon request. Remember, address them, Poultry Post, D-26, Goshen, Ind.

NEW—NEW—NEW—

SHEER'S Latest Production

Patent Applied For

FRIEND Poultryman, this incubator gives results. No other incubator you have ever seen has the design and features of this. No other incubator you have ever used has given the high percentage hatches day in and day out this is giving. Its marvelous price is just \$6, delivered to you.

More than 11,000 ordered before one line of advertising appeared. One poultryman, after test, ordered 50. One man, inexperienced, cleared \$150 with one little hatcher in 5 months. **Results — that's the answer.**

This is the first practical all metal, fireproof, everlasting machine ever produced. The first machine of its size with a perfect heating and heat distributing system.

Peerless-60

Round Like a Nest. Eggs heated from above with the patented triple wall heat radiator. All heat is used. Regulation of heat, ventilation and moisture is all automatic. Equipped throughout with the famous Sheer fixtures. Wonderful Sheer Wafer Thermostat Regulator automatically turns lamp flame up and down to meet temperature in egg chamber. Overheating impossible. Uses less oil than any other incubator on earth per dozen eggs. I am ready to prove these facts.

Let Me Send You a Sample Incubator

Let me send you one of these machines so you can see for yourself, upon the absolute guarantee of results or your money back. This is a fair, square offer. It means money in your pocket. Write me today.

H. M. SHEER, Dept. 3, Quincy, Illinois

\$6 DELIVERED

Coal-Burning Self-Feeding Self-Regulating Brooders

are money-savers and money-makers. They save labor and fuel, greatly reduce mortality, and Grow the Chickens.

They demand the construction of no special buildings. May be satisfactorily operated in any comfortable structure, as a barn, colony house or large poultry building. Each forms a complete brooding system, at once safe, convenient and efficient. They are easily installed and may be quickly moved as required.

No other piece of "chick machinery" so satisfactorily meets the requirements of so many different classes of poultrymen. Small and large operators alike may use them to advantage, either exclusively or in addition to their present equipment.

Newtown Giant Colony Brooders

are made in two sizes, the smaller for any number of chicks up to 500, the other for 1,000 to 1,500.

The coal-burning stove is controlled by a simple but powerful regulator. This positively maintains the temperature at the desired point regardless of weather changes. The coal magazine holds sufficient fuel to last from one to three days. Fuel costs but eight cents per day. And there is no danger of fire, which is a mighty important factor.

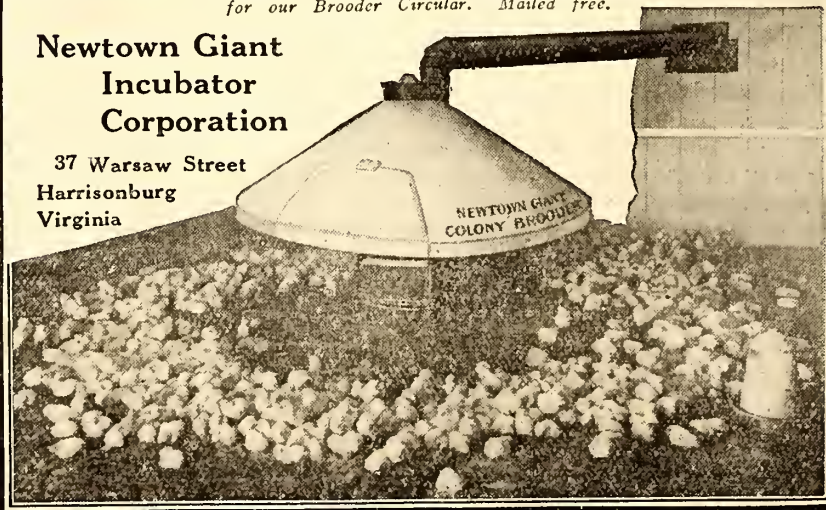
The hover furnishes the maximum of chick comfort, being light and well ventilated. No fumes or gas; no crowding; no chilling; no over-heating.

Don't add to your brooding equipment until you investigate the merits of this—the **best brooder on earth.**

Inspect it at your dealer's. Or write to-day for our Brooder Circular. Mailed free.

Newtown Giant Incubator Corporation

37 Warsaw Street
Harrisonburg
Virginia



BUFF LEGHORNS ON A NORTHERN EGG FARM.

Thinking that you might be interested in knowing what results I received from the classified ad. which I carried in the Poultry Keeper for four months this spring, I will state that I was surprised at the number of orders which it brought me as I shipped \$68.00 worth of eggs for hatching. I shipped them as far out as Denver, Col., and east to New Jersey. Who could wish for any better results than this? All of which proves that the Poultry Keeper is a very reliable paper in which to place an ad. You will certainly be favored with my ad. again the coming season. As I have had a very successful season.

I will give you my egg record which I have kept for the past year. My flock averaged 164 eggs per hen this year Here is their egg record for one year.

	Number of
December, 1912, 29 hens	.....120 eggs
January, 1913, 29 hens	.....435 eggs
February, 1913, 29 hens	.....529 eggs
March, 1913, 29 hens	.....535 eggs
April, 1913, 29 hens	.....487 eggs
May, 1913, 26 hens	.....450 eggs
June, 1913, 26 hens	.....435 eggs
July, 1913, 26 hens	.....280 eggs
August, 1913, 26 hens	.....280 eggs
September, 1913, 26 hens	.....308 eggs
October, 1913, 22 hens	.....367 eggs
November, 1913, 22 hens	.....238 eggs
Total	..... 4570 eggs

I wish also to state that several of my April hatched pullets were laying before they were five months old. These are all Rose Comb Buff Leghorns Michigan. E. B. STACY.

SUCCESS WITH POULTRY.

The best book on poultry ever published, one which embraces every branch of the poultry business, is Success With Poultry. From the first chapter, "How to Get Started," to the different chapters on every phase of poultry for profit, this is a book that is of greater value than any other ever published.

Do you want to get plans for buildings used in the big poultry plants of the country? Success With Poultry will tell you.

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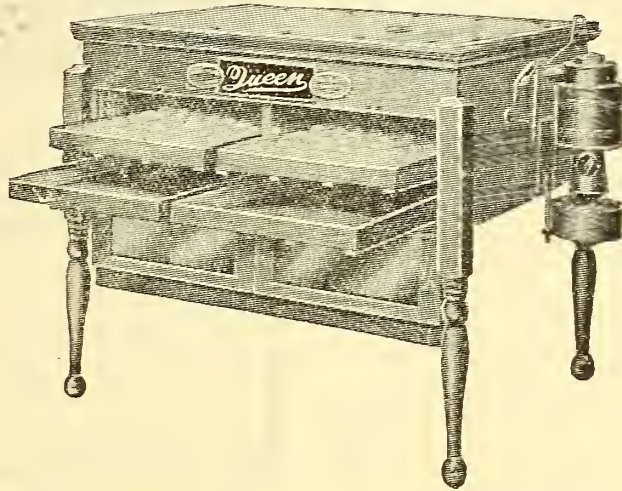
Do you want to learn about raising capons, foods and diseases of poultry and remedies? Success With Poultry tells this.

...Success With Poultry contains 128 pages (9x12 inches in size) with numerous half-tones and etchings. Price is \$1 per copy. For price of book alone we will furnish a full year's subscription to Poultry Keeper and send Success with Poultry postpaid. Offer is good for new subs or renewals. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

This is the Famous



The Incubator of Quality



Read This 4 Months' Record

This spring we purchased a Queen Incubator from you. Following are our hatches:

- May—101 chicks from 105 fertile eggs
- June—107 " " 107 " "
- July—102 " " 106 " "

In August we loaned it to a neighbor and she broke the thermometer and went five days without one, and hatched 96 chicks from 108 fertile eggs. We think the Queen is the only incubator.

F. W. RATHBUN, Arlington, Neb.

Started With One Queen, Now Using Forty-four

This QUEEN worked so satisfactorily that in the following spring we ordered six more of the same size (360-egg). When we decided to establish our large hatchery in Philadelphia in 1911, we placed our order with you for twenty-three more 360-egg QUEENS. This spring (1913) we purchased ten of the Ranch size QUEENS (560 eggs) and altogether we are now operating thirty-four 360-egg QUEENS and ten 560-egg QUEENS. They turn out a better average per cent hatch and produce stronger chicks than any other make we ever used.


C. TOWNSEND ALLEN
Mgr. Orchard Poultry Farms
Philadelphia, Pa.

THESE are but two of many similar reports of success from Queen Incubator users. The Queen gets its great popularity from the good work it does—its uniformly big hatches, its strong, livable chicks. The Queen has the hatching faculty. It is strong and durable, built to last 25 years. It is up to date, with every approved incubating appliance and 28 special features. Paying more money than the Queen price will not get you a better incubator. The Queen sells at a fair price on a fair plan. Investigate the Queen. Start now. Write for our fine Poultry Guide and Catalog which gives particulars. Fully illustrated. It's free. Address

QUEEN INCUBATOR CO.

Box 2, Lincoln, Neb.

BIG PROFITS
 result when chickens are free of mites and lice. Use **AVENARIUS CARBOLINEUM (REG.)** for cleaning poultry houses once a year. Write for circulars. Carbolineum Wood-Preserving Co., Dept. 54 Milwaukee, Wis.



POULTRY NOTES.

Eggs in winter mean money, and the lack of them means loss. If you realize this thoroughly you will set to work.

Hens that are laying consume more feed than those that are not laying and in winter they need more than in summer.

Give plenty of room in well ventilated houses.

Some hens have a born tendency to lay, while others have a born tendency to put on fat.

Egg shells should be powdered and mixed with the mash; never give in a whole state.

One feeding rule is to give the hens half as much as they will eat of a morning, nothing at noon and a full meal at night.

As the weather becomes colder the eggs should be gathered several times a day.

Cabbages, mangels, potatoes, etc., make excellent green feed.

A little moistened food is relished, and will slightly increase egg production.

It must not be forgotten that the food flavors the flesh as well as the egg.

There is no stock that pays a higher rate of interest on an investment than poultry, although many farmers consider it of little value.

Wheat contains a larger amount of albumen than any other grain, and therefore should be the basis of all egg producing foods.

Give your birds plenty of green food in most any form. They like it and will tell you so by the egg basket and flavor of eggs, also. They even relish an apple chopped up, as yourself, and the saying is, "an apple a day will keep the doctor away."

Eggs may be flavored by the feed given to the hens. Breed has nothing to do with the flavor of an egg. Good flavors are produced by keeping hens in clean quarters and giving them good feed.

No poultry house is complete without an adjoining open front scratching shed. Here, during bad stormy weather or severe cold weather, the fowls may be confined and if kept busy will be happy, healthy and what is more to the point, profitable.

In order to keep the system toned up it is best to feed some green food, such as refuse heads of cabbage, turnips or alfalfa and clover leaves steeped a few hours. Keep all drinking utensils clean and fill with warm water three times each day, especially in cold weather. Where possible, give the turkeys all the sweet milk they can possibly drink. Clabber will also be healthful. They will stand about the trough and drink until the last.—Exchange.



If your feed bill is high—Reliance Sprouted Oats will cut the bill in half. If your hens don't lay and your egg yield is below average—Reliance Sprouted Oats will keep them laying all winter and increase the yield over 50%. If your hens are not thriving—Reliance Sprouted Oats will make and keep them healthy, sturdy and promote growth.

\$200 Back for Every \$1.00 You Spend

NO other one thing, since the invention of the modern incubator, pays the poultryman such large dividends as a reliable grain sprouter—**The Reliance**.

And, if there is one time more than another when every poultryman absolutely needs a Reliance Sprouter—not only for the profit it brings, but for the chicks it saves—now is the time, during the cold days of January, February and March.

Figure it up for yourself and you'll see that for every dollar you spend for a sprouter the Reliance will make and save 2 to 3 times that much for you every month.

Reliance Grain Sprouters
Are Sold Direct from Factory at Low Bargain Prices

In November and December we cut the price on all four sizes way below competition. We will adhere to that low price for the rest of the season. Better values you can get nowhere else.

The Reliance is Not Only Cheaper—But BETTER

It has double walls, double insulation, extra galvanized iron linings, galvanized trays, (not wooden), strong screening. The lumber is of the highest grade, the heating system is better, the ventilating system is faultless; besides the front contains more glass which induces larger quantity of sprouts. Write for literature and low prices. We ship same day order is received. Safe delivery guaranteed.

Reliance Incubator Co., Dept. 65, Freeport, Ill.
 Manufacturers of Grain Sprouters, Incubators, Brooders

Reliance Sprouted Oats



Taken from photo of 3 bu. tender, juicy sprouts. All from 1 bu. of oats placed in a Reliance Sprouter on Monday and taken out on Saturday morning. Think of the cheap feed you're getting and the extra eggs.



Taken from photo of tray full of sprouts before feeding a flock of hens. Note the tray is not wood—but heavy galvanized iron with double locked and riveted frame which can not rot or wear out like the wooden ones. Other superior features in our literature. Send for it.



Baby Chicks, Eggs for Hatching, Breeding Stock

"Tywacana Quality" means heavy laying ability combined with fine marketing qualities and "Standard of Perfection" requirements. Improve your flock or start anew with some hardy and vigorous day-old chicks, breeding stock or eggs for hatching from

TYWACANA White Leghorns, Barred and White Plymouth Rocks

Book your order now for eggs or day-old chicks, as the demand for "Tywacana Strain" stock is increasing each season. Tywacana Baby Chicks and Eggs are shipped in strong, light, safe and sanitary boxes especially designed to save transportation charges and insure protection of chicks or eggs during long shipments.

Write for Free Illustrated Catalog

Send today for our big, beautiful catalog describing Tywacana Farms Leghorns and Rocks and giving prices on chicks, eggs and breeding stock. Prompt shipments. Satisfaction guaranteed.

TYWACANA FARMS POULTRY CO.
 A. E. Wright, Supt. Box 57 Farmingdale, L. I., N. Y.



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Local Agents are wanted at once by us to sell our complete line of Incubators, Brooders, Hovers, Foods, Insecticides, Metal Goods and General Poultry Supplies.

Liberal Cash Discounts Allowed—No Capital Required. Some of our Local Agents make \$200 to \$350 in the Three Spring Months and devote only their spare time to the work. For full particulars, address our place of business nearest you.

CYPHERS INCUBATOR COMPANY, Factory and Home Office, Buffalo, N. Y.

Branch Houses: New York, N.Y. Boston, Mass. Chicago, Ill. Kansas City, Mo. Oakland, Calif.
 41 Barclay St. 12 Canal St. 329 Plymouth Court 317 Southwest Blvd. 2127 Broadway

FEEDING FOR WINTER EGGS.

There is nothing particularly difficult or mysterious about getting winter eggs if you have the right kind of hens. But the general idea that anything that has feathers will lay eggs if only you can find the right sort of feed needs correction. The feeder who thinks he has another guess coming because he does not get eggs from a given method of feeding or a certain feed will generally find, when too late that it was useless to try to get winter eggs from his stock at all. It is possible by making a supreme effort, to

get a few winter eggs from old hens, but it does not pay. It is a comparatively simple matter to get them with early hatched pullets and, in some cases, with one year old hens. Something depends upon breed, but the statement will apply in a general way to all the larger breeds. While there are a multitude of rations and methods of feeding there are no essential differences between the successful ones because there are no "best" or indispensable feeds or ceremonies.—Exchange.

Too Late To Classify.

Sanborn Business-Bred Layers

DORR'S TRAP NESTED ANCONAS. Two year old, well mottled hens, mated with strong vigorous, dark, unrelated cockerels. Eggs now. Frank E. Dorr, Box 327, Woodsfield, Ohio.

S. C. ANCONAS. Eggs \$2 for 15. Book now for spring delivery. Good dark stock. H. W. Leyenberger, Floral Park, N. Y. 1-3

SINGLE COMB ANCONAS. Bred to lay cockerels. \$1 and \$2 each H. O. Bernhardt, Sturgeon Bay, Wis. 1-1

MOTTLED ANCONAS, Partridge Wyandottes, Single Comb Rhode Island Reds, White Cornish, White Leghorns; Rouen, Pekin, Indian Runner and White Call Ducks. Black Rose Comb Bantams, White Rose Comb Bantams, Red Pyle Game Bantams. First class stock. Healthy vigorous, line bred cockerels. Have score cards with every bird and satisfaction guaranteed. Judge Cary, Trimble, Ohio. 1-4

BABY CHICKS for January shipments. Guarantee safe arrival 2,000 miles. True Standard bred Barred Plymouth Rocks Buff Orpingtons, White Orpingtons, White Wyandottes, White Leghorns, Reds. Write for free circulars. Eggs for hatching. Martin Michelson, 232 5th St, Aurora, Ill 1-4

DAY OLD CHICKS. Hatching eggs, great specialties. Wyckoff-Blanchard S. C. White Leghorns Any number, any distance, fully guaranteed. Great reduction in prices. Twenty-three years in the business. Hundreds of testimonials. Send for circular. Certain to get your order. C. N. Reynolds, Canton, Pa. 1-4

BABY CHIX Express paid. Ten leading varieties. Fifteen dollars the hundred. Eggs six dollars the hundred. Satisfaction and safe delivery guaranteed. Order now, Madison Square Winners. Cedar Hill Farm, Saugerties, N. Y. 1-1

BABY CHICKS and eggs from seven varieties. All orders given prompt attention. Catalog free. East Saugatuck Hatchery, East Saugatuck, Michigan, Box 21. 1-4

BANTAMS, 34 varieties. Egg orders booked. Send 2c stamp for circular. The Penn Bantam Yards, Box 77, DeLavan, Wis. 1-6

McDILL'S BUCKEYES, Winners wherever shown. B. L. McDill, 421 West 43rd, Indianapolis, Ind. 1-1

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LIGHT BRAHMAS, Stock for sale. Scored birds. Eggs \$2 and \$3 per fifteen. Write for winnings and prices. Perfect satisfaction guaranteed. J. E. Garrison, North Tenth St., Mt. Vernon, Illinois. 1-4

SILVER CAMPINES, SICILIAN Buttercups. Eggs. Write, E. H. Adams, Outwood Pa. 1-4

CAMPINES THAT ARE CAMPINES. Write your wants and get prices. Every bird guaranteed satisfactory or money refunded. Several cockerels at reasonable prices. Eggs in season. Chas Abel, Johnstown, N. Y. 1-4

SILVER CAMPINES (Jacobus). Some from Jacobus best eggs. Prices right. Satisfaction guaranteed. Eggs in season. Robert N. Morgan, Geneva, Ohio, 1-1

IMPROVED SILVER and Golden Campines. Imported stock. Eggs for sale. P. G. Miltner, Painesville, Ohio. 1-4

CORNISH INDIAN GAME cockerels. Extra fine, \$2.00 each. Chas. A. Ramsay, Watson, Mo. 1-1

DARK CORNISH the victors. A few for sale. "Satisfied customers" is my motto. Stamp for prices. John R. Wall, Yards' 719 W. Marietta St, Decatur, Ill 1-4

I have my farm so well stocked with egg bred Buff Wyandottes that I am going to P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$5; 100 eggs, \$12. Mention P. K. in ordering. My three books ordered with eggs, \$1 additional.

DR. N. W. SANBORN, R. F. D. 24,

HOLDEN, MASS.

DOGS. Collies. All ages. Catalogue Falling Poultry Farm, Lafargeville N. Y. 1-4

AMERICAN DOMINIQUE. Very best. there is in Dominiques. A. Q. Carter, Freeport, Maine. 1-3

COOK'S STANDARD FAWN INDIAN RUNNERS America's oldest and best large white egg strain. Ask for descriptive booklet and prices of stock and eggs. Irving E. Cook, Munnsville, N. Y. 1-4

INDIAN RUNNERS. Fawn and White. Choice white egg strain. 12 eggs \$1.00. H. E. Littleton, Farina, Ill 1-4

INDIAN RUNNERS. Light, Fawn and White, heavy white egg strain. Eggs, 15 for \$1. Young ducklings in May. R. H. Vreeland, Manasquan, N. J. 1-6

GEESE FOR SALE. Giant, English, Toulouse, two years. Show birds, \$15.00 trio. Chas. Brown, Maineville, Ohio. 1-1

TOULOUSE GEESE, ganders, \$3.50; geese, \$3.00; trio \$9.00. Clifford Kent, Alta, Ill. 1-2

PEARL GUINEAS and Silver Laced Wyandottes from prize winners. H. McMahon, Middlefield, Ohio. 1-1

BIG BONED, greenish, glossy, dark eyed. Black Langshans (scored). \$2.50 and \$5. Eggs, 15 cents. H. Osterfoss Hedrick, Ia. 1-4

TOM BARRON WHITE LEGHORNS direct. Also Young and Wyckoff strains. Eggs, \$1.00 per 15, \$5.00 per 100. Catalog of matings and poultry supplies free. The Elmore Farm, Bridgeport, Conn. 1-4

S. C. WHITE LEGHORNS from heavy laying stock. Eggs for hatching, \$5 per 100. Day old chicks, 10c each, any amount. Satisfaction guaranteed. Mt. Senia Poultry Farm, Ripley, N. Y. 1-4

EXHIBITION ROSE COMB White Leghorn cockerels, scored or unscored, will win anywhere, only \$3.00 to \$5.00 each. Satisfaction guaranteed. Harry C. Alken, Chaseburg, Wis. 1-4

LEGHORNS, cockerels. S. C. White. Catalog Falling Poultry Farm, Lafargeville, N. Y. 1-4

CHOICE WHITE LEGHORN COCKERELS for sale. Price two dollars each. Three for five dollars. I am now booking orders for eggs and baby chicks. Eggs, \$1.50 for fifteen, two fifty for thirty or six dollars per hundred. Baby chicks, ten cents each. L. W. Hamblin, Wilson, Niagara Co., N. Y. 1-4

SUPERIOR UTILITY S. C. W. Leghorns. A few good cockerels for sale. Eggs and baby chicks in season. Satisfaction and safe delivery guaranteed. Order now for future delivery. Circular free. W. H. Beers, Cameron Mills, N. Y. 1-4

SINGLE COMB WHITE ORPINGTON cockerels. (Cheviot and Kellerstrass strain) \$2 and \$5 each. Eggs in breeding season. W. E. Hobart, Box 69, Route 1, Canon City, Colorado. 1-4

S. C. BUFF ORPINGTON stock, also eggs \$2 for 15. Geo. W. Martin, 231 Lulu Ave., Wichita, Kansas. 1-4

ORPINGTONS, WHITE AND BLACK. Winners Quincy, Peoria, Canton. Fine young stock for sale scoring up to 95 by Russell. Bargains in breeding pens or trios. O. W. Brickner, Canton, Ill. Route 4. 1-4

BUFF ORPINGTON cockerels, \$2.50. Pullet, \$1.00. Mrs. N. Vickery, Arkoe, Mo. 11-3

ROSE COMB WHITE ORPINGTONS. Won 17 out of possible 18 firsts, 5 seconds, 2 thirds, 1 fourth, silver cup for best cock-hen-cockerel-pullet and 34 other specials, on 23 entries. Stock and eggs. Rose Comb Reds, choice cockerels \$2 and \$3 each, a few pullets at \$2. A few Exhibition birds in S. C. Black Minorcas. Prices right. Utility \$1 up. Write me your wants and booklet of winnings, etc. E. M. Mengel, Dreherstown, Pa. 11-x

PARK'S 200-EGG BARRED ROCKS, Penz headed by son of Park's hen "Muzz" 232 eggs. Hens with records 238-246 eggs. 15 eggs, \$1.50. Circular free. Frederick Matteson, 3848 Woodley Lane, Washington, D. C. 1-4

BUFF ROCKS. "Gold Nuggets." Cockerels. \$2.00 and \$3.00. 300 farm raised, good size and color. Eggs, \$2 per 15, fertility guaranteed. John W. Morgan, Marietta, Ohio. 1-4

WYMAN'S PARTRIDGE PLYMOUTH ROCKS, Cleveland winners. Hens and pullets, \$1.50 each; cockerels \$2. E. F. Wyman, Route 2, Brunswick, Ohio. 11-6

PLYMOUTH ROCKS. Bickerdike and Fishel strains. White Rock eggs, \$2 and \$3 per 16. One choice mating, \$5 per 16. Barred Rocks \$1 and \$2 per 16. Fancy Hill Poultry Yards, Joseph Bird, Hagers-town, Ind. 1-4

PARTRIDGE PLYMOUTH ROCKS. Illinois State Show Winners. Circular free. Stock \$2 to \$5 each. Eggs \$3 per 15. Notfinger strain. State vice president of club. John Hacker, Marissa, Ill. Box K. 1-4

BARRED ROCKS OF QUALITY and utility. Bred to lay, pay and please. Splendid winter layers. Mature birds for breeding used. Eggs, sitting \$1.50 prepaid. C. G. Johnson, Richwood, Ohio. 1-6

E B THOMPSON'S Ringlets. Barred Rocks, direct. Extra choice cockerels. Barred Rocks, big, vigorous stock; bred from winners, best New York winning blood; from proved winners. Have spared neither pains nor money. Wm Huckle, Waverly, New York. 1-1

PARTICULAR PRINTING FOR PARTICULAR POULTRYMEN. Anything in the line that is good. Maple Leaf Print Shop, LaPorte, Ind. 1-4

200 EACH NOTEHEADS, envelopes, cards, all \$1.75 or 1,000 each for \$6.99. Illustrated with your particular breed. A-1 quality, samples free. Thos. C. Clark & Company, Michigan City, Ind. 1-4

FOR SALE—R. C. R. I. Red cockerels, from prize winning stock, \$2.00 each. Farm raised. Elmer Landis, Mt. Pulaski, Ill. 1-1

BIG BONED, deep red Rose Comb Reds. Long back, low tail, red eyes, scored. \$2.50 and \$5.00. Eggs 15 cents. Highland Farm, Hedrick, Iowa. 1-4

S C R I REDS for sale cheap. High scoring quality. Going out business. Cockerels, hens, pullets. Old Trusty incubator, \$5.00; Humphrey bone cutter, new, \$7.00. Scotch Collie dogs. G. M. Saunders, Independence, Iowa. 1-2

ROSE COMB REDS; cockerels bred from hens with records of 200 eggs and better \$2.00 and \$3.00 each. H. O. Bernhardt, Sturgeon Bay, Wis. 1-1

RHODE ISLAND REDS, Fawn and White Indian Runner Ducks. Vigorous stock. Satisfaction guaranteed. All eggs, \$1.25 per 15. Mrs Ed Criger, Alvada, Ohio. R. F. D. 1. 1-4

STANDARD LOW-COST BROODING DEVICES.

On page 343 of this issue of Poultry Keeper will be found an advertisement of the all metal, self regulating, portable and adaptable hovers, manufactured by Cyphers Incubator Company, Buffalo, N. Y., New York City, Boston, Mass., Chicago, Ill., Kansas City, Mo., and Oakland, Cal. Following are two sample reports from Cyphers Company customers, telling of the good work done by these brooding devices:

Birchmont Poultry Farm, Montvale, N. J.

July, 18, 1913.

Cyphers Incubator Co., Buffalo, N. Y.

I have used several makes of hovers and after a thorough trial find the Cyphers Company's Portable the most suitable. I am especially pleased with the self-regulating feature, which avoids the necessity of visiting the hover several times at night to see that the temperature is not too high or too low, as is necessary in using hovers that depend for regulation on the raising or lowering of the wick. Being portable or movable this hover can be placed in a room, colony house or other poultry building and will work satisfactorily. Should I at any time require additional hovers, I certainly shall get the Cyphers portable.

C. Bullinger.

Buckton, Mo., July 19, 1913.

R. F. D. 2.

Cyphers Incubator Co., Buffalo, N. Y.

Our Cyphers Adaptable Hovers have proved themselves to be all you claim for them. We have tried them out in cold, rainy weather with lots of wind and the temperature was more regular than the temperature of a small incubator we had in the house. We can cheerfully recommend the Cyphers Adaptable for use in any and all places where it is safe to brood chicks. It is all that the name "Adaptable" implies. We have not lost over five per cent of all chicks put into them. We have a 244-egg Standard Cyphers Incubator about eight or ten years old and it is still doing good work. We have the best of feeling for all Cyphers Company goods.

W. Walter Harman.

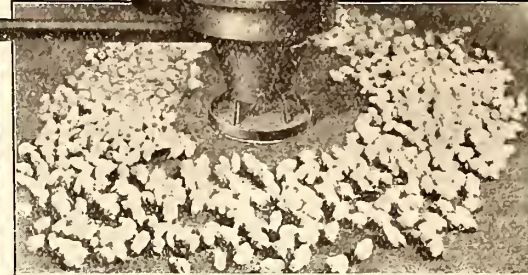
Reader is requested to look up the Cyphers Company's full page advertisement of these brooding devices on page 343 of this issue of Poultry Keeper.

THOROUGHbred FOWLS FREE.

Elsewhere in this issue you will find an offer made by the POULTRY POST, Goshen, Ind., of giving thoroughbred fowls in any number to anyone securing subscriptions for their publication. They have one of the best 25c poultry journals published and securing subscriptions for them is easy work. Write them today for sample copy and full particulars. Address them Poultry Post, Dept. 26, Goshen, Ind.

Free Book Tells How To Save All Your Hatch

Count Your Chickens



—not before they're hatched; it isn't safe; you may be disappointed. But it's safe to count them as soon as they're hatched, providing you have installed the Duplex Colony System of Brooding. If you can hatch fifty chicks at a time you cannot afford to use any other system.

This modern system raises even the weakest chicks, helps them thrive and become strong. It brings cripples to maturity. It saves every chick not suffering from organic defects.

Our book on "Colony Brooding" tells all about this system which not only raises all chicks to maturity, but positively saves three-fourths labor and fuel expense.

Duplex Combined Brooder Stove And Ventilator

Made in Three Sizes

50 to 300 Chicks
100 to 800 Chicks
500 to 1500 Chicks

This system of Brooding can be installed with less expense than any other system in use anywhere. It raises enough more chicks out of the first hatch to pay for itself. It is efficient and economical. It costs less for fuel and is dependable at all times, raising chicks as successfully in mid-Winter as in May or June.

Fresh air is the secret of successful brooding. The Duplex Combined Brooder Stove and Ventilator keeps the air perfectly pure and warm at all times without holes in the walls or ceilings; therefore, there's no possibility of a draught.

All the fresh air comes into the brooder house through the stove and is heated before it can pass into the room.

All the poisonous gases from the breath and droppings of the chicks are taken up off the floor and leave the room through the stove, with the air on the floor. The circulation is complete, and perfect ventilation is secured without the loss of a single heat unit. Burns cheapest kerosene, natural or artificial gas.

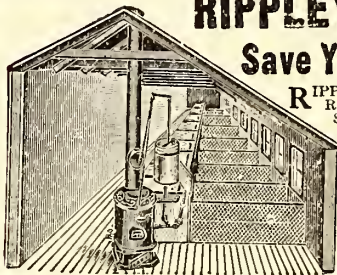
Every Chick Saved is a Dollar In Your Pocket

FREE Book "Colony Brooding" tells how to save chicks, save dollars. Send for it. Book also explains all features of Duplex Brooder Stove and describes all different sizes. Will quote you low price upon postal request. Get the book; it's FREE.

Duplex Colony Brooder Co., 483 N. Avon St., Rockford, Ill.

RIPPLEY'S HEATER AND COOKERS

Save Your Chicks, Pigs & 1/3 Your Feed Bill

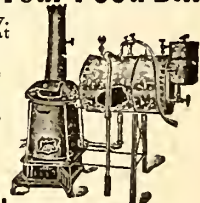


RIPPLEY'S No. 200 Heater works automatically. Regulates temperature in hovers; will heat 800 feet 1 1/2-in. pipe.

Also fine for heating Hog Houses, Green Houses, Work Shops, etc. We sell cookers from \$3.95 to \$50.00. We manufacture full line Egg and Chick Shipping Boxes, Fireless Brooders, Coops, Whitewashers, Sprayers, Carts, Chick feed, etc. Catalog mailed free.

RIPPLEY MFG. CO.

Box 24 Grafton, Ill., U. S. A.



10 IMPORTANT FEATURES

These 10 Important Features should be considered when you are at a loss to know just which Hover to select. 1. The Ideal Hover may be carried with lamp burning. 2. It broods the chicks the natural way. 3. Can be used in a Brooder, Colony House, Henhouse, or any place where it is suitable to brood chicks. 4. It sets on level floor with no bridges for chicks to climb. 5. Has a Hot Air Double Drum Heater that produces 15% more heat than the Single Drum Heater used in most of the better class Hovers. 6. It is the best Hover made for winter and early spring use. 7. The new Automatic Lamp is perfection in itself, oil fount is outside of the lamp box feeding cool oil to the wick and will never cause trouble by smoking. 8. Lamp flame is always in plain view. 9. It is 24 inches in diameter and will brood 100 chicks. 10. While the quality ranks with the best it sells at a lower price.

Before selecting your Hover for 1914 we want you to write us for Circular showing how the Ideal Hover is constructed, also showing it in actual use on the State Farm at Dayton, Ohio, where seventeen were used last June with excellent results. We will also send you Circular of the Queen Incubator which we sell. Tell us all about our Special Combination Offer of the Queen and the Ideal Hover, and if you will mention this paper when you write us we will include a copy of "How to Raise 90% of Your Chicks." Write us today. Dealers wanted to handle the Ideal Hover. NEW CARLISLE MFG. CO., New Carlisle, O., Successors The Duplex Incubator Co., Tremont City, O.



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Lay When Eggs are High

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The profits in poultry are in
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GRIMM'S CELEBRATED ANCONAS
Winners at Kansas City, St. Louis and
Springfield. Quality high; prices low.
Booklet free. Eggs, \$1.50 to \$5.00 per 15.
Fertility of every egg guaranteed. Fred
Grimm, Webster Groves, Missouri. 1-4

SINGLE COMB ANCONAS from high
scoring birds. Heavy egg production, Trio
\$5. Get my special prices on eggs and
baby chicks. Giant Homer Pigeons, \$1.25
per pair. John Geiger, Chatfield, Ohio. 1-4

SIX HUNDRED YEARLING ANCONAS
for our big baby chick trade this coming
season. You will want the best; get your
order in early. Illustrated catalog. J. O.
Somers, Bedford, Ohio. 12-4

ANCONA COCKERELS. Breeder and ex-
hibitor six years. Reasonable prices.
P. E. Gregoire, Newton, Illinois. 11-3

MUSKINGUM POULTRY FARM. Ancon-
as, 500 breeders for sale, \$4, \$6 and \$9 per
trio. Eggs and chix a specialty in season.
Catalog free. Evans & Timms, Malta,
Ohio. 11-4

FOR SALE. Surplus large, dark, neatly
mottled March Ancona pullets, \$2, younger
\$1.50; yearling hens, \$1.25. Cockerels \$1.50
up. From fine exhibition matings. Act
quick. W. H. Clipp, Hagerstown, Md. 11-4

SINGLE COMB ANCONA COCKERELS
and cocks at \$3 and \$5 apiece. Also some
fine pullets and yearling hens at reason-
able prices (Sheppard strain). Guy Shatto,
Dunkirk, Ind. 11-4

SHEPPARD'S FAMOUS ANCONAS. The
world's best. Single or Rose Comb. First
at world's greatest shows, including Lon-
don, England, Madison Square and Cleve-
land. Greatest egg record—256 average.
Catalogue free. Cecil Sheppard, Box H,
Berea, Ohio. President International An-
cona Club. 10-6

ANDALUSIANS.

FOR SALE, BLUE ANDALUSIANS.
White Langshans. Cockerels, pullets, bred
from best stock. Strong, healthy, large,
boney fellows. Satisfaction guaranteed.
R. A. Weinkauff, Box 56, Truman, Minn.
10-4

BABY CHICKS.

WE ARE BOOKING ORDERS for S. C.
White Leghorn day old chicks for March,
April and May delivery. Eggs at \$5.00 per
100. Send for circular. Address Meeme
Poultry Yards, Kiel Wis. 1-4

GET YOUR ORDER in early for strong
hustling baby chicks. Single Comb White
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Rocks, Black Minorcas and Golden Sebright
Bantams, 15c to 20c each. Safe arrival guar-
anteed. Baroda Hatchery, Baroda, Mich.
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BANTAMS.

"MOHAWK STRAIN SUPERIOR." Larg-
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Cochin Bantams. Madison Square Garden
winners, shipped on approval. Mohawk
Bantam Yards. Pox J, Schnectady, N. Y.

BUFF AND BLACK COCHIN Bantams.
Highest honors world's greatest shows.
Wm. Fillman, Red Hill, Pa. 11-4

**RARE BARGAINS, GOLDEN AND SIL-
VER SEBRIGHT, BUFF, BLACK, White**
and Partridge Cochins, Rose Comb Black,
Black Tailed Japanese, Red Pyle and
Black Red Game Bantams. Proper & Son,
Scholarie, N. Y. 8-13

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LIGHT BRAHMA stock for sale. Young
and old, both sexes. Eggs for hatching
in season. Satisfaction guaranteed. Send
for my prices. They are reasonable. Geo.
Lister, Box 27, Sibley Iowa. 1-4

DARK BRAHMAS—We have made a
specialty of breeding Dark Brahmas for
39 years. Can furnish a small number of
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Thos Perrine, Lebanon, Ohio. 12-4

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SICILIAN BUTTERCUPS. Fancy, qual-
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pullet, Cleveland Show, Dec., 1913. Eggs
\$1.50 to \$5.00 per 15; cockerels for sale.
H. M. Ackermann, Rock Creek, Ohio. 1-4

SICILIAN BUTTERCUPS. April and later
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BUCKEYES.

WEISBERG'S QUALITY BUCKEYES
Pullets now laying. Good breeding trios,
\$10.00. Pens, \$15.00. Glad to send cat-
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GARRELL'S PEERLESS CAMPINES
have proven their merits by their winnings
of many first prizes at St. Louis, Kansas
City and Springfield. If you want highest
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BRAEKEL CAMPINES. A few choice fe-
males for sale at a low price. A. A. Whit-
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SILVER CAMPINES Four firsts out of
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Show birds and utility stock for sale. Mon-
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PARTRIDGE COCHIN cockerels, pullets
and eggs for sale. Write for description
and prices to Chas. B. Ogg, Mt. Pleasant,
Iowa. 11-3

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FINE WHITE INDIAN RUNNERS of the
racy type. Also choice White and Fawn
Runners. Eggs at \$1.00 per twelve.
Oscar Wells, Farina, Ill. 1-1

SEND 1c STAMP for Duck Culture for
beginners. Show Pekins and White Runners
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MAMMOTH PEKIN DUCKS. Big breed-
ers from stock that has won at state and
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ENGLISH PENCILED INDIAN RUNNER
ducks. Excellent condition. Good type;
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\$5.00 per trio. Monroe Hopkins, Box 125,
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PENCILED WHITE EGG RUNNERS.
Young stock for sale. Eggs and ducklings
in season. Member Cumberland Club.
Mrs. Wayne Flint, Randolph, Pa. 12-4

WHITE RUNNERS 250 for sale. Fishel
and Spencer strains. Pure white eggs, pure
white breeders. As good as money can
buy anywhere. Price on application. G.
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WHITE RUNNER DUCKS. Winners at Chicago and Ill. State Show. Racy, large, white eggs. No stock. Eggs, 13, \$1.50; 50, \$4.00; 100, \$7.00. Orders booked. A. A. Whitford, Milton Junction, Wis 12-12

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CUMBERLAND DRAKES, Young's White Leghorn cockerels. Fine birds. White eggs. Mrs. Galvin Wilcox, (Hilcroft) Spencer, N. Y. 11-4

BARGAIN IN WHITE RUNNERS. 3 pens of seven each at \$10 per pen. Fishel's strain direct. George Christensen, Exeland, Wis. 11-3

INDIAN RUNNER DUCKS. Fawn and White, also White Chinese geese. Fine show birds and breeders. W. M. Sawyer, president of National Indian Runner Duck Club, Lancaster, Mo., Box P. K. 11-4

DUCKS—PEKIN, ROUEN, AYLESBURY, W. I. Runner and Fawn and White, Grey and White Call, Colored and W. Muscovy, Cayuga, Mallard, Teal, Pin Tail, Pheasants, Pea Fowl, Guineas. Geese—Egyptian Canadian, Brant, African Embden, Toulouse, Brown and W. China, Bronze and W. Holland Turkeys. Barred Rocks, Anconas, S. C. R. I. Reds, W. Wyandottes. Dawson Bros., Franksville, Wis., 10-3

INDIAN RUNNER DUCKS, light fawn and white, white egg strain. White Wyandottes, Martin Strain direct. Stock for sale. W. E. Markel, Continental, Ohio. 10-4

BUFF ORPINGTON DUCKS. Largest flock in state. First class stock for sale in large or small lots. Now is time to buy. Watch for egg ad later. Pherson, Bainbridge, Ind. 9-x

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GEESE, Mammoth Toulouse, White Embden, White China. Brown China, Gray African. Ducks; Imperial Pekins, Indian Runners, Rouens, Muscovys, Gray Call, Buff ducks. Turkeys: White Holland, Bourbon Red. High quality fowls at low prices. Alf A. Ziemer, Austin, Minn. 12-4

LARGE EMBDEN GANDERS for sale. Eggs in season. 20 cents each. Alvin Rame, Plattsmouth, Nebraska. 11-4

SILVER SPANGLED HAMBURGS.

SILVER SPANGLED HAMBURGS, cocks and cockerels. Prize winners, \$2.50 to \$5.00 each. Also utility stock, \$1.00, \$2.00 each. Great laying strain. Eggs, \$2.00 per fifteen. Raymond Heald, West Chester, Pennsylvania 12-4

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FEW THOROUGHbred Houdan cockerels for sale, \$2 each, if taken soon. Mrs. R. J. Morgan, 421 Dewey Ave., Chandler, Okla 1-1

FAMOUS HOUDANS. A nice lot of young birds. Fine winter layers. Cockerels, \$3.00; pullets, \$2.00. M. B. Richardson, Mocksville, N. C. 10-4

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COCKERELS. Black Langshans, \$2 to \$5. Golden Gate Farm, Lafayette, Ind. 12-4

MOORE'S WHITE LANGSHANS. Farmers' friends, noted for health and winter laying. Stock for sale for both farmer and fancier. Will gladly answer all inquiries. R. H. Moore, Nellie, Ohio. 11-4

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"AMERICAN QUALITY" SINGLE Comb Buff Leghorns. Bred for eggs but they win." Hundreds of grand winners, breeders, layers. Priced right. Leo Munger, DeKalb, Ill. 11-4

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WOODROW'S POULTRY FARM. S. C. W. Leghorn eggs \$1.00 per 15, or \$5.00 per hundred. Orders filled same day received. None too large, for we have 1,000 selected breeders. The largest S. C. W. Leghorn farm in Iowa. Write W. L. Woodrow, Oskaloosa, Iowa. 9-5

ROSE COMB BROWN LEGHORNS Stock and eggs from first prize winners at two Missouri, two Illinois state shows; Indianapolis, Centralia, etc., seven silver cups, first cockerel, seventeen times in nineteen shows. Oscar Wells, Farina, Ill. 10-12

SINGLE COMB WHITE LEGHORNS (Wyckoff Strain.) Bred to lay. Eggs \$5.00 per 100. Infertile eggs replaced. Two and four months old pullets. Stock free from diarrhoea. Robert E. Smith, Nassawadox, Va. 1-4

TOM BARRONS STRAIN S. C. White Leghorns; also Wyckoff strain. Any number strong chicks, hatching eggs from large vigorous farm range stock, carefully selected for heavy laying. Prices low. Choice males for sale. Circulars. Write wanta R. T. Ewing, Atlantic, Pa. 12-4

(BLANCHARD WYCKOFF) Single Comb White Leghorns. Hens, cockerels. Eggs \$2.50 to \$5.00 per 10. Catalog free. William Albers, Lombard, Ill. 9-12

SINGLE COMB WHITE LEGHORNS. Rose Comb Reds. Record layers. Cockerels, cock, pullets, yearling hens, \$1.00 each up. Albert Daily, Frankfort, Ohio. 12-4

PEDIGREED S. C. BUFF LEGHORNS. Stock and eggs bred from hens with records between 219 and 267, mated to 250 record blood. Winners at Los Angeles, Indianapolis, Columbus, Racine and Kansas State Shows. Winners for any show now. Dr. L. Heasley, Dorr, Mich. 11-9

FINE COCKERELS. S. C. White Leghorns, (Lakewood Strain). Price \$2 to \$5 each. John Senior, 1622 Fourth St., New Brighton, Penn. 11-3

ROSE COMB WHITE LEGHORNS. Cockerels fine white. P. Augustin, R. 3, Orland, Illinois. 11-3

S. C. BUFF LEGHORNS. Heavy laying strain. Bred to lay and pay. Large vigorous stock. Pullets, hens, cockerels. Reasonable prices. Satisfaction guaranteed. Eggs in season. W. P. Carnahan, Ada, Ohio. 11-4

ROSE COMB BROWN LEGHORNS. Stock and eggs, choice cockerels and pullets. Prices right. W. T. Dodd, Mineral, W. Va. 11-4

SINGLE COMB WHITE LEGHORNS Layers and payers. Vigorous, range raised cockerels, \$1.50 and \$2.50 each. Shady Nook Farm, Antwerp, Ohio. 11-4

OUR S. C. WHITE LEGHORN COCKERELS are early hatched from superior strain of layers of big white eggs. Write for bargain prices. Courteous treatment. H. Roby, Box 163, Fairfield, Ill. 1-4

FINE COCKERELS. S. C. W. LEGHORNS. Young strain, good shape, snow white, well spread tails, \$2.00 to \$10.00 each. Pullets \$2.00, six for \$10.00. Won 4 firsts, 2nd, 4th on 11 entries in 1912. H. W. Goodman, Rentchler, Ill. 10-4

S. C. BUFF LEGHORNS. Thirty good cockerels, \$1.50 each. No hens or pullets. Address, O. B. Colgan, Defiance, Ohio 10-4

S. C. WHITE LEGHORNS. 32 layers averaged 130½ eggs for first 8 months of 1913. Another point, quality and pure young strain. Satisfactory cockerels, \$1, \$2. Karl Dittmer, Napoleon, Ohio. 10-4

FINE SINGLE COMB White Leghorn cockerels, \$1 each. White Runner drakes \$2. Will Tonn, Haven, Kansas. 11-4

BUFF LEGHORNS exclusively. both combs, from large eggs, from hens laying successive days. Mates unrelated. Wanted for new blood, hens equaling mine. J. C. Benedict, Chevy Chase, Md. 11-x

SINGLE COMB BROWN LEGHORN Cockerels. Healthy and vigorous, on free range and from a heavy laying strain. Price two and three dollars each. Mrs. John H. Miller, Cedar Crest Farm, R. F. D. No. 2, Baylis, Ill. 10-4

BUFF MINORCAS.

HOBBS S. C. BUFF MINORCAS. The latest Standard variety and coming breed. Also Buff Orpington ducks of the better class. Eggs or stock. Catalog and photo free. Address O. K. Hobbs, Hickory Grove, Ky. 1-x

MINORCAS.

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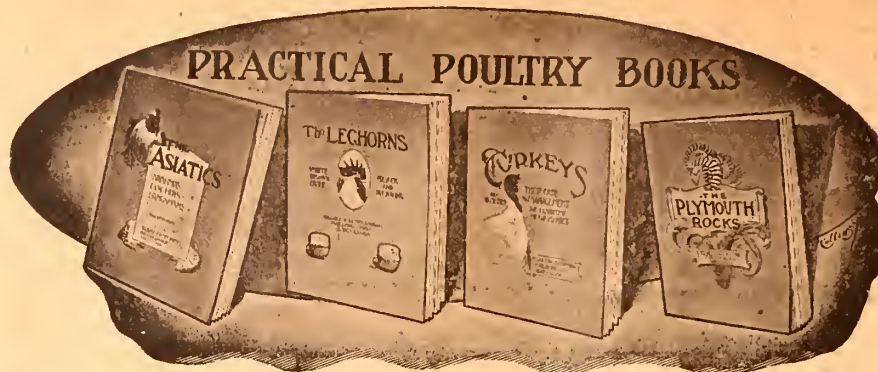
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VOL. XXX

FEBRUARY, 1914

No. 11

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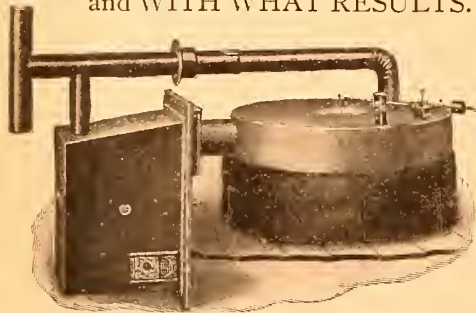
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Burlington, Ill., July 21, 1913.

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B. F. ELLITHORPE.

Methuen, Mass., May 20, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I bought one of your Self-regulating Portable Hovers to test its usefulness and I am very proud of it. It will please you to learn that I have now tested this Portable Hover during four weeks and I have not lost a single chick—not one. It does all you claim for it. Have never before found or heard of so easy a way to take care of little chicks. They are safer than with hens and much easier to look after. Have found your free printed matter of great help to me.

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Mt. Kisco, N. Y., July 15, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

The Cyphers Portable Brooding Hover is all that you claim for it. I am very well satisfied with mine and several friends who also purchased these Hovers are just as well pleased. This season I hatched 400 chicks and kept each hatch about four weeks in the Portable Hover, after which they were transferred to colony houses. Have not lost a chick this season on account of any reason that could be ascribed to the Hover, while in other years my losses have run fully forty per cent. on account of poor brooding facilities. Had as high as 104 chicks under my Portable Hover at one time and they did not appear to be over-crowded. It is very roomy and burns less oil than any other brooder I ever used. Next spring I intend to use Portable Hovers exclusively.

S. W. BELLMER.

Beech Creek, Pa., June 23, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

It affords me much pleasure to give you our experience with the Cyphers Portable Hover, which we purchased last spring. We placed 186 chicks in this Hover and raised every single one. After the chicks were far enough along to take care of themselves we placed 20 Indian Runner Ducklings in this Hover to see how it would work and raised 19 of the finest ducks we ever had on the farm. The one duck that died was a weakling.

H. C. BERRY

Lebanon, Kansas, January 23, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I find that your Self-regulating and Self-ventilating Adaptable Hover is a wonder when it comes to raising chicks in cold weather. Recently the thermometer here has registered as low as 22 degrees below zero, but the chicks are healthy and happy in the colony house in which we installed this Hover. Poultrymen who have seen this Adaptable Hover working have marvelled at its simplicity. I am sure that if all poultry raisers knew how easy it is to rear early chicks by this method they would obtain these Hovers and there would be a wonderful increase in their volume of business. I feed in the litter each morning, scraping it under well and that answers for all day. The youngsters put in their time alternating between scratching for the grains and getting under your simple, liceless, miteless foster mother whenever they need warmth.

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VOL. XXX.

FEBRUARY, 1914.

No. 11.

INCUBATION.

The foundation for good incubation rests in good breeding stock, which means strong constitution and perfect health. Fowls must be fed nourishing food in well balanced rations. The breeding birds must have sufficient exercise to have healthy blood. The best time for hatching is spring yet we do not wish to wait, consequently more care is needed to have the stock healthy and vigorous.

Whatever the method of hatching, the eggs must be fresh and fertile. Fertilization or fecundation takes place at time ovum escapes from the ovisac or soon after it enters the oviduct. The egg as a living organism is more interesting when under incubation than as simply a food. Few people realize how complex is its make up as revealed by close inspection and study.

The germ is imbedded in the circumference of the yolk and floating always uppermost. The germ starts while passing through the oviduct and stops when laid. The longer you hold the eggs the weaker the germ gets. That is why we should set as fresh as

we can. If a day old, better than a week, yet I have seen some good hatches from eggs four weeks old.

No occupation is as interesting as artificial incubation. The great difficulty is the temperature, air and moisture. Some machines are built to use no moisture. This depends upon the location. I have used these machines in different localities and found that moisture had to be supplied. So it is up to you to find and study these locations. Follow instructions of the makers and use common sense.

In turning eggs, some turn with trays, others by hand. When turning by hand be sure the hands are clean. Your hands may be clean and yet if they perspire don't touch the eggs.

The best way to turn eggs by hand is to take a dish with warm water, dip your fingers in water and draw them over the eggs and see how quickly you can turn them and you will find it beneficial to the eggs. I have used this method for a few years. Do not take my word for it, try it. This method keeps your hands and fingers clean. Some people never test out eggs which is wrong. They should be

tested the fifth, tenth and fifteenth days. Dead germs are not wanted in incubators, regardless of what make.

Eggs should not be cooled too much. Watch your machine more and the eggs that are in it will hatch well. I had during the year 1913, ten hatches. The eggs were 95 to 98 per cent fertile and hatched out from 80 to 90 per cent of fertile eggs, also raised 90 per cent of the chicks, so study your birds and machines and you can do as well. To find where you are at fault set a few hens at same time you set the machine and by close observation you can learn much in running your incubator. It is the best experience you can get. You must use the tester often with eggs under hens and in machines.

Much more could be accomplished if the poultrymen in so many different localities and under widely varying conditions of environment would devote their talents, thoughts and investigation to this subject.

G. W. Williamson.

New York.

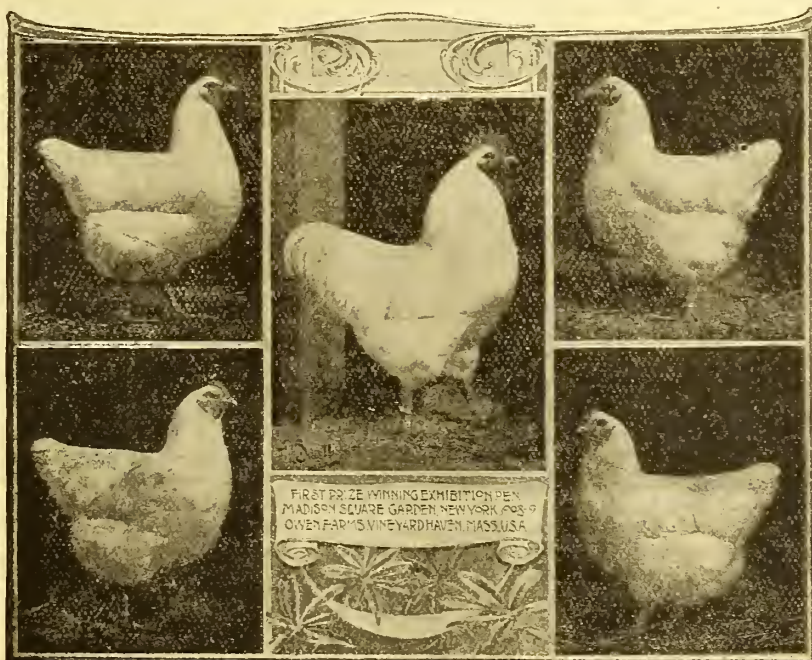
SORRY HE GAVE POULTRY KEEPER AWAY.

Editor Poultry Keeper:

Enclosed find stamps for my renewal and please don't miss my January number, as I have been too busy to order sooner. I highly recommend Poultry Keeper to all who are interested in poultry. I gave my own copies to some of my friends and have been sorry later because I wanted them for reference. I am going deeper in the business this year. I have a 400-egg incubator all ready set up and am building a 200-chick brooder, called the A-shaped colony breeder. I have discarded—and three other papers, as I find Poultry Keeper better than they are.

Thomas Harber.

Hudson Falls, N. Y.



X When a subscriber finds this item marked with an X in blue pencil, he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants it except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

POULTRY WORK IN 1914—A LONG LOOK AHEAD—PROSPECTS GOOD.

Dr. N. W. Sanborn, Holden, Mass.

POUltrYMEN have been passing through a period of depression and uncertainty. Feeds have been high, eggs hard to get in cold months, and chick rearing has been harder than in earlier years. Few problems have come up to be solved, new diseases have had to be learned and conquered, new conditions met. Even the breeder of fancy stock has had a hard time of it to maintain his stock, to find buyers for his thoroughbred birds and get prices that would pay him for his time and expenses.

I have been more than interested in getting at the opinions of breeders of both practical and fancy stock as to the prospects of the immediate future. Through the summer there was a general feeling of blueness as to the future of poultry raising. Just why it was hard to find out. Beginning with September, increasing through the following months, came a more general belief that right at hand were "good times" in poultry keeping. Lately, at the big eastern shows, I have come in touch with the largest and best known fanciers and find that they agree with the owners of farm flocks that egg-bred stock, fancy bred stock, will not wait a buyer in 1914.

That good courage is being shown can be seen in the pages of the poultry journals, in the larger entries at the winter shows and in the letters that come to me in every mail. I am pleased, as you are, with the prospects that are now so near. What can we do through 1914, to help in the maintaining of better poultry, in getting the cash returns that should be ours, and in meeting the demand that is pressing for producing a line of better layers? Let me suggest some ways in which you and I can help in the producing of better results with good poultry.

More Careful Methods.

We can do much to increase interest in poultry by following more careful methods. We have been somewhat careless, at least I have, in the meeting of the problems of the poultry farm. Your sins of omission or commission may not be mine but I am willing to go on record in saying that somewhere we have all made blunders. Let me confess one place where I went wrong in 1913.

In the rush of the coming of many incubator chicks I was overcrowded in my brooders. So I gave twenty of my best chicks to a hen to brood for me through the months of June and July. What was wrong about that? Nothing—except she had scale on her shanks. The disfigurement was not much, in fact hardly noticeable, but it increased with the summer. I neglected to kill off those scale mites that live under the scales of the shanks. What was the result? Just this. When I went to pick up four pullets that would match in color and type a

pen to send to Madison Garden Show I found them in the flock that the hen had reared. They were fine. Just what I wanted and better than any other four pullets on the farm. They were as like as four peas in a pod in all that was good. They were a delight till I looked at the shanks. Every one of them was beginning to show the irritation of the scale mite. I did not dare to treat it with kerosene or any violent remedy, so I made the best of it by rubbing thoroughly with camphorated oil. At the show I had to do the same again to cover up the light roughness that kept appearing at the edges of the scales.

It was a little matter—this attention to the destroying of scale mites—but I think it made me get a less important ribbon on my show pen. Five minutes attention, last June, would have killed every scale mite on that hen, and I would not have a bunch of sixteen chicks that must be treated for the same trouble. I use this as an example of one of the little things that we neglect to do in our work with hens and chicks.

Another Little Loss.

Not far from my town is a large breeder of White Leghorns. He keeps them to supply white eggs for a particular market. He began to notice that his egg returns were getting unsatisfactory. On inquiry he found he was getting less than his neighbors because he sent out eggs that had to be washed. A washed egg never is as good looking as one that needs no attention. A washed egg does not keep as well as one that is as it comes from the nest. Marketmen and cold storage age men know this and pay accordingly for the eggs sent them. Where had this man failed? Just in this place: he had not seen that a few of the pullets made their night's resting place in the nest boxes. He had been through the houses at night, had picked up the eggs through the day, yet did not know that the droppings of the pullets at night was the cause of the soiled eggs that he tried to make white and clean. He had eyes but did not see. In one pen of one hundred pullets there were only two that went to the nests to spend the night but they did mischief enough to cause the loss of sixty dollars in the grading of his eggs at the commission house through November and December. A little thing—but important in gaining success.

If we are making these mistakes because we are trying to accomplish more than we can handle it might be best to reduce our work. If we cannot raise in better condition a thousand chicks, then let us cut down the number to six hundred. If we have the equipment to handle five hundred layers and breeders, we need to see that we do not put six hundred birds into the quarters. I have seen plants where the incubator capacity was too large for the number of breeders on the farm.

The result was that many little chicks died, many of them grew up stunted and the remainder were only fair specimens of the breed. Let me call your attention to some of the problems that confront some folks the present year.

Bacillary White Diarrhoea.

The first problem comes in the raising of the little chicks. It is a serious matter when you fail to bring to maturity most of the chicks that you hatch. I have found that this serious disease of baby chicks is one of the serious problems facing many of the plants that are well established. I do not know today, that so many folks suffer from white diarrhoea in their flocks as I did three years ago. More is known of the history of the disease, the knowledge is more widely spread from the Experiment station reports and the poultry press and your nearest neighbor may have stamped it out of his plant. No one need give up poultry keeping because of the ravages of this serious illness of the poultry yard.

Let us look at the prominent points in the history of the disease that is now well known as bacillary white diarrhoea. Where does it start? From any one of a circle of points. It may be in the yolk of the egg, in the single chicks in the brooder flock, in the ovary of one hen in your breeding flock. Given any of these points of beginning and you can easily have an outbreak of the disease. Clear out all these sources of trouble and you will not have the disease. At this season of the year there is little you can do except to set eggs that are from disease free hens. So long as you have one "carrier" of bacillary white diarrhoea—so long will you fight in vain. By trap-nesting, by knowing the chicks from each hen, by brooding them by themselves till you select the infected hens, till the hen that gives the bad eggs is rejected from the breeding pen, till then you are likely to have trouble all through the season. If you have trouble from all the matings then you will need to get outside and buy eggs from non-infected plants. One man who had unsuccessfully fought this illness for two seasons, solved his problem by buying a hundred yearling hens from a neighbor of mine to breed from. He kept his own females to lay table eggs and used those he bought to produce his hatching eggs. As a result he raised sixteen hundred chicks from seventeen hundred hatched, where the year before he lost fourteen hundred chicks out of fifteen hundred hatched, using the same incubators, the same brooders, the same houses and yards, the same run, no change in care or feed. Yet a successful chick season in 1913 as compared with a decidedly bad season in 1912.

Feeds and Feeding.

We have a problem in the feeds we buy and the method of giving them. In these days of commercial mashers and chick feeds we have to watch out lest we buy and use spoiled food. Most dangerous is the chick feed that is carried over from the year before. Mold

germs are liable to appear in the particles of cracked corn, in the bag of chick feed and mold in chick feed means many deaths. There is danger enough from mold in the brooder litter, in the chaff of the growing house, without having to watch out for it in the chick feed of the first few weeks. Unless we are careful in our watchfulness over the quality of the chick food we are sure to have trouble sometime in trying to raise small chicks. It is a problem that we must always keep in mind.

The feed of the older birds must be watched all through the year. No longer do we give our fowls anything that is not good enough for the horse or cow. No longer do we accept as true the saying of the grain dealer that "anything is good enough to feed hens." We know better. Do we not keep in mind the facts we know to be true? Unless we do we shall have to repeat some of the failure of last year as we pass through the experiences of the coming twelve months.

Breeding for Vigor.

The foundation of all successful work with poultry is the vigor of the breeding stock. Life, activity, gimp, whatever you may wish to call it, must be in the birds that make up the foundation stock of a poultry plant. When we neglect this, and too many do, we are starting on the road that leads to failure. No utility plant can long continue to put out profitable table eggs when vigor is forgotten. I often think that the fancier practices this more consistently than does the utility man. The fancier knows that he can seldom win the blue ribbon when his stock is out of condition. To produce the cockerel or pullet that will please the eyes of the judge he has to start with eggs from a breeding pen of birds that are in healthy condition. More and more are we understanding that vigor is the foundation of success with poultry. More and more are successful poultry plants being built up from stock that is known to be of a long line of vigorous ancestors. Blood tells in poultry. No more so than in the point that I am hammering away at—that of vigor. We have no place for the knock-kneed cockerel, snaky head pullet or slow maturing chick in our breeding pens. The birds need to be selected from those that have never been seriously ill, from the flock that has never been stunted from lack of care or good food. A single bird of low vitality may put a line of blood into your flock that will knock out possible profit. Whether you are producing eggs for eating, market poultry, or show stock, you can never afford to use for a single day a bird that has given signs of lack of vigor. If you have any question as to the health of the bird—reject him. I get so many questions asking me what to do to cure birds—because they want to save them to breed from—that I get out of patience many times. A bird that has ever been seriously ill had better be kept out of all future breeding work. If you will follow this advice, as well as select with vigor in mind, you will come to me in future years and thank me for so persistently urg-

ing this on the readers of Poultry Keeper.

Other Problems.

Other problems we have to meet with the coming of the busy season now so near at hand. They will arise when we least expect them. We shall not be forewarned. If we are meeting the problems that we have some knowledge of we surely will be the better fitted to handle the unknown ones. I seldom have an hour with a poultryman when I do not learn something worth while. His problems may be my problems—sometime—and his words of wisdom now may save me dollars and worry later on. None of us knows all that there is to know in regard to poultry keeping. We are all learners, all not so far along as we may think, but we must get all the facts we can to help do better work in 1914 than in the years that are gone. I believe that we can and that we will see better results than ever before. But it will come through thought, through patience, through careful attention to the duties as we find them in our poultry houses and yard.

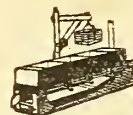
The Alpena Poultry Farm, Box 320, Alpena, Mich, have three excellent varieties of general purpose fowls in their special matings of White Orpingtons, Barred Rocks and White Wyandottes. The latter variety is making some fine showing at the big American egg record: the lead being held by an English pen of White Wyandottes, and several other American pens have excellent records also. If you are in the market for either eggs or baby chicks of these varieties write the Alpena Poultry Farm for further particulars.

Readers of the Poultry Keeper interested in the American Poultry Association Standard of Perfection, may obtain a copy of it direct from the Poultry Keeper office for \$2.00. This is the official book governing on all fancy points and every exhibitor should have a copy of it.

Do not be afraid to set chilled eggs, provided the shells have not been cracked. Eggs can stand lots of cold and still hatch. Even those that have stood for days in a cold ice box can be expected to give fair results provided they are from sturdy stock.

Is your paper marked with the blue X this month, showing that your subscription has expired? If so, no not neglect to renew and do us the further favor of getting some one else to send in a subscription with you. Our special offer of three subscriptions for one dollar is one which it will be to your advantage to investigate.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this journal is published, namely "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.



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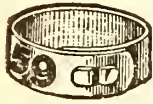
Now is the time to start that classified advertising. This is the form of advertising usually adopted by the breeder and the breeder who raises a limited amount of stock. A four month adv. costing ten cents per word for all four months is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, of desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote you promptly.



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Ideal Aluminum Leg Band
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Practically indestructible. Keep lamps well filled with oil and wicks do not need trimming, running uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and aid keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two 15-16 inch wide; or Number three, 1 1-2 inches wide. Price ten cents each. Fit any lamp. Address,

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To get the best results from poultry the year 'round a steady supply of green food must be furnished. This class of food furnishes the bulk needed to round out the balanced ration and furnish the birds with a natural supply of various chemical properties or salts needed to keep them in a healthy condition.

Many small home plots are now given over to the chickens to run in and during the growing months these plots are kept entirely stripped of all grow-

has been that most busy people do not care to assume the extra labor cost necessary to plant and cultivate it. Modern implements have done away with much of this labor. The accompanying picture shows one of the simplest of these machines. This is known as the Planet, Jr. single wheel hoe, costing five dollars. The equipment with this machine consists of two 6 in. hoes, three steel cultivator teeth, and one large garden plow, and the work even this simple machine can do remarkable. Other forms of machines along the same lines, include all sorts



Planet, Jr. Single Wheel Hoe. ing plant life because the hens will not let the tiny plants get a start. In many cases it would be far better to devote these plots to family gardens. This furnishes a steady supply of vegetables from early spring till killing frosts. The weeds and trimmings from the vegetables may be given to the hens and instead of having a bare yard which produces no growth of green food even during the summer and growing period, the garden furnishes a generous supply of green food for the birds, together with plenty of vegetables for the home table.

A leading objection to the garden of planting and cultivating attachments capable of taking care of the very largest gardens where horse power machines are used. The Planet, Jr., farm and garden implements are made by the S. L. Allen Co., Box 1106-C, Philadelphia, Pennsylvania, and they will be glad to send you a seventy-two page book showing many designs of implements and garden pictures which will surely interest many readers of the Poultry Keeper. Many of the poultry supply houses and retail seed stores carry these implements in stock so that you can see them right in your home stores.

A VISIT TO A CERTAIN MR. OAKES

By J. Willard Bolte,

Down in Tipton, Indiana, lives a man named Oakes who has had more to do with the success of modern artificial incubating and brooding than any man now active in the business, yet you never heard of an Oakes Incubator or Brooder, did you? Neither did he, for he never sold one. But he has made the heating and regulating devices for something like half of all the incubators that have ever been sold in this country.

L. R. Oakes has seen the rise of the modern poultry business, and he thinks no man will ever see its fall. When his company was formed, twenty-one years ago the famous hatching machines of today were not even dreams, and the Oakes Mfg. Co. has outlived the business life of every manufacturer of incubators then in business, save only Geo. Stahl.

Incubators come and go, but not so with Oakes. He keeps right on coming and the reason for his 21 years of steady and increasing business is the fact that he makes the best goods that can be made and he knows just what he is about.

The corrugated-wafer heat regulator was invented by him, and it is now used on dozens of different kinds of machines. His safety lamp, burners are the only ones that absolutely stop the gas from forcing back into the oil tank of the lamp. And from one end of his long line of poultry devices to

the other you will find the finished touch of the master who knows from long experience the exact difference between fact and fancy.

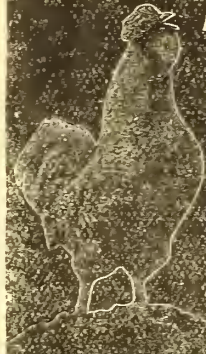
What does Oakes make that you could use? Lots of things and all worth the money. Incubator and brooder parts to build any kind or size of machine yourself. Regulators and heaters to turn a poor machine into a first-class one. Chick hovers and fountains and feeders to raise the little chicks better. Self-feeding grain and mash hoppers, sanitary water fountains and feed bins, to remove almost all the work of feeding your laying pens. Galvanized trap nests and leg bands and the markers to identify the breeding of every chick in the flock.

And he makes them in a fine, new up-to-date factory, with the best of equipment of metal working machinery that the writer has ever seen. One hundred and more skilled workmen turning out the Oakes line of wonderful automatic machines, enable Mr. Oakes to sell these fixtures at low prices.

At the time of the writer's visit, Mr. Oakes had just finished writing his 22nd annual catalog and it is now ready for distribution. If you want to learn more about the great Oakes line of poultry house equipment it will pay you to send for a free copy of this new book. His address is L. R. Oakes, Oakes Mfg. Co., Tipton, Indiana.

By the way, Oakes is an enthusiastic breeder of Partridge Plymouth Rocks and he has some dandies. He is

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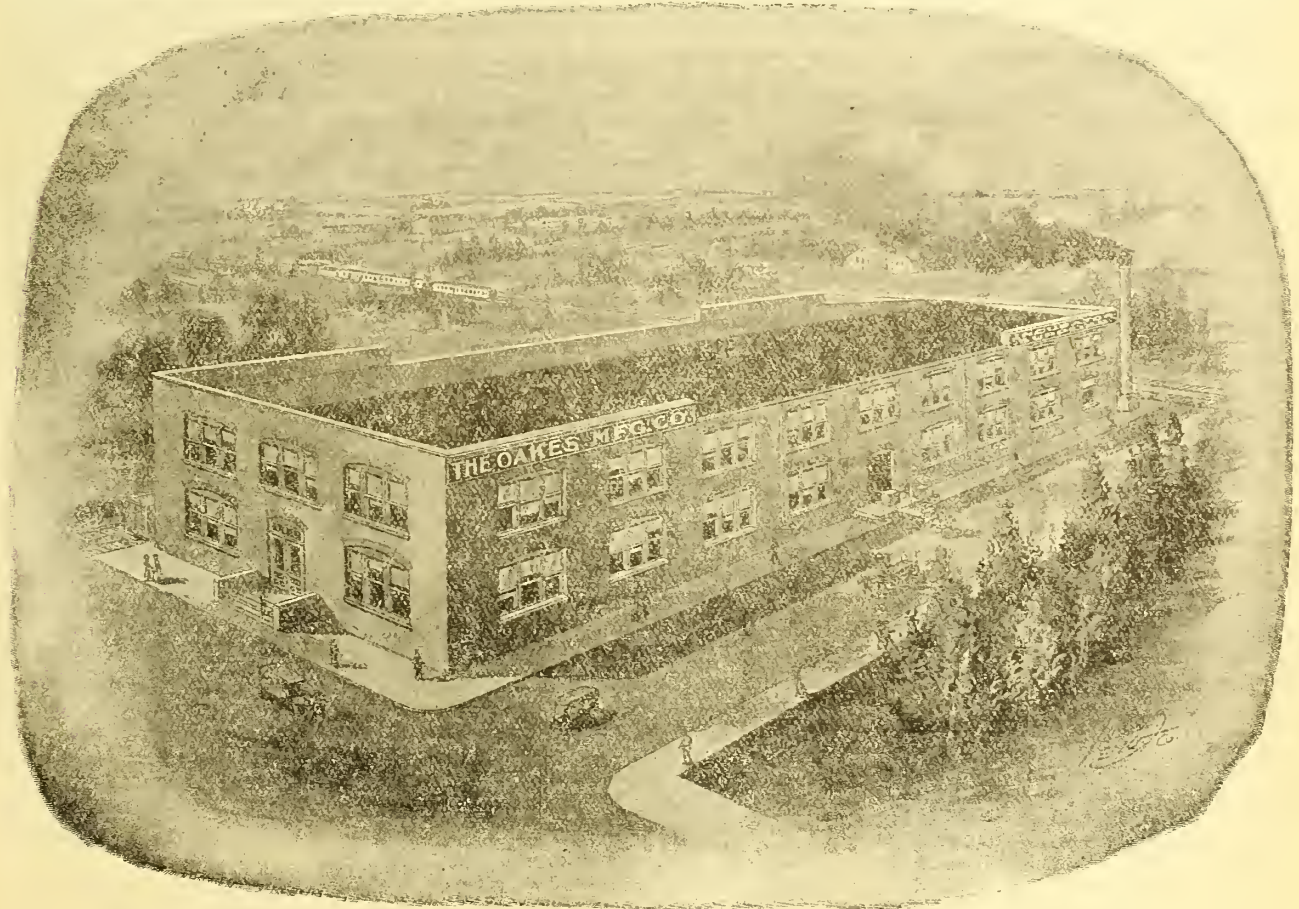
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just beginning to find time to show them and I predict that his Rocks will not hurt the reputation of his manufactured goods. He uses these pens to try out his new inventions on, and they looked pretty healthy in spite of it.



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The lack of this ash is the cause of your chicks dying in the shell. Phosto increases your egg yield without loss of fertility, in fact improves it, and what is more, gives you an egg that the incubator will hatch.

Start now at the very root, namely, in the breeding pen, with the use of Phosto, and then continue with the chicks, and you will quickly convince yourself that the future of successful poultry raising depends upon science to come to the rescue. If the increased chicks you raise by the use of Phosto do not pay for its cost, it is optional with you to go back into the old rut.

Remember this, chickens owe their size to ash. Ash builds bone and aids digestion. The two create size. Phosto solves this problem for you and does it well. Phosto makes beef scraps and bone products unnecessary. Again, Phosto is not made from bones.

Read the article in January Poultry Keeper on Protein and Lime Contents of Poultry Foods, by Chris McIntyre. Cut it out and memorize it. In a year or two from now you will believe every word of it. Let us send you convincing opinions from England's and America's most successful breeders. Prices, in \$1 and \$2 tins prepaid. In ordering specify for "Poultry." Our literature is free.

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Norwood Park Box P. K. Chicago, Ill.

SOURCE OF MUCH INFORMATION.

Editor Poultry Keeper:

Please send Poultry Keeper for another year. We get a great deal of information from time to time. We keep Barred Rocks and Buff Rocks and breed them more for utility rather than for fancy, although we have a number of show birds. Our hens laid unusually well through this cold snap and are still shelving them out in good shape. We believe in keeping the best and your good Poultry Keeper has been the medium of our success.

E. H. Keene.

Maine.

The eighteenth week of the Third "Philadelphia North American" Contest is showing the White Wyandottes up as the best all 'round producers. Six out of nine of the White Wyandotte pens have passed the 100 egg mark and the leading pen of all varieties is a pen of English White Wyandottes with a pen record of 219 eggs for eleven weeks (ending Jan. 16). In the S. C. White Leghorns, there are 14 pens out of the 43 that have passed the 100 egg mark, making less than a third of the White Leghorns with this high a record while two-thirds of the White Wyandotte pens passed the 100 egg mark. Two out of three of the Ancona pens have also passed the 100 egg mark.



A Good Trap-Nest

Made in a few minutes from a common box. Send 10c for complete plans for making the most simple and reliable trap-nest. Warm water drinking fountains, feed hoppers, poultry houses, etc. Barred Plymouth Rock breeders, \$3.50 each. Exhibition birds, \$12 each. Eggs \$1.50 per 15; \$7.50 per 100

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(Box P. K.)

STRDIVANT FARMS CO.



A WORLD'S EGG LAYING CONTEST DECEMBER REPORT.

ON December first at the State Poultry Experiment Station at Mountain Grove, Mo., 1040 hens began to make poultry history in the greatest egg laying and feeding experiment ever conducted at any point in the world. These hens were from some of the best bred-to-day flocks to be found, and from all parts of the globe. England starts the contest in the lead. A pen of ten White Leghorns from Tom Barron making the best record for December by laying 206 eggs. One pullet in this pen laid 26 eggs in 31 days, another 25, and others 24, 23, 23 and 22 eggs each. Other parties have birds of the same strain entered in the contest and it will be interesting to note the difference in egg production. Another pen of another variety contains ten pullets which are full sisters from a high producing hen. What will be the difference in the production of these sisters? Will there be any great difference, and what will be responsible for the variation? Will the English again carry away the honors in 1914, and if they do, why is it that English hens can beat the Americans in egg production? Will the Australian and New Zealand pens make the high records in this country that they make in the contests in those countries, entire pens of hens averaging from 250 to 265 eggs each? If they can't do so well here, why? Is it the climate or the breeding or what? Will some American, or some Missourian be able to prove to the world that he knows some things about breeding hens for egg production, and that the world must sit up and take notice of our methods. There is no denying the fact that American breeders are making rapid advancement along this line, and we serve warning upon foreign nations now that if Americans do not win in this test, that the time is not far distant when they will do so.

We are told by one of the contestants who has been winning many honors in contests and in show rooms of foreign countries that the foundation stock of his stock of noted layers was imported from America. He took this American bred stock, and by close study and application of the principles of breeding for egg production, he produced his famous strain of layers and also combined show qualities in the same flock. If some American does not win in this contest, it is because of the fact that we have gone to seed on the fancy side of the business before we even sprouted in our study of the science of egg production. It is not so today, however. Thousands of American poultry raisers are devoting their best thought and energy to an effort

to increase the productiveness of their hens, and egg laying contests are responsible for much of this interest.

This experiment was not begun under the best conditions nor most favorable circumstances. Some of the foreign birds did not arrive here until two weeks after the contest started. Some pens were six weeks on the road in shipment, and six hens were dead in one pen when it reached Mountain Grove. A number of hens were dead in other pens because of long shipments. Many hens arrived out of condition and we have had cool, damp, rainy, foggy weather and two heavy snows since the first birds began to arrive, and only a very few days of sunshine. Our altitude is also much higher and the climate quite different from some of the warm, dry countries and states from which many of the pens came. This has worked a hardship in many cases and made a situation which has been very difficult for us to control. The contest really should have begun on November 1st at latest and this would have given the birds time to become acclimated and also given us another month's egg yield which we will practically lose in our totals, as the mature pullets laid many more eggs in November as pullets than they will lay next year in November as hens.

This experiment really consists of three separate contests. Each will be fed differently. Separate prizes will be offered in each, and a grand championship prize will be awarded for the highest record. The sixty pens in the National Contest are fed a very simple ration which was formulated by the Experiment Station, but what we believe is going to prove to be one of the best which can be used. The 28 pens in the National Single Comb White Leghorn Contest are being fed a ration which has always proven good with Leghorns and which is looked upon as being the best for that variety. The 16 pens in the National Utility Contest are composed entirely of Barred Plymouth Rocks, White Wyandottes, S. C. Rhode Island Reds and White Orpingtons. These are the general purpose varieties and are being fed a ration which proved best in our feeding experiments and which is also recommended by one of the leading Experiment stations of this country. It remains to be seen what the results will be.

The total eggs laid in December were 6,792, or an average of over 6½ eggs per hen for both good and bad. The leading pen for the month averaged 20.6 eggs per hen.

Missouri has nearly as many pens all the other states combined. Besides Missouri, the following states and countries are represented by the following number of pens:

7 Pennsylvania	5 New York
6 Ohio	4 California
4 England	4 Texas
4 Iowa	2 Michigan
3 Nebraska	2 Arkansas
2 Australia	1 New Jersey
2 Kentucky	1 Illinois
1 Maryland	1 West Virginia
1 Alabama	1 Wisconsin
1 Massachusetts	1 New Hampshire
1 Ontario, Canada	1 Vancouver Island
1 British Columbia	1 South Africa
7 New Zealand	

The best record made by representatives from each country as follows;

Buff Orp. made best U. S. record	152
Anconas made best Missouri record	147
W. Leg. made best B. C. record	133
W. Leg. made best Van. I. record	109
W. Leg. made best S. Afr. record	86
W. Leg. made best N. Zea. record	82
W. Wyan. made best Ont. record	66
W. Leg. made best Aus. record	33

The Australian birds did not arrive for sometime after the contest started. The Australian and New Zealand pens will be somewhat handicapped this year because of the fact that the pens which they have entered were hatched out of season. Their seasons are exactly opposite from our own. When we are having night, they are having day and when we are having fall, they are having spring and summer. Most of the birds which were sent from those countries had to be hatched this fall and late summer which was their spring, and their birds are therefore very young.

National Egg Laying Contest.

We thought best to divide this year's contest into three divisions.

The standing of the ten highest pens in this experiment as follows:

Pen	Eggs
0 Foreign Leg. Eng.	206
36 Buff Orpingtons, Texas	152
5 Anconas, Missouri	147
24 White Wyandottes, England	145
15 White Wyandottes, Penn.	141
2 Anconas, Missouri	133
39 S. C. Reds, Missouri	126
1 Buff Leghorns, Missouri	124
4 Buff Leghorns, Michigan	120
13 Campines, New Jersey	113

The highest individual hen in this test was an English White Leghorn which laid 26 eggs in the 31 days.

National S. C. White Leghorn Contest.

One notable record was that made by the pen of S. C. White Leghorns from South Africa. These birds were six week on the road, and did not reach the Experiment Station until December 9th, nine days after the contest started. They laid three eggs the next day and from one to ten each day following that, and finished the month as one of the ten highest pens in the Leghorn contest.

The standing of the ten highest pens in this experiment is as follows:

Pen	Eggs
79 Pennsylvania	140
64 British Columbia	133
65 Missouri	113

77 Vancouver Island	109
61 Nebraska	108
80 Missouri	106
60 West Virginia	96
69 Kentucky	96
71 Missouri	90
81 South Africa	86

A pullet from Missouri, pen 67, made the best individual score by laying 23 eggs.

National Utility Contest.

Here the Plymouth Rocks, Wyandottes, Orpingtons and Buffs are to compete. The birds in this experiment seemed to have arrived in poorer condition and suffered more from the changes in climate, altitude and weather than those in the other experiments. Some of these pens are also immature and many of the hens are just beginning to lay, so we look for much better records next month. The ten highest pens in this experiment are as follows:

92 S. C. Reds, Penn.	105
86 Barred Ply. Rocks, Mich.	81
99 White Wyandottes, Arkansas	68
88 White Orpingtons, Kentucky	62
95 S. C. Reds, New Hampshire	57
94 S. C. Reds, Ohio	53
85 Barred Plymouth Rocks, Texas	46
93 S. C. Reds, New York	29
89 White Orpingtons, Missouri	26
97 White Wyandottes, Texas	19

A White Wyandotte from Arkansas, pen 99, and a Barred Rock from Michigan, pen 86, tied for best individual record by laying 21 eggs each.

T. E. Quisenberry, Director.

Mountain Grove, Mo.

A writer in the February issue took the position that only the hens that mate regularly can be expected to lay well. Mating does not necessarily mean good layers. Whole flocks of pullets or hens that have never had male birds in the yards, show excellent egg records, thus proving that it is not even necessary to have male birds around. As a matter of fact, there are breeders who make a specialty of supplying strictly infertile eggs for use of physicians and sanitariums, from flocks which have no male birds. Some cities have ordinances which prohibit the keeping of male birds except during the hatching season, it being known that the hens will lay just as well out or hatching season without male birds.

John S. Martin, the Regal strain, White Wyandotte breeder whose adv. is in this issue advises that fertility of hatching eggs from his pens has been running extremely high. He has three hundred fine January hatched chicks out and a lot more on the way, according to advice received from him under date of January 25th.

Sidney Cook, specialty breeder of Nelsonville, Ohio, offers eggs for hatching from S. C. White Leghorns, S. C. Brown Leghorns, S. C. Black Orpingtons, S. C. Black Minorcas and White Wyandottes. He is centrally located to make prompt delivery to a large territory and will appreciate your order.



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60, \$1.00; 100,
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Leader Adjustable. Prices postpaid
12, 15c; 25, 25c; 50, 40c;
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W. W. KULP, Box 30., Pottstown, Pa.

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and calendar of fine, pure-bred poultry for 1914. This book contains many pages of poultry facts. 70 different varieties, some shown in natural colors. All illustrated and described, tells how to make hens lay, raise and care for them, all about the Famous Greider Incubators and Brooders. Shows photo of the largest poultry farm in Penn. Prices of breeding stock and eggs for hatching and supplies within reach of all. A perfect guide to all poultry raisers. Send 10c for this noted book on poultry.

S. H. GREIDER, Box 104 Rheems, Pa.

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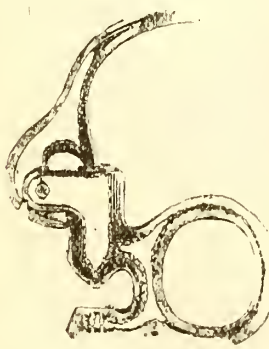
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 SADDLES \$3.00 up NEW UNIFORMS \$1.50 up
 Shoes, pr. 1.85 " Army Revolvers 1.65 "
TEAM HARNESS 21.85 " " HAVESACKS .10 "
 Leggins, Pair... .18 " " Swords... .25 "
TENTS... 2.85 " " Shot Cartridges 2.95 "
 Colls Calc 4s. Revolvers... \$7.50 up. Cartridges 1c ea.
 Sp'ld Mauer Sp'lg Rifle 11.85 Cartridges 2c ea.
 Army Breech Loading Rifle .98c. Cartridges 2c ea.
 420 Large page CYCLOPEDIA CATALOGUE, 60c.
 5,000 Illustrations. BEST BOOK PUBLISHED ON
 WAR WEAPONS mailed 25c. Est'd 50 years.
Francis Bannerman, 501 Broadway, New York City

KILL RATS & MICE
 SCIENTIFICALLY
 with **Pasteur Laboratories Rat Virus**
 NOT A POISON
 HARMLESS TO POULTRY, DOMESTIC ANIMALS & MAN
PASTEUR LABORATORIES OF AMERICA
 NEW YORK 366 WILST. CHICAGO 443 S DEARBORN ST
 Room 865 Dept. C

McKee's ORPINGTONS
 WHITE AND BLUE and M. B. TURKEYS at Madison Square Garden, N. Y., 1913, won first pen Blue Orpingtons over most noted fanciers of England and America. Can please you. Have no Blues for sale now. Will import as many as you desire upon receipt of order. Can book few more orders for eggs at \$10.00, \$30.00 and \$75.00 per 15. White Orpington Eggs, \$10.00, \$5.00, \$3.00 per 15. Augusta, Ga., and Knoxville, Tenn., winners. Trios, \$7.50, \$10.00, \$15.00 \$25.00. Turkeys \$15.00, \$18.00 a trio. Eggs, \$1.00 each.
McKEE'S ORPINGTON FARM
 GARVEY McKEE, Proprietor
 Box P. K. Watertown, Tenn.


P. K. MARKER.
 There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 65c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

SITTING HENS ON THE GROUND.

I have just been reading with interest the letter of J. E. R. on "Hatching" in your January issue. He starts out with the hen but soon switches off to the incubator. I have been hatching with the hen for the last 20 years and have had great success. Early in my experience I was advised to set hens on the ground and have followed that system ever since, often getting a chick out of each and every one of the 13 eggs and seldom less than eleven.

I put my male bird in a pen with no more hens than I think necessary to produce the eggs I will require from them and when I set a hen I hollow out the ground to the required depth, cover the hollow with a small quantity of cut hay. I then take a barrel and saw off the open end at the bilge hoops and between these and the other bilge hoops, I saw out a couple of staves for an opening to allow the hen to go in and out. The tub so formed I invert and place over the nest. I then take a packing box about 4 feet square and a couple of feet deep and remove the top and bottom, one of which I cover with wire netting. In the end of the box I make an opening about the same size as the opening in the side of the tub and place the coop so made in front of the tub. I feed and water my hen in this coop each day keeping water there all the time. The hen can come off and dust, eat and drink at will and nothing can bother her.

Last season a friend of mine was presented with some eggs that she was most anxious to have hatched. I fixed up a place for her as I have described and set her own hen on ten

of the eggs and she got nine chicks. The remaining six eggs she gave to a neighbor, who set them under a hen in a box of dry straw in an out building and the result was but one chick.

Shortly after the chicks were hatched the same lady friend got nine turkey eggs and I set another hen for her on the same spot of ground using the same tub and yard and every egg hatched.

The result is that this lady is about as well convinced as I am, that setting hens on the ground is as good a method as can well be adopted.

This winter I amused myself during leisure hours making out of packing cases little houses like the scratch sheds on each end of the poultry house shown on page 340 of the January issue, instead of wire netting I will put laths up and down the fronts and outside I will place a can of water and a can of feed for the sitting hen and when the chicks are hatched the houses can be placed here and there about the green and will make, I think, good enclosures for the hens and chickens at night during the months of summer and on rainy days and as they are of half inch material they will be light and each evening can be moved to a clean and fresh piece of ground.

I hope your readers will excuse me for going so into details but I am greatly interested in poultry of all kinds and have so much success by allowing my birds to sit on the ground at all times that I desire to have all those who will profit by my experience. I think all will admit experience is a great teacher.

I. B. Arnaud.

Nova Scotia.

500 Prepotent Cockerels



For years **REGAL WHITE WYANDOTES** have been bred for vigor and stamina. My male line has a wonderful reputation for high fertility. With a temperature of 20 to 25 below zero I am getting an average of 75 per cent fertility. Have 200 husky young chicks a week old and hope to hatch 2000 before March 1st, when the rush of egg orders begins. I have just received a letter this morning which illustrates my point:

Castile, N. Y., Jan. 11th, 1914.

Last spring I bought a cockerel from you and I now want to tell you he was a dandy. I bred him to ten pullets and raised some of the finest chickens I ever saw. I set an incubator with 108 eggs from this pen. They tested 105 fertile eggs and hatched 100 chicks. At the Warsaw show I won 1st and 2nd cockerel, 1st and 3rd pullet and 1st cock on the bird I got from you. I remain, yours sincerely,

Chas. E. Dunn.

REGAL CATALOGUE IS READY.

I have just received from the printer's my new catalogue and mating list for 1914. It is illustrated from cover to cover with photographs of my famous winners and snapshots of my breeding pens and plant. It has a number of articles on feeding and rearing chicks, also on the care of the breeder. It also has a full description of my matings for 1914. If you will send me your name I will forward you a copy free of charge.

1500—COCKS, HENS, COCKERELS AND PULLETS FOR SALE—1500

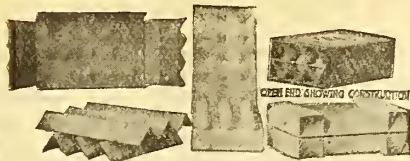
Special—100 Exhibition Cockerels and 200 beautiful Pullets ready to now win the blue ribbon for you. 100 well matured Cockerels from my heavy laying Dorcas line, \$10, \$15, \$20 and \$25 each. Dorcas Pullets, \$5, \$8 and \$10 each. Stay White utility cockerels, \$3 and \$5 each.

John S. Martin

Box 408

PORT DOVER, CANADA

BUY DIAMOND EGG CARRIERS



It is a fact and not a boast that eggs get the maximum protection in the Diamond Egg Carriers. Order today. Sample 25c. 15 egg size, doz. \$1.50, \$11.00 hundred. Parcel post boxes, all sizes. 1 to 12 dozen. Poultry Supplies.
DIAMOND BOX MANUFACTURING CO.
Room 316, 219 N. 2nd, Minneapolis, Minn.

ATTRIBUTES HER SUCCESS TO POULTRY KEEPER.

Editor Poultry Keeper:

Enclosed find \$1 for which please send Poultry Keeper to Mr. F. Marshall, Carlsbad, New Mexico, and to my address. I certainly enjoy reading your magazine and find much help in it. I keep chickens for my own pleasure only. I have twenty-six hens and they keep us in eggs and I have three or four dozen eggs to dispose of every week. They have laid steadily for fifteen months. I have Rhode Island Reds, both single and rose comb, and I think they are the only birds for practical use, but I attribute my success to Poultry Keeper.

Mrs. F. McReynolds.

Mosinee, Wis.

PLENTY OF GOOD EGGS AND A GOOD INCUBATOR.

Editor Poultry Keeper:

I am much interested in the poultry business. I am a breeder of Buff Orpingtons and find them a splendid fowl for I am getting plenty of eggs this zero weather. I keep before my hens all the time a dry mash of ground corn and oats, bran and beef scraps, also plenty of grit and oyster shells. I have one of the "Old Trusty" incubators and brooders made by the M. M. Johnson Company, Clay Center, Neb., and have had splendid success with this machine.

A. S. Piper.

Scenery Hill, Pa.

OCULUM SAVES CHICKS' LIVES.

The following testimonial from an Oculum user shows the worth of this preparation: Oculum is a marvelous remedy. As a tonic it produces fine, plump, juicy broilers and pure germless eggs. Before I "got onto" Oculum I lost 4200 chicks from White Diarrhoea and 300 hens from cholera. The next year I hatched 2500, used Oculum and did not lose 5 per cent. No more mouth remedies for me, as Oculum is injected and gets there every time. Speedwell Poultry Farm, Salem, Va.

For further information regarding Oculum send to the Hancock Inoculum Company, Box 5, Salem, Va., for their circular, and please mention Poultry Keeper.

SIMPLEX

No Wick
No Gas

No Fumes
No Smoke



Direct
Contact
Burner

1500
Chicks
Successfully

Brooded around one Stove

BROODER STOVE

HOW MANY OF YOUR CHICKS LIVE?

With a Simplex brooder stove you can actually RAISE 20 per cent to 50 per cent more chicks than by any other method—and save 75 per cent of your operating expenses and 90 per cent of your time. Do you know as good a way to profit? You don't want to experiment, you want to know. Here's the knowledge you want. The Canadian Government has done the experimenting. It moves slowly and surely. It has to know before it plunges, just as you are saying you must know. It tested all methods in every imaginable way and finally

led to the Simplex for all the Canadian Experimental Stations, increased the equipment and is planning to still further increase the number of Simplex Brooders at each Branch Farm.

The Simplex can be used in almost any room. It is built by experienced and practical poultrymen who originated it purely to raise their own chicks. They are offering it to others on the word of scores of users who are thankful for it. They have had it built right, not flimsy cheap construction nor expensive upkeep. All the things you'd ask a neighbor who had one are answered in a perfectly frank catalog and this will be sent by next mail for a request on a postal.

HERE'S THE PROOF:

The Simplex Eliminates White Diarrhoea. Read this letter, it proves that we know what we are talking about when we say the "Simplex will prevent White Diarrhoea.

Chicago, Illinois
April 9, 1913.

Simplex Brooder Stove Co.
Grand Rapids, Mich.
Gentlemen: Enclosed please find my check for \$29.50 in payment for brooder stove shipped me on the 7th. This is the second stove I have purchased from you this season, and of course the last one is purchased because the first one is doing the work. The stove works entirely satisfactorily

and does all that you claimed it would do. I believe you have solved the bothersome problems in brooding. The stove has entirely eliminated White Diarrhoea from which I suffered heavy losses, losing 50 per cent of my hatch. The losses with the stove have been very small. Very truly yours, Judge J. C. Everett, Farm at Holland, Michigan.

Dominion of Canada, Dept. of Agriculture Central Experimental Farm. Ottawa, Canada.

Simplex Brooder Stove Co.
Grand Rapids, Mich.

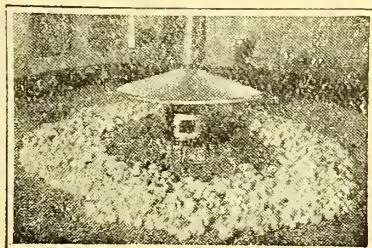
We have put in one or two more Simplex Brooders at several of the branch farms throughout the Dominion. Would like house plans and F. O. B. Grand Rapids prices.

V. C. Elfard,
Dominion Poultry Husbandman.

Simplex Brooder Stove Co.

224 Fourth St., N. W. GRAND RAPIDS, MICH.

Petaluma Brooder Stove



The Modern Way of Brooding. Fresh Air and Economy combined. Raises more and better chicks. Saves 90 per cent of the labor. No chilling, crowding or overheating. Automatic Control. Free Catalog.

Petaluma Brooder Stove Works

Box P. K. Dayton, Ohio and Hayward, Cal

POULTRY KEEPER

ISSUED THE FIRST OF EACH MONTH
A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY
(Incorporated) QUINCY, ILLINOIS.

Subscription Price: Fifty Cents a year; Single Copies, 5c.

Foreign Postage: Thirty-six cents a year additional.

Quincy, Ill., delivery, 75c; R. F. D. Del. 59c. Canadian subscriptions, 75c a year.

Entered at the Quincy, Ill., Post Office as Second Class Matter.

Remittances should be made by Draft, Money Order, Express Order or Registered Letters. Small sums will be accepted in United States one or two cent postage stamps.

Change of Address—When this is desired, be sure to give old and new Post Office addresses.

All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising Rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

FEBRUARY, 1914

No. 11

The American Poultry Association is doing much for the fanciers in general, but what is it doing for the fancier in particular? Tell us, that we may give credit where credit is due. We do not want to criticize except that we may help to bring about better conditions. That the A. P. A. can be more generally useful goes without saying. Try the central office for some practical advice as to breeding. Then try your own State Agricultural College on the same matter. Tell us the results.

The Boston show had a utility class of live poultry this winter; a class in which practical points counted more and fancy points less than at previous shows. It was a breed show in which birds of all varieties in the breed competed together. Feathers did not count unless two specimens scored alike on practical points when the better colored bird got the ribbon. To make this part of the show more attractive the management admitted entries without a fee, giving a first prize of two dollars. The Boston show set apart five hundred dollars to meet all the cost of the utility part of the show saying that if the poultrymen did not respond with good entries it would not be repeated in future years. We have had no report as yet from the show but plan to give facts of interest in our March issue.

There seems to be a feeling of cheerfulness as to the future of the fancy poultry interests. The past two years have been hard on many a breeder of quality stock, have affected the profits of many a breeder of practical birds and will gladly be forgotten. Many an advertiser has sent out less dollars worth of stock than he paid the poultry journals for advertising space. It looks as though the tide had turned. At the winter shows there have been more sales than for several seasons, probably lower prices than three or four winters ago, and inquiries for good stock are coming in more freely. Advertisers are reporting more sales from the num-

ber of inquiries than for a long time. All this is encouraging to publisher and breeder alike.

We wonder whether the borrowing and lending of show birds is on the increase? At the shows that we have attended this winter we have heard more remarks along that line than for several winters. It is hard enough for a beginner, at showing, to have to compete with the birds of a man who has unlimited money to purchase stock without having the entries of a bunch of breeders put in under a single name. The borrowing and lending of show birds is under a ban, but it needs the indignation of the poultry public to make it effective. You expect a fancier to play the square deal. Most of them do. What shall you name the man who wins the blue ribbons on birds that are not his? What can you do to the man who loans the winners? It is up to us all to: first, neither borrow nor loan, and second, be free to get busy when we see evidence that the crooked work is starting up.

Is there much real satisfaction in winning the blue and red ribbons on purchased birds? Within two months we met a happy man who had won a third pen and fifth cockerel on nine entries, every bird in his string having come out of eggs laid on his own farm, the layers of the eggs being of his own breeding. We looked over the variety that was in competition. Of all the exhibits there, his was the only one that had any uniformity of type and color. While the others won the highest prizes, they were plainly of many lines of blood, some of them obtained to "win at any price." Do you know that the man who keeps in the fancy, year after year, is the one who breeds along a chosen line, breeding his stock to a better perfection? The man who buys his winners is short lived as a fancier, in fact never was one, and drops out of poultry owning or changes to other breeds or varieties.

Make up your pens this spring with the plan to breed better birds for next

winter's show. Grow better stock than last year. See that your chosen variety improves through your work of the year. Linebred as you go, producing your own breeding and show stock. Win in 1914 with products of your own brain and from your own matings!

The shipping of eggs by parcel post has not yet proved a success. Here and there we learn of parties doing it but most of those who started out to do it have given it up. The trouble seems to be that the Post Office department do not apply modern methods in the handling of fragile articles. Everything is sent out in mail bags, handled as in the past when the bulk of the matter was letters and papers. The bags are stacked to the top of the mail cars, thrown off at the stations, carried on the front platforms of the electric cars, and nowhere "handled with care." The department can well learn of other countries, that have been handling parcel post for years, and adopt some of the plans that have been found to be needful. Much of the Christmas mail was spoiled through the crushing of the packages in the heaping up of large lots of full mail bags, in cars and offices and much fault is being found. Unless the department is willing to learn from the criticism of the public the express companies will regain much of the business that they thought was lost.

The hatching season bids fair to open earlier than usual. Hens have been laying well since the opening of the year, the high prices of last summer and fall seem likely to be repeated and there is a shortage of laying stock. Hardly a poultryman we know has full pens at this time of writing. Several men will not sell a pullet now on hand, planning to carry them over another winter for breeding and filling up the other pens with 1914 chicks. It will take several years to catch up with the shortage that exists in laying stock. February and March hatched pullets will give eggs through August and September, perhaps through October, catching the money-making prices of that season, and be worth owning. If they should molt, do not worry, keep them through the winter to be your best breeding females of another year. Early hatches will be more numerous than of late years. The day-old chick folks are already well at work and can supply many people with good chicks that may not be conveniently hatched at home.

FROM A FRIEND OF THE FAMILY.

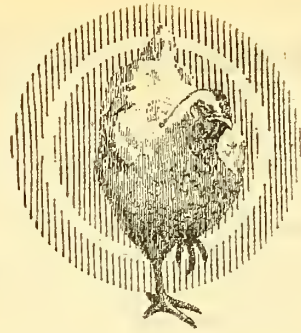
Editor Poultry Keeper:

Enclosed find one dollar to keep my Poultry Keeper coming. There is none better. I took it eighteen years ago when Mr. Jacobs had a hand in it. I will always say a good word for Poultry Keeper to my friends. I wish you all kinds of success.

A. G. Stoddard.

Montana.

Guaranteed Eggs *and* Certified Chicks



ARE the next steps in Commercial Poultry Keeping. Standardized products are the newest thing in the solution of market problems. The dairyman can now furnish certified milk and cream; the apple grower can guarantee his fruit under the national apple act, and the beekeeper can sell his honey with a guarantee of standard quality. The poultryman can standardize, too. If you would have the plan and methods, read

The Guaranteed Egg, By Howard Mittman *and* Certified Poultry Farms, By P. A. Maurer

ARE you putting your profits into the feed bin, as many poultrymen are doing? By buying cheap feeds, changing from one brand to another, and costly experimenting, they are using up the profits that might be saved. A manufacturer tells how the business looks to one who is both poultryman and feed dealer. It's all in the article,

What's In the Poultry Feeds?

The average man on an average farm with an average flock has little chance to make

money. The quickest improvement comes from putting the flock above the average. There are three ways of doing this: Breeding, hatching or brooding. The details are given in the article,

New Blood For Old Farm Flocks

These and other practical articles are appearing in the February issues, along with

The Diary of a Commercial Hen

The unique poultry serial of the year.

The COUNTRY GENTLEMAN

Five Cents the Copy, of all Newsdealers. \$1.50 the Year, by Mail

THE CURTIS PUBLISHING
COMPANY

Independence Square
Philadelphia, Pa.



Cut
Out—
Mail Today

THE COUNTRY
GENTLEMAN

Independence Square
Philadelphia, Pa.

Enclosed please find \$1.50.
Canadian price \$2.25. Please
send THE COUNTRY GENTLEMAN
for one year to the address below.

Name _____

Town _____

State _____

ARE YOU GOING TO RAISE CHICKS?

Remember last spring when you stood on the back porch watching the mother hen with her brood of chicks, about every twenty steps she took she would step on one of them, remember the days it rained, how she would refuse to shelter her little ones and you had to go out and bring them into the house and put them in a box

Well, your troubles are over, it took years to find the answer, but it is here now a complete success, no more need to worry about the hens stepping on her little ones, no need to bring the chicks into the house when it rains, no fear of rats and mice at night, in fact all chick troubles can be removed by the use of the Simplex Feather Brooder the advertisement of which appears in this issue.

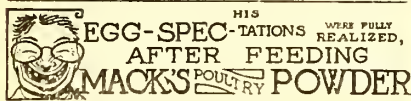
It hovers the chicks nature's way with natural feathers, no fire, no smothering, no leg weakness, no chilling and no matter how many or how few chicks seek its shelter, the temperature always remains the same.

With this brooder there is no wood to warp or rot, no parts to get out of order, it is made of galvanized iron, has a felt curtain to keep out cold and an iron wire guard to keep out rats and keep the chicks within at night.

Chicks go under the mother hen, not to get warm, as "some people think" but to retain their own natural body heat.

The chicks under a Simplex Perfection brooder are as warm and more comfortable than under the hen, they have plenty of room running in and around the natural feathers, retaining their own body heat, as nature intended they should.

Now, don't wait until the last minute to look into this brooder, just drop a postal to Simplex Brooder House, Pontian Bldg., Chicago, Ill., and they will mail you a complete catalogue, giving you detailed information about this wonderful feather brooder, that hovers chicks nature's way. Please mention Poultry Keeper.



EGG-SPEC-TATIONS WERE FULLY REALIZED, AFTER FEEDING MACK'S POULTRY POWDER

Unexcelled for egg producing qualities. Promotes health, vigor and ability to assimilate food. Brings egg organisms into activity and stimulates them. While pure grains, beef scraps, grit, etc., are essential, the added touch of MACK'S POWDER keeps their egg machines at full capacity. Guaranteed to contain no adulterations whatever—is all powder. Nothing like it on the market. Delivered to you pure and fresh by parcel post, package 50c. One month's supply for 100 hens. A trial will give you the satisfied smile.

MACK'S POULTRY POWDER COMPANY.
314 Holmes St., Pittsburg, Pa.

PURE BRED BABY CHICKS.

1914 CATALOG yours for asking. Send today, it's free, full description of chicks, all guaranteed products. Full count, safe delivery. All varieties. 25 years in one place. Prices 10 cents up.

ROSEMONT POULTRY FARMS AND HATCHERY.

Z. C. Drum, Manager.
Box P. K. Rosemont, N. J.



FERRIS IMPROVED WHITE LEGHORNS

Are bred for heavy egg production. Trapnested to lay 160 eggs or more a year. Large, healthy, vigorous breeding and exhibition stock to sell at low prices. Hundreds of Cocks and Cockerels at from \$5.00 up. One Thousand Hens and Two Thousand Pullets at \$2.50 and up. All bred directly from our heavy laying and prize winning stock. We ship on approval and insure stock for 30 days. Write today and let us quote prices on the stock you want.

35 FIRST PRIZES AT 10 BIG SHOWS.

We have won three times as many prizes this season as any other White Leghorn breeder. This record of 35 first prizes and 38 second prizes at 10 big shows has never been equaled. Here are the shows:

- Iowa State Fair, August, 1913.
- Maryland State Fair, September, 1913.
- W. Mich State Fair, September, 1913.
- W. Virginia State Fair, September, 1913.
- Kansas State Fair, September, 1913.
- Alabama State Fair, October, 1913.
- Georgia State Fair, October, 1913.
- Mississippi State Fair, October, 1913.
- St Louis, Mo., November, 1913.
- Grand Rapids, Mich., January, 1914.

See catalog for complete list including other shows.

EGGS FOR HATCHING.

Fifteen Exhibition Matings comprising the best of our winners at this winter's show. See catalog for description and prices.

Bred to Lay Utility Matings. We have over 2,000 selected hens in these matings. Everyone is of fine quality, scoring about 90, large, vigorous and heavy layers. No undersized eggs, all large, white and strongly fertile. Any infertiles replaced free. Prompt shipment guaranteed. March prices, \$2.25 per setting, \$12.00 per 100, \$103.00 per 1,000. April prices, \$2 per setting, \$10 per 100, \$90.00 per 1,000.

DAY OLD CHICKS.

Our incubator capacity is 25,000 eggs and we can furnish 5,000 chicks a week. This means prompt shipment. Chicks from the bred to lay utility matings during March, 25 for \$8, 100 for \$28, 1,000 for \$252. April prices, 25 for \$7, 100 for \$24, 1,000 for \$216. We guarantee safe arrival any where within one thousand miles.

1914 CATALOG IS READY.

Don't buy until you get a copy of this new catalog. Tells how we developed laying and exhibition qualities. Fully describes all grades of stock, eggs and chicks. It is free. Just mail a postal and we will send it by return mail.

George B. Ferris

THE FERRIS LEGHORN FARM.

909 Union Avenue

GRAND RAPIDS, MICHIGAN.

The Best Way

To Get Rid of Lice

on Poultry is to dust them separately with a good lice killing powder. Hold the fowl by the legs, head downward, so that its feathers will be open and the powder can penetrate through to the skin, especially around the vent and under the wings. The best time to do this is at night when the birds are at roost. The lice and mites are then on their job. It takes only a short time to dust an entire flock and the powder "works while you sleep." The best lice killer to use—

30 Years the Universal Favorite

The Old Reliable

LAMBERT'S
DEATH TO LICE

Its effect is immediate and it does not injure eggs, hens or chicks, neither will it soil or discolor the finest plumage. It is the most reliable powder and a sure Profit Payer. If not at your Dealers, send 10c for sample. Larger sizes, 25c, 50c and \$1.00. Latest Pocketbook of Pointers (invaluable to all poultry raisers) mailed for 2c stamp.

O. K. STOCK FOOD CO., 504 Traders Bldg., Chicago, Ill.

AMOUNTS TO A "FREE LIBRARY" OF POULTRY INFORMATION.

We believe that practically every one of our readers will find it to his or her advantage to send to the Cyphers Incubator Company, Buffalo, N. Y., for a full set of valuable free booklets and special 1914 circulars they are now mailing out, postage paid, to all who ask for them. These booklets and circulars include the following;

Main catalogue, 1914 edition, entitled "Poultry Keeping In All Branches," containing 244 pages, 7 1-4x10 inches in size.

"Selling Day-Old chicks and doing Custom Hatching," explaining both plans and giving examples of noteworthy successes; eight pages, 9x12 inches, illustrated.

"Portable Hovers—When, Where and How to Use Them for Best Results," four pages, 11x18 inches, well illustrated.

"Sectional Indoor Brooders—When Where and How to Use to Best Advantage," same size as foregoing and well illustrated.

"Successful Outdoor Brooding," telling "When, Where and How to Use Adaptable Brooding Hovers for Best Results," same size as foregoing.

"Best Methods of Brooding," consisting of 52 pages, 7 1-4x10 inches in size, a daily guide for care of the chicks.

"Poultry Foods and Poultry Feeding," also 52 pages same size as above, full instructions on how to raise broilers, fries, roasting chickens, capons, layers, breeders, etc.

"Cyphers Poultry Farm 1914 Marketing and Sales List," twenty pages, 7 1-4x10 inches, fully describing the basis on which the Cyphers Company's \$80,000.00 all-purpose poultry plant is conducted, fully illustrated.

To our subscribers all the above mentioned booklets and circulars are entirely free, without any obligation on your part and so that you may "keep abreast of the times" on the latest poultry information, we suggest that you write to the Cyphers Incubator Company, Dept. 23, Buffalo, N. Y., and ask for such of these pieces of printed matter as you would like to receive.

When you send in your request, please give us the name of this journal, thus doing us a valuable favor.

America's Best Strain

BARRED ROCKS, S. C. REDS, PEKIN and INDIAN RUNNER DUCKS.

Leading winners at Battle Creek and Grand Rapids recent shows. Over fifty first prizes won in last five years. Our birds are bred to lay in the bone. Ten superb pens mated. Eggs \$2. \$3 and \$5 per 15; Utility, \$5 per 100. Chicks, 15c up. Duck eggs, \$1 and \$3 per 12; \$6 per 100. Free circular. Write today.

Emwood Poultry Farm

R. R. No. 13. Grand Rapids, Mich.

The Latest Improved Brooder Stove

Here's the stove that is meeting with enthusiastic approval of breeders everywhere. The stove that incorporates ALL the features essential for successful and economical Colony Brooding—that is absolutely reliable under any and all weather conditions—that will not smoke or throw off fumes. The stove with a regulator that controls the flow of oil under any possible emergency and keeps the temperature where it should be. The stove that ventilates as well as heats your brooder house. The stove that positively eliminates White Diarrhoea. Use a

Duplex Combined Brooder Stove and

Three Ventilator Sizes 50 to 100 Chicks, 100 to 800 Chicks, 500 to 1500 Chicks



and you not only get perfect ventilation but you save the time, labor and expense of working out and installing an independent system. It is foolish to try to heat all outside by getting your ventilation through a hole in the roof and side walls when a Duplex will give you better results without.

Here's How the Duplex Does the Work

No. 1 is the cold air pipe connecting with the outside. This pipe brings the cold air from the outside into the inner chamber (2) where it is heated before it passes into the brooder room. Note how the air goes down in this chamber, then rises, going up under the deflecting cover, then out into the brooder room proper. 3 is the flue which goes out through the roof and carries off the smoke, fumes, poisonous gases and air off the floor. 4 is the radiating drum through which the heat which is not radiated from the inner and outer heating surface, must pass before it can get out through flue 3. 5 is the fire-box proper. Note the double heating surface. The arrows under the burner show where the air is taken off the floor and carried out of the building through the stove. This makes a perfect circulation of air in the room without the loss of a single heat unit.

The Duplex System of Colony Brooding can be installed with less expense than any other system in use anywhere. Raises enough MORE chicks out of the first hatch to pay for itself. Efficient and economical. Costs less for fuel and is dependable at all times. Raises chicks as successfully in mid-winter as in May and June.

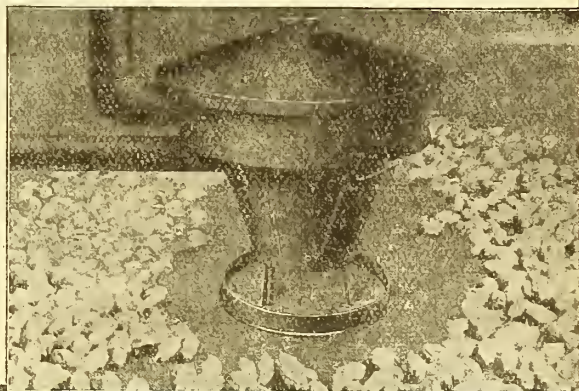
Help Nature Raise Strong Chicks

YOU cannot raise the chicks. No matter how hard YOU try or how much attention YOU give your chicks YOU cannot raise them. The only thing YOU can do is help. Nature must do the work. The only way for you to help is to provide conditions which make it possible for Nature to do the work. All that Nature asks for is clean, well ventilated, evenly heated quarters and plenty of room for exercise. These combined with reasonable care in feeding will make it possible for Nature to do the work for YOU. Chicks which Nature raises are always strong and healthy. The easiest way to help Nature is to install the Duplex System.

Every Chick Saved is a Dollar in Your Pocket

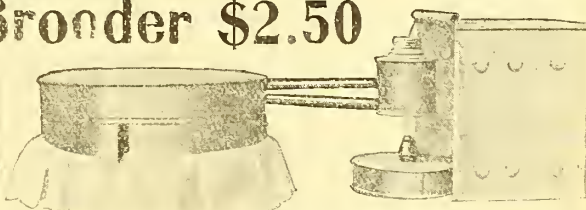
FREE Let us send you our free book "Colony Brooding." Tells all about this wonderful chick-saving system—how to cut the labor and expense in two and increase profits. Write now for special low freight prepaid price and thirty day actual operation guarantee to those who answer this ad.

Duplex Colony Brooder Co. 488 N. Avon St. Rockford, Ill.



\$2.50 Brooder \$2.50

A Brooder That Will Take Care of 50 Chicks.



This Brooder Has Stood the Test. It is Made Entirely of Metal. Can be put in any box or coop in 10 minutes. A Perfect Hot Water System. It has a warm flannel to lay on the chick's backs. Easy to heat. Easy to take care of—a child can take care of it; weighs 11 pounds by parcel post. Get our book describing our 125 egg incubator for \$6.98 and 53 different articles we make. Your name on a postal card will get it. It will be valuable to you. WENDELL INCUBATOR CO., 60 Main St., Holly, Michigan, U. S. A.

CLASSIFIED ADS AN INDEX TO CIRCULATION.

In looking over the classified ads in the Poultry Keeper any person possessed of the least spirit of investigation can not help but be impressed with the wide territorial range of the advertisers. The very first ad, noticed in the Jan. issue was from the state of Missouri—the "show me" state.

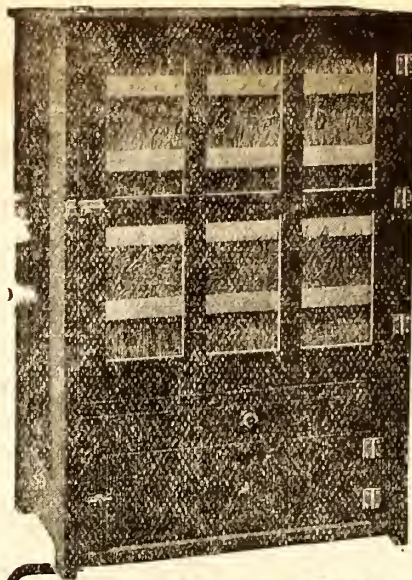
One of the best indexes to the value of a publication as an advertising medium is the diversity of the ads, their character and the fields they cover. In this connection bear in mind that the true test of the circulation of a city daily newspaper is its classified ad. department. If this department covers pages it is the best possible evidence of a very large paid for subscription list also that it is read by the people in general. If this were not true the classified ad. department would not be there. This rule holds good with all class publications and is strongly proven by the classified ad. department of the Poultry Keeper.

Following closely this department in this journal the discovery was made that the January number contained advertisements from 32 states. Think of that! And well may the question be asked, why do the poultry raisers from these thirty-two states flock to this journal to do their advertising? For the one simple reason that they have learned that its large circulation covers a wide and vast field and for this reason these advertisers know that their money planted here will grow.

A poultry journal published in Illinois that can step over into Indiana and pluck twenty-one classified ads. shows drawing power. Then when it takes one more step over into Ohio and gets twenty-six of these ads. it is surely going some. Reaching then over into Pennsylvania nineteen more are picked up. Twelve are from the state of New York and then the stream continues on up through New Jersey, Massachusetts, Vermont and Maine and then swings down through the Sunny Southland, covering Virginia, West Virginia, North Carolina and "My Old Kentucky Home." And then this stream of classified ads, meanders out, through and across Missouri, Kansas, Iowa, Nebraska, Nevada, dipping down into the fertile fields of Oklahoma. Then with a wide sweep it passes up through Michigan, Wisconsin and Minnesota, thus covering as much as two-thirds of the territory of the United States.

As strong as these features talk for the wide circulation of the Poultry Keeper, the best as well as the strongest evidence of its genuine merit and real value is found in the fact that the Illinois breeders give it strong support, forty-two of the classified from them being found in the January number, the first month of the advertising season. Home support is the arch-stone on which any publication must rest. No better recommendation than the cards of these forty-two breeders could be secured and a stronger compliment as to the worth of the Keeper could not be paid.

These classified ads, from thirty-



Increase Egg Yield This Winter, Save Money on Feed, Make Chicks Grow Rapidly, Strong

by installing an Ideal Grain Sprouter and feed your hens the green food that is absolutely necessary to insure prolific egg production.

Eggs are going higher in price every year, the demand is far exceeding the supply, and it looks like *good times* and *plenty of money* for the man who has one of our sprouters.

The IDEAL Grain Sprouter

- is the *best machine* for sprouting grain ever made;
- will produce sprouts over two inches long in 24 hours;
- sprouts any kind of grain *better*, in less time and without fuss or muss;
- produces *three to four bushels* of feed from one bushel of grain;
- pays for itself in a single month by saving in feed bills, increasing egg yield, supplying food that makes chicks grow strong and vigorous.

The "Ideal" is made in several sizes—for a few hens up to hundreds. Can be used in summer (without lamp) as it has proper arrangements for moisture and ventilation to produce quick results and crisp feed.

CONSTRUCTION

Made of best lumber—double walls, insulated with heavy deadening felt—inside lined with galvanized iron—frame of trays heavy galvanized iron—bottom of tray heavy wire netting—front of machine glass, which admits green sprouts. These sprouts require very small amount of artificial heat which is produced by the Ideal Safety Lamp, the fumes of which pass through ventilators.

Get Special Low Price Offer Today

Don't delay, but write at once for special low price introductory offer, full particulars and description of this perfect grain sprouter. No poultry man should be without it. It is the *Biggest Money Maker for the Poultryman since the Incubator was Invented.*

Made by J. W. Miller Co., Manufacturers of Incubators, Brooders and Poultry Supplies, which is sufficient guarantee of its excellence.

J. W. MILLER COMPANY, Box 604 ROCKFORD, ILLINOIS.

Feeding Question Solved

YOUR CHICKENS

WILL GIVE YOU

FERTILE EGGS IN ABUNDANCE

If fed H-P Scratch and H-P Egg Mash. These High Protein Foods are Clean, Sound, Wholesome and rich in sweet, nutritious Egg-Making materials. They are balanced specially for Egg production and will keep your laying hens healthy and profitable. Send postal for catalog and freight prepaid prices to.

KNOLLENBERG MILLING CO., Dept. A. QUINCY, ILL.

BUFF WYANDOTTES

THE GREAT GENERAL PURPOSE BREED—BIG BARGAINS IN BREEDING STOCK NOW
Let me try to please you. Send for circulars containing best lot of testimonials put out by any breeder. Ten years a breeder of Buff Wyandottes.

ORIGINATOR "HIGH QUALITY" STRAIN.

J. E. WILLMARTH,

AMITYVILLE, N. Y.

Wyckoff's S. C. White Leghorns

Acknowledged everywhere the world's greatest laying strain; unequalled in standard qualities. Remember that we are the originators and for over 30 years specialty breeders of the justly celebrated "Wyckoff" Strain of S. C. White Leghorns, the most profitable strain of poultry in America today. Place your order at headquarters and make no mistake. Eggs for hatching in any quantity from the grandest of matings, both exhibition and utility. Catalogue and testimonials free.

G. H. WYCKOFF & SON, Box P. K. Aurora, Cayuga Co. N. Y.

two states, tell in a nut shell the story of large and wide circulation and a well read medium. Without this wide range of circulation these advertisers from this vast territory would not be seeking admission. The Poultry Keeper may well congratulate itself on this very healthy condition and it is to be congratulated that it exists.

T. E. Goodrich.

Indiana.

GETTING THE BABY CHICKS STARTED.

Stop-watch feeding of little chicks; that is, feeding a moist mash 5 times a day "all they will clean up in 5 minutes," is far from practicable to thousands whose hours of labor keep them away from morning until evening and is quite unnecessary for best results.

To all such people I herein suggest a method of care and feeding that if faithfully followed will not only grow your chicks like magic, but will eliminate much of the sickness common to little chicks, such as bowel trouble and diarrhoea. I have adopted this method for the past 3 seasons and have never grown less than 96 per cent of all chicks hatched—diarrhoea is unknown and chicks have matured into healthy productive stock.

When the chicks are 36 to 48 hours old give them lukewarm water and one-fourth pint fine chick feed to every 50 chicks fed on a piece of board so they can get it handy. A little

coarse sand mized with the feed is necessary as grit in some form should be provided at all times. This is all they will need the first day.

From the 2nd until the 10th day, water, milk or buttermilk should be before them constantly. The floor of the pen should be covered to a depth of 2 or 3 inches with fine hay chaff and the chick feed mixed with this to induce scratching. One-half pint to every 50 chicks morning and evening. After the tenth day and until chicks reach maturity a dish containing a good growing mash is constantly before them. Continue the scratch grain as before, morning and evening, increasing the amount as they grow older and increasing the depth of litter in the pen. When the chicks are 6 weeks old gradually change from the fine chick grain to cracked corn, wheat and oats, equal parts. Simple enough, is it not?

Don't think that in order to grow fine chicks you must tie a napkin about their necks and feed them with a spoon. Pampering is unnecessary, simply use common sense and the chicks will do the rest.

Now one thing more and I am done. When giving the chicks their first drink each morning, make sure the chill is taken from the water, for if a chick is allowed to drink its fill of ice cold water, just after eating, bowel trouble in some form is sure to follow. Later in the day the temperature of the water does not matter, but the

morning drink should be warmed. To all who have had heavy mortality among their chicks from diarrhoea I would say, try this morning warm water treatment, try the whole plan as outlined above and you will agree with me that chick raising is not so complicated and laborious after all.

George H. Gill.

Connecticut.

Readers of the Poultry Keeper are urged to try Mack's Poultry Powder for stimulating the egg yield. A fifty cent package is enough to last a flock of 100 layers for one month, making the cost nominal when compared with the value of the eggs. Write the Mack Poultry Powder Co., 514 Holmes St., Wilkins Station, Pittsburg, Pa., or order direct from this notice, and package will be sent you by parcel post.

S. H. Long, Elwood, Illinois, has special pens of both English Penciled and White Indian Runner Ducks, and can fill orders for either sittings of hatching eggs, or for baby ducklings. Mr. Long is a breeder of many years and is well posted on the subject of Indian Runners.

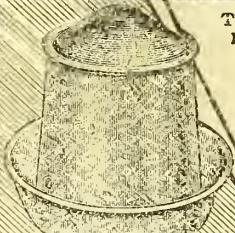
Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

**Keep Your Birds Healthy—
Save Money on Feed**

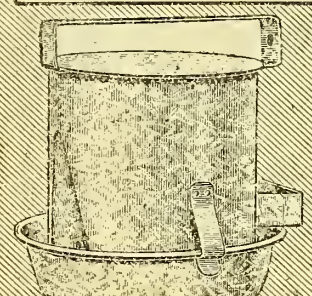
There are two big profit making features for you in Kentuco Poultry Ware. One is that you have the best possible protection for keeping poultry feed and water pure—the other is that the birds cannot waste their feed. It is the truest economy to equip your entire poultry yard with

KENTUCO Poultry Ware

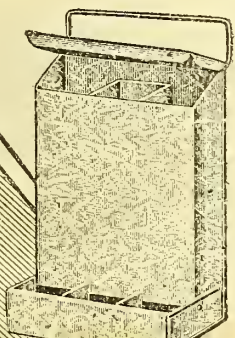
The water fountains are galvanized after they are made. There's no possible chance for rust. Every piece is easy to clean and keep clean. For instance, take the Kentuco Sanitary Wall Fountain illustrated here. It's made with two pieces. You can get into the reservoir with a brush to clean it. There's plenty of room all around the pan for many birds to drink at the same time. No other wall fountain is built like this. No other can be cleaned so easily. Equally valuable points of construction can be found in every piece of Kentuco Ware—yet Kentuco Ware does not cost more than the less worthy stuff now on the market.



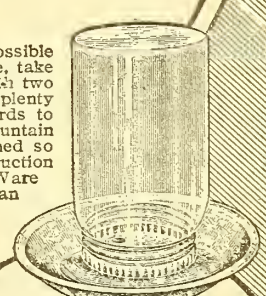
Kentuco Two Piece Fountain
Cone top prevents birds from perching on it and polluting water in the pan.



Kentuco Sanitary Wall Fountain
Birds can not pollute water, yet always have a plentiful supply. Reservoir can be taken off and cleaned.



Kentuco Grit Box or Food Hopper
Birds can not waste food or pollute it.



FREE

Kentuco Jar Fountain

The handiest fountain anyone could imagine. Screw the base on to any Mason jar. This base is made so it doesn't splash water when inverting it as others do.

To let you know more about Kentuco construction we will send you the base free if you will enclose stamps, to cover postage and packing.

Write at Once

for the big folder telling the money making facts about Kentuco Ware. Ask your dealer about Kentuco Poultry Ware. Insist upon having it. In writing please mention your county as well as your city and state.

Address

**Kentucky Stamping Co.
140 N. 15th St.
Louisville,
Kentucky**

NEVER HAD BETTER RESULTS.

Editor Poultry Keeper:

Enclosed find my renewal subscription for 1914. I never expect to allow my subscription to your good journal to lapse. I am receiving replies to the ad I had in the January issue ever day. I never had better results from any paper.

Indianapolis, Ind., B. L. McDill.

WHERE TO BUY DAY OLD CHICKS.

Many readers of the Poultry Keeper are perplexed right at this time as to where it is most advisable to place their orders for day old chicks or Eggs for hatching. You want above everything else full value for your money. Of course, you want chicks at as low a price as you can buy them, still you do not want to sacrifice price for quality.

One of the first considerations is to purchase from a firm that you know takes particular pains to keep its breeding stock up to top notch; one that not only has the best blood lines obtainable, but also keeps them up in a good, strong, healthy condition, free from vermin and disease of all kinds. This is the first requirement if you want to purchase chicks that will be remembered long after the price is forgotten.

The second consideration perhaps the most important, is to be assured that your chicks are well hatched, 90 per cent of the chicks that die each season can be traced directly to improper incubation. It has been proven that chicks will hatch under all kinds of conditions and varying temperatures, and yet if the proper amount of ventilation, the proper amount of moisture applied at the critical period, the correct temperature at all stages, the correct cooling and airing of the eggs are not all taken care of properly, chicks may result but they are far from well hatched.

The Goshen Poultry Farms have from the start given this subject their utmost attention. Their man in charge of the hatching department has made a life study of artificial incubation and today their chicks have a reputation that reaches from coast to coast for vitality, hardiness and livability. This is the kind of chicks you want to purchase. Don't let the price alone be the deciding factor in placing your order. You want every chick you purchase to be a living monument to your success. Whether you want chicks for exhibition purposes or to produce breeding stock, the best is the kind that is well hatched. They will prove the most profitable for you in the end. If you are interested further write to the Goshen Poultry farms for their chicklet catalog. It is free to all readers of Poultry Keeper and should be in your hands. They are also in position to furnish eggs for hatching in any quantities, and their new brooder which is made under their own design and manufactured by them should be in your hands. Address Goshen Poultry Farms, Route 3, Goshen, Indiana.

The Biggest Poultry-Profit Year

Why?

I advise all my friends to get ready now to take advantage of the greatest demand for Poultry in many years and at the highest prices. There's a big shortage in pork and beef. Poultry raisers must make up the meat deficiency. The sooner you start the longer and bigger your harvest; the bigger your money roll at the end of the season. You can't depend upon the hen to produce your chicks—she's too slow; too bothersome; too unreliable.

The Sure Hatch Incubator

Is the Ever-Ready—Ever-Dependable Chick Producer. It is strongly built of California Redwood, triple-walled, water-heated, self-regulated, economical. Guaranteed for 5 yrs. Yet my direct-to-you factory price is LESS than you're asked to pay for many poorly built machines. Poultry picks up what would otherwise go to waste on the place. It is a "pick up" for you, too. No experience is necessary with my machine. It's so simple and absolutely self-regulating from start to finish. I guarantee my machine to maintain proper hatching conditions in a room where water freezes; and to hatch every egg that has the germ of life in it. I'm so sure that my machine will do all I claim for it that I'll send it to you on **SIXTY days' trial** and pay the freight. You can try it at my risk. If not satisfied send it back and get your money.

FRANK HAMMOND, Pres. & Mgr.
SURE HATCH INCUBATOR COMPANY
 Box 2, Fremont, Nebr.

GUARANTEED FOR 5 YEARS



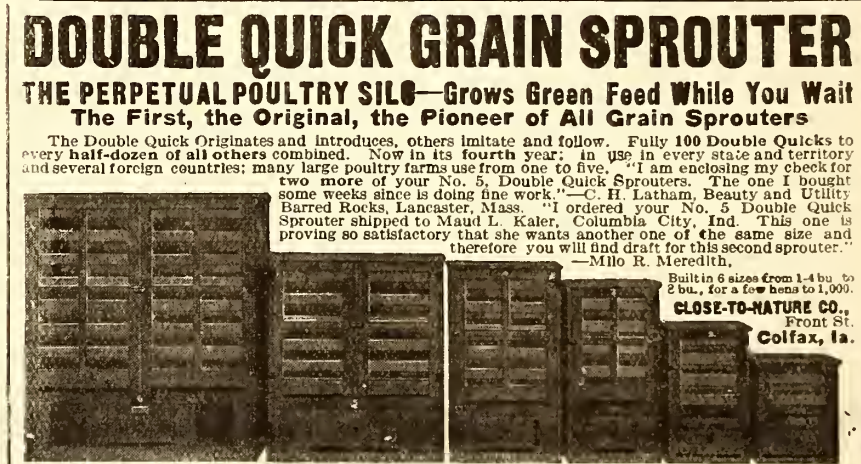
DOUBLE QUICK GRAIN SPROUTER

THE PERPETUAL POULTRY SILO—Grows Green Feed While You Wait

The First, the Original, the Pioneer of All Grain Sprouters

The Double Quick Originates and Introduces, others imitate and follow. Fully 100 Double Quicks to every half-dozen of all others combined. Now in its fourth year, in use in every state and territory and several foreign countries; many large poultry farms use from one to five. "I am enclosing my check for two more of your No. 5, Double Quick Sprouters. The one I bought some weeks since is doing fine work."—C. H. Latham, Beauty and Utility Barred Rocks, Lancaster, Mass. "I ordered your No. 5 Double Quick Sprouter shipped to Maud L. Kaler, Columbia City, Ind. This one is proving so satisfactory that she wants another one of the same size and therefore you will find draft for this second sprouter."—Milo R. Meredith.

Building 6 sizes from 1-4 bu. to 2 bu., for a few hens to 1,000.
CLOSE-TO-NATURE CO.,
 Front St.
 Colfax, Ia.




"BOB" ESSEX' GREAT BIG OFFER

Let me Start You in the Poultry Business Right. I will give you a complete Poultry Plant of High Quality at such a Bargain Price that it seems like giving it away. I want to help you "Make Good." My factory is running nights—every night except Sunday—turning out the

LARGEST LINE OF INCUBATORS AND BROODERS IN AMERICA

Write today for my Big Free Catalogue and read about them. But let me tell you right here about this Great Bargain Outfit. Everything you need to do business with, and do it Right, for \$25. This is the way I help poultry-keepers. My customers are successful. They get High Quality goods at Rock Bottom Prices. This is a sample. Order today and make sure of it.



"BOB" ESSEX.



A 70-egg incubator; 100-Chick Hover; House for chicks or growing stock, with Glass, Wire and Cotton Front; Wire Run with double Wire and Wooden Hinged Roof and Four Cotton Frames; Roost and Lice Proof Supports, Grt. Box and Wall Fountain; also Complete Plans for Laying Houses Good value at \$50. You get it for \$25.

ROBERT ESSEX INCUBATOR CO. 7 Henry St., Buffalo, N. Y.
 87 Barclay St., New York City

TWENTY-FIVE LICE REMEDIES.

1. Whitewash the entire interior of the building at least once, if not twice each year, after having first swept the walls clean of all dust, straw, etc.
2. Whitewash the nests at the same time the building is whitewashed.
3. Clean out the nests and put fresh straw in them once a month.
4. Spray or paint on a little liquid lice killer or kerosene oil whenever you find any lice or mites in the nests.
5. Put kerosene oil on the roosts once every two weeks or once a month.
6. Put a handful of air slacked lime under the ends of each roost.
7. Clean off the droppings boards every morning and sprinkle some dry sifted earth or sifted coal ashes on them.
8. Do not allow filth to accumulate on the floor. Clean out often.
9. Change the litter on the floor every month, and oftener if it becomes filthy or damp.
10. Clean out around the water fountains and feed hoppers often. Scald the fountains and clean and paint the hoppers.
11. Wash the windows so there will be plenty of light.
12. Have no dark inaccessible corners. Keep everything moving around.
13. Avoid having any more dust

than is possible flying around the house.

14. Provide a dust bath of sifted earth, or if the sifted earth is not available then try sifted coal ashes. Don't use road dust.
15. Keep sparrows away. They carry lice.
16. Clean up all rubbish which harbors rats and mice. They stir up filth which favors lice.
17. Have all fixtures, roosts, nests, hoppers, etc., movable so they can be taken outside to clean.
18. Burn sulphur or sulphur candles in the house if badly infested.
19. Keep the yards clean.
20. Allow no filth to accumulate around the fence corners nor around the poultry house doors.
21. Feed all parings, apples, roots, etc., in pans or troughs and remove them after the fowls have eaten. Thus preventing filth from decaying vegetable matter left over.
22. Dust the hens with insect powder if necessary to rid them of body lice.
23. Add two ounces of crude carbolic acid to each gallon of whitewash if the lice are present.
24. Line the interior of the house with tar paper. This is objectionable to lice.
25. Keep ahead of the lice. Keep them in check. Don't let them have any chance to multiply.—Exchange.

GIVE REPORTS FROM "ACTUAL USERS."

The attention of our readers is called to the advertisement of the Cyphers Incubator Company, on the inside front cover page of this issue, which gives some interesting reports from owners of the Indoor Sectional Paradise Brooders manufactured by this company. Following is another sample report, which is published at the request of the Cyphers Company: Cyphers Incubator Company, Buffalo, N. Y.

We are having splendid success with our Paradise Brooder purchased from you—the one you sent by express. It is being operated in a room 12x14 feet, with fairly good light. We aim to keep the chicks in the brooder from eight to twelve days, placing fifty chicks in each section. As we have three sections of the Paradise it gives us a capacity of three hundred chicks at one time. We do not hesitate to put chicks of different ages in the several sections of the brooder and results have been very satisfactory. This is our second season with the Paradise and it continues to do splendid work. Must say that it is the best brooder we ever used as a 'chick nursery.' It would be hard for us to give up this brooder.

J. C. Fishel & Son, Hope, Indiana.
The reader is requested to look up the Cyphers Company full-page advertisement of this brooding device on cover page of this issue.

Write Your Name on a Post Card Today

For this Big 112-Page Prairie State Catalog FREE



No matter how many other catalogues you get don't fail to send for your copy of this big free book. You will find it different from any other incubator catalog ever published because it was written by one of the world's foremost experts on incubation and the rearing of chicks—a man who knows from actual experience how to succeed in the poultry business. He tells you how, by watching the hen that stole her nest, he hit upon the idea of the moistened Sand Tray—an exclusive patented feature of Prairie State Machines which insures hatching a larger number of strong, vigorous chicks that live—chicks that live and grow into profit.

1914 Prairie State Incubators Brooders, Hovers and Colony Houses


are fully described in this big, free book. They are used and endorsed by leading Agricultural Colleges and poultry experts the world over. For 30 years they have maintained the lead and with the new 1914 exclusive features they are simply incomparable. Those who must economize in the matter of price will be particularly interested in the Prairie State Keystone model which embodies all the new improvements with Prairie State quality and yet sells for only \$9.00 and up.

Send for this FREE Book At Once

It contains also about 60 pages of valuable information on poultry raising. Tells How to Feed, Rear and Breed for Best Results; How to Prevent and Cure Diseases; How to Grow Green Winter Feed; How to Build Poultry Houses; How to Preserve Eggs, etc., etc. You will be surprised at the amount of valuable information this big 112 page book contains. A postal will bring you a copy by return mail—free and postpaid. Write



PRAIRIE STATE INCUBATOR CO.
205 Main Street
HOMER CITY, PA.



GERMOZONE

Tones the System

For Roup Colds and other Poultry Diseases

Should be given regularly *twice-a-week* to all fowls, as a tonic and a preventive of disease. It tones the system, aids digestion, and keeps the fowls in A-1 condition. The best remedy for Roup, Colds, Chicken Pox, and other poultry diseases. Endorsed by leading poultrymen the world over. Easy to give—certain in results. Price 50 cents.

Protein in digestible form is what is needed for best results in winter egg-production. That's what you get in Lee's Egg Maker—almost 50% protein and every ounce of it digestible. Used regularly on America's biggest poultry farms. The only perfect substitute for all kinds of meat food, and at less feeding cost. We guarantee an increased egg-production by its use.

25c and 50c Pkgs. Mail \$2.00.
100 lb. Drum \$7.50.

Ask for Lee's Poultry Book Free
GEO. H. LEE COMPANY,
937 Harney Street,
Omaha, Neb.

Lee's Egg Maker

PERFECTION SANITARY CIRCULAR METAL BROOD COOP



made entirely of galvanized iron which will last a life time. They are properly ventilated, and are Rat, Mink, Weasel and Skunk proof. Just the coop you are looking for. Write for circular & special introductory price. Perfection Metal Brood Coop Co., Box 58E Warsaw, Ill.

Paint Without Oil

Remarkable Discovery That Cuts Down the Cost of Paint Seventy-Five Per Cent.

A Free Trial Package is Mailed to Everyone Who Writes.

A. L. Rice, a prominent manufacturer of Adams, N. Y., has discovered a process of making a new kind of paint without the use of oil. He calls it Powderpaint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof and as durable as oil paint. It adheres to any surface, wood, stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

Write to Mr. A. L. Rice, Manuf'r., 21 North St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write to-day.

SIMPLE OR SIMPLEX BROODING.

By Gerald S. Jordan, New Jersey.

To my mind the most difficult problem there is in poultry keeping is the artificial brooding of the young chicks. The heavy mortality during the brooding season is one of the greatest drains on the poultry keeper profits. Many are the reasons that can be assigned for this high mortality, the principal reason in my opinion is "An inefficient brooding system." The majority of the deceased in the baby chicks can be distinctly traced to this cause. It is not uncommon to read of 90 and 95 per cent hatches with all kinds of incubators. But, how uncommon it would be to hear of 95 per cent brooding in large numbers. Hens will brood a 100 per cent given fine weather, but the natural system is not adaptable to the large commercial egg farm or the small intensive poultry raiser. In discussing with poultrymen about their average mortality in brooding I find their averages very considerable. 20 per cent loss is considered a fairly good stunt in brooding. Personally I have had as high as 40 per cent. Even this figure I do not consider abnormal. The most widely used system in artificial brooding is the individual lamp and hover used indoor and outdoor in specially constructed coops or in brooder houses.

To every large commercial farm with its specially built brooder house, with its heated pipe line there are hundreds raising poultry for profit on a small scale. This accounts for this system being used so extensively. To me it was always a perplexing question to determine the right amount of heat units there should be under the hover at night. The climatic changes are so sudden in the spring that it becomes a question of pure guess-work to regulate the heat. A little too much heat and you get an aftermath of bowel trouble, not sufficient heat and the chicks get chilled and crowd, then your mortality list shoots up like the iceman's bill in the summer.

Again this system of brooding is in units of fifty generally. So to raise a thousand or fifteen hundred chicks at one time means a considerable outlay of money. Then there is the brooder house on the large commercial plants especially built for the purpose. Its initial cost of building and equipment would almost buy a good farm. The majority of poultry keepers in the United States are located on five and ten acre farms and not on hundred acre farms. So any system that can brood a large number of chicks with safety and the initial cost of which is in line with their income is something which the most of us are in need of.

In the spring of 1913 I wanted to raise about 1500 chicks and preferred if possible in the one brood. I installed on my farm in a "Simplex Brooder Stove." On April 2nd I placed 850 chicks around this stove. A week

later 120 were added making a total of 970 chicks or about two thirds of its capacity. The results were marvelous. For the whole of the operating period the total cost of heat was ten dollars and eighty cents, a little more than one cent per bird. At the end of the seventh week my records show that I lost 62 chicks, eleven of these were accidentally killed in an outside run by a box falling on them. This is the lowest mortality I ever heard of with a like number of chicks. All the work of operating and care and feeding was done by my wife.

The conclusions I have arrived at are that the Brooder Stove System is without a parallel for its cheapness, its efficiency in raising chicks and the saving of labor as it is almost as easy to care for and feed a thousand as it is to handle fifty. Its operating cost is without equal. In the whole brood I did not have a single case of diarrhoea. The stove itself was set up in one of my laying houses and in watching the chicks I found out they regulate their own heat. This is the secret of success. In writing this article to you and commending the stove it is with the point in view of easing the labor of these engaged in the industry and increasing their profits.

ABOUT CAPONIZING.

In every poultry paper we read a great deal about caponizing and the great profits a poultry keeper can make out of his superfluous cockerels. But so far, I never read in the Poultry Keeper about the experiences and results which anyone has had with caponizing.

About two years ago I bought an up-to-date caponizing outfit and tried my hand in the business of converting roosters into capons. Of course, some of these fellows went to the kitchen as broilers, because I was so unlucky as to cut the artery which is so dangerously near to the testicle. But soon I learned how to overcome this difficulty and had not much trouble in removing the testicles. Everything went along nicely for some weeks. My cockerels looked more and more like capons. But after two months or so the change came. My cockerels turned to be roosters again. Out of all the cockerels I had worked on not a single one turned out to be a capon at the end.

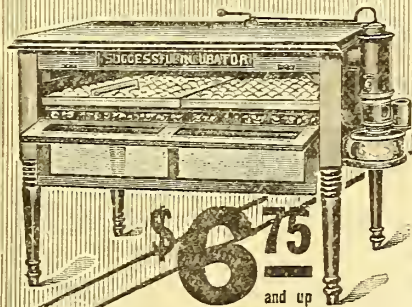
The next year I did not use my caponizing set at all, but this year I started in this profitable business once more. I had very good luck, that is, I killed only two or three during the operation, but at the end there was the old story again. My capons became roosters.

Now I would like to know if some of the readers of the Poultry Keeper have had the same experience as I had, or if someone can tell me what my failures came from.

A. K.

New Haven, Mo.

Read this Page—Then You'll Know What Kind of an Incubator to Buy—



There Are 20 GOOD REASONS Why You Should Buy a "Successful" Incubator In Preference to Any Other Hatching Machine.

18 of These Reasons are the Features of Superiority Printed Below. The Other Two Reasons Are Records for Larger Hatches and Our Low Price Offer.

I WISH everyone interested in the *big profits* to be made from the poultry business, especially those interested in incubators and brooders, could see this page announcement of mine.

Probably it would mean the saving of *many dollars* to them, the saving of *many hatches*, the saving of a lot of *trouble, time and annoyance*—by keeping them from buying a cheaply constructed or poor incubator.

You know there are two kinds of incubators on the market. One built merely to sell for a low price—the other built to hatch the greatest number of chicks from the eggs put into it, do it year after year as long as the incubator is in use, and sell at a price that anyone can well afford to pay.

The latter exactly describes my

Successful Incubators — Successful Brooders

Life Producers

Life Preservers

I do not promise you impossible things. But what I do promise is that a "Successful" will hatch *larger and stronger chicks* and a *larger percentage* of them than any other incubator in use anywhere. No other machine is so big a money-maker—none other so big a profit-payer.

This is no idle statement. The special construction of my Successful Incubators, combined with exclusive points of merit, go to make an incubator the equal of which has never been manufactured. You can see this for yourself in the detailed description of the hatcher.

If you are anxious to get into the poultry business, to make a good living out of it, and *want to start right*, you will make no mistake buying a Successful Incubator.

With the "Successful" no experiments or trial hatches are necessary—you'll have no failures.

We also have "High Grade Poultry"—stock and eggs of all the leading varieties—land and water fowls.

Successful Grain Sprouter made in sections—capacity 50 to 600 hens—keeps your fowls laying all winter—when egg prices are up. Furnishes green food in coldest weather—will enable you to get three bushels of fresh, succulent, egg-making green food from one bushel of oats, wheat or rye. It sprouts grain in 24 hours. Send for free booklet.

\$25.00 Poultry Course, FREE

This course contains the most practical advice ever given to beginners. It tells how to produce poultry and eggs at lowest cost, explains how to sell them to best advantage; all about poultry house construction, many different feed formulas, diseases of poultry and their remedies, how to raise ducks, geese, turkeys, etc., in fact, takes you from the beginning to end of the business, revealing everything necessary to insure you more profit from poultry.

If you are thinking about buying an incubator, don't be persuaded to decide on any make until you write for my

Successful Catalogue—It's FREE

—and learn what I have to offer you. My book tells all about various incubators and brooders. It gives you a good idea of the advantages of each, what size to buy, etc. It is frank and comprehensive—free from all exaggerations—and tells you just what steps need be taken to insure success.

Write for my book if only to get my low price offer and to read page 6 which contains my guarantee—the strongest guarantee ever put behind an incubator. Don't buy an incubator that guarantees less. Don't fail to ask for prices on Successful Brooders—the only brooders made with automatic heat regulator, therefore, the best chick preservers. Address

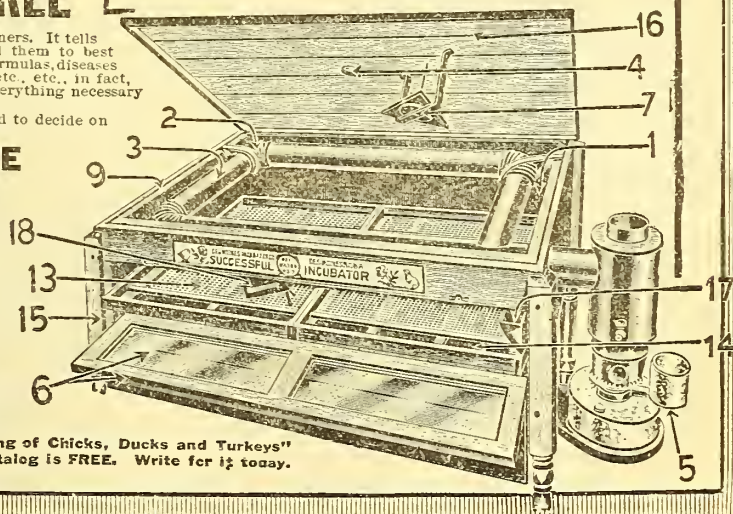
J. S. GILCREST, Pres. and Gen. Mgr.

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47 Second Street, Des Moines, Iowa

NOTE—Our famous little booklet, "Proper Care and Feeding of Chicks, Ducks and Turkeys"—worth its weight in gold—sent for 10 cents. But our big Catalog is FREE. Write for it today.

Here Are 18 Features—Any One of Which Should Make You Buy a Successful

- 1—The only hatcher that heats the colder edges of the body first.
- 2—Round corners on tank, giving faster current, more even heat, better regulation.
- 3—Heaviest copper tank used on any incubator.
- 4—Only one scientifically ventilated. Admits cold air at center of top. Does not create draft which dries out eggs.
- 5—Safety attachment on lamp burner—provides absolute protection from fire.
- 6—Only incubator with two glass doors—through which thermometer may be seen.
- 7—Combination water thermostat regulator.
- 8—The only machine guaranteed with a guarantee that guarantees and evades no issue.
- 9—Built like a refrigerator.
- 10—Case non-warpable.
- 11—Weights more.
- 12—Cost less per pound.
- 13—Strongest, most durable egg trays.
- 14—Nursery under egg trays. The greatest feature applied to artificial incubation.
- 15—Detachable legs, allowing machine to be stored in very small space.
- 16—The only incubator in the world cabinet made.
- 17—Simple, effective application of moisture when necessary.
- 18—Adjustable thermometer. Never necessary to open doors or pull out the trays to read temperature. Thermometer is stationary; chicks cannot knock it over.





J. F. SIEMS,
Inventor and Patentee

foreign countries
the end of the hatching process.

Natural Hen Incubator ^{200-Egg Size} Costs Only **\$3.00**

Don't Throw Your Money Away: Other Incubators Cost 4 Times this Price

Over 600,000 Sold—Many are pushing the old-style hot boxes aside with their dangers and unsatisfactory hatches. With the **Natural Hen Incubator** there are no more smoking lamps and death dealing fumes, no overheating, no sudden cooling, no expense for oil, no sleepless nights, no more spoiled hatches. People are learning to know that the **Natural Hen Incubator** way is the right way. There is no way to beat nature. Imitations only result in failures and costly mistakes.

The **Natural Hen Incubator** is unlike any other incubator. With it you not only hatch more and better chicks, but they will be stronger and more vigorous and develop more rapidly and make better fowls. The Government is behind it. It is fully protected by patents in the U. S. and in the only patented incubator in the world which uses the living hen from the beginning to the end of the hatching process. Thousands of voluntary testimonials.

Notice the Words of Praise

J. L. Beach, Morgantown, W. Va., writes: "Your Natural Hen Incubator is a most useful invention. I am recommending it to everyone that is interested in chickens. It fills every claim you make for it."

Captain G. S. White, Vinila, Okla., writes: "This is the best thing in the chicken line ever offered." Another: "The Natural Hen Incubator is the surest and best of all incubators."

J. D. Haley, Cottonwood, Texas, writes: "The Natural Hen Incubator is simplicity itself and the greatest help to nature ever conceived by man."

Professor C. L. Willoughby, University of Florida, writes: "It is useful, safe and economical." Another: "Out of 160 eggs I hatched 150 chicks. It is the grandest thing I ever saw."

If you want the incubator that will hatch the most and best chicks, the **Natural Hen Incubator** is the incubator for you. No freight to pay. Agents wanted. Send today for **FREE** Catalog with *Special Introductory Offer* and make success sure.

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CAREFULLY hatched from pure-strain, heavy-laying, vigorous stock. The kind of chicks that thrive and grow to healthy maturity. Every-one inspected—carefully packed.

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to any point in America. Hatched on Michigan's largest poultry farm with the best of equipment and management. Beginning March 1st we will ship 5000 chicks per week. Avoid disappointment by booking your orders now. Costs nothing until the chicks are to be shipped. Ask for new, beautiful and instructive Poultry Book—FREE.

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SUGGESTIONS FOR THE HATCHING SEASON.

Experience is a good teacher. As time passes every poultryman gradually collects a store of odd bits of information that will meet conditions not planned for in the books. A given situation arises and this experienced man does perhaps the unusual thing, but the thing however that will exactly fill the bill. These odd bits are to be gained by experience, not by reading, and the winning of them makes it exceedingly pleasant and profitable to do some thinking along with the work.

For instance, an experienced poultryman told me that so long as he was keeping one of the larger breeds he would never chose a cockerel that was large and up to the standard in weight for his breeding pens. And the old man gave me good reasons. He said that a large bird was bound to be clumsy and wouldn't do his work very well and quite often, perhaps, would not do it at all. Now, one can readily see that with such a bird fertility is bound to be low. And fertility is quite an item. But some one may say that by choosing a small active cockerel you will develop a strain that will always be under weight. If the statement were true it would still not be a very serious objection. We know very well that it is not the larger specimens of any breed that are the best layers so perhaps it would be just as well if the most of our birds would be a little under weight. But a small active cockerel will will not necessarily breed small progeny. He will insure fertile eggs, but as for size and shape of birds, these are given by the mothers, so it would always be well to choose large hens for the breeding pens. This reasoning looks good to me. I tried it and I found that it just about as the old man says.

And then again I have learned to be mighty careful as to where I am to put my eggs while collecting a sitting. A man who was supplying a fancy egg trade once received a protest from the purchaser. It was declared that the eggs were not sweet and didn't seem to be fresh. The producer knew that it was not his fault for the eggs were fresh when sold. He went in to make an investigation. He found that the eggs were put in a large refrigerator and although there was nothing in there to give a taint to the eggs, (the proprietor knew that much) still the foul air took away the sweet, fresh taste. Thereafter the eggs were given fresh air and no more protests were received.

It is needless to say this point offers a valuable suggestion for the care of eggs intended for hatching. If you are skeptical, put it to the test, I did. I collected a hundred eggs to fill my incubator and I put them in a new trunk. There were clothes in the bottom of it and I laid the eggs on the clothes, and every time I put in additional eggs I saw to it that the till which was full of clothes fit down close and tight. This to keep the eggs warm, you know. Well, I hatched one chick out of the hundred eggs. I then came to the conclusion that eggs were regular fresh air fiends and the next time I gave them plenty of fresh air while collecting my number. I had a good hatch. Then again there is a good deal to be said for the "close-to nature" cry. For instance, the wild jungle fowl used to place her egg nest on the ground and then line it with a few dry blades of grass. And she knew her business, no doubt of it. Now let tell you an excellent plan for carrying out just this knowing way with your domestic fowls. Take a box, say a common soap box, knock one side off and put it on the ground with the open side-down. Then in under there, form a neat little nest in soft earth and line it with some straw and not too much of this. Don't make the nest

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Write today, now, for our new 1914 Catalog; a perfect guide for growing everything for Home or Farm, in Seeds, Bulbs, Plants, Shrubs and Trees. SENT FOR THE ASKING

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Hens Need Green Bone

Greatest of all egg-making foods. Supply it fresh, get it low priced. Cut it at home with a **STANDARD Bone Cutter**

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The cutter that handles bone in all conditions and doesn't break down. The favorite everywhere. It always makes good. Its easy turning, strength and nice work in cutting bones across the grain please every user. 12 sizes for hand and power, costing from \$8.75 to \$145. Send for free book.

STANDARD BONE CUTTER CO., Millford, Mass.

too deep. Be sure of this. Make it shallow so that when Biddy steps in among the eggs, they will push readily to one side of her feet and not break. Of course you don't want Biddy to drown in the first soaking rain, so you had better put the box in some fairly sheltered place or have a good waterproof roof for it. Otherwise the rain will do harm. You had better also make a rat-proof and skunk-proof door for the front of it, or better still, move to Colorado where there are no rats and mighty few skunks.

If the weather is unusually dry or if you happen to live in a dry climate you need to pay some attention to the supplying of moisture. Here is a good way to do this. Take a fairly small sized tin can and sink it in the middle of your nest so that its top just comes level with the bottom of the nest. Fill it say half full of water and stretch a small piece of burlap over it and then spread your straw on this. The eggs will get plenty of moisture. There are other excellent reasons why this is a good way to build a nest out under the cherry tree or in the shed. You can see how it would be detrimental to the health of lice and mites, and how easy it would be to provide green food and a dust bath, but I haven't time to talk to you about these things to-day.

Colorado. Jesse Resser.

BROODING YOUNG CHICKS.

I have never seen an article from any one describing the kind of brooder I am using. I tried raising chicks in three or four different kinds and made a failure in all until I made the ones I have now. I made one myself and hired a carpenter to make one.

They are made of pine barn siding, 6x3 ft., 18 in. in front and 12 in. in rear. A partition in the center with a small door and a hinged lid covered with a good grade of roofing paper. One side is floored and an opening left 14x16 in. On the under side of this I tacked a piece of sheet iron. The other half has no floor. I make a frame the size of brooder and 6 in. high and set the brooder on frame and fill one side full of dry dirt. On the other side where the sheet iron is I place dirt or sand about 1 in. deep then some old cloth or sack. Then place chaff or leaves on this. Place a small No. one lamp under brooder and warm the dirt. Place the chicks in brooder when they are dried off and cover them with a cloth tacked to a light frame about 2 in. high. Let the cloth sag in the middle so it will come down on their backs. Keep them under the hover as much as you can for the first 24 hours. Don't turn your lamp too high. A small blaze is sufficient in cool weather. I have had good luck with my chicks raised this way.

Leave the hover open so they can get out if it is too warm for them. It is a pleasure to go out to your brooder after dark and find the little fellows lying scattered out fast asleep and not huddled up in one corner as I used to find them in some of my other brooders.

Indiana. F. H. Green.

Wisconsin Wins In Big Hatching Contests EVERY YEAR

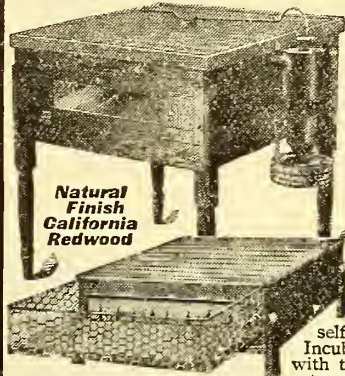


Mrs. J. McMahon, Veedersburg, Ind., won in Missouri Valley Farmer Hatching Contest, hatching 123 chicks from 126 eggs.
Mr. C. B. Armitage, Atwater, Ohio, won in the Successful Farming Contest, getting 181 chicks from 181 eggs in two hatches.

Mrs. J. W. Mize, Vaughns Mills, Ky., won in the Successful Farming Contest, hatching 208 chicks from 208 eggs in two settings.
Mrs. F. H. Lewis, Montrose, Pa., in 1913 won in Successful Farming Contest, getting 96 chicks from 96 eggs in one setting.

I stand ready to prove that Wisconsin Incubators are the best built and the best equipped machines on the market today. You can't get bigger or better hatches even if you pay twice the price. I build the outer walls of my incubators of Genuine California Redwood—costing four times as much as materials some manufacturers use.

130 EGG INCUBATOR } Both \$10 FREIGHT PREPAID
CHICK BROODER } For EAST OF THE ROCKIES
180 Egg Incubator and 180 Chick Brooder } Both \$11.50 For



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Find out what material an incubator is made of before you buy.

Incubators have hot water heat, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Incubator and Brooder shipped complete with thermometers, lamps, egg-testers, all set up, ready to use when you get them.

Write for FREE catalog and we will send you a sample of the Redwood our Incubators are made of

Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others we will feel sure of your order. Don't buy until you do this—it pays to investigate before you buy. Money back if not satisfied. **THOS. J. COLLIER, Manager.**
WISCONSIN INCUBATOR CO., Box 78 RACINE, WISCONSIN

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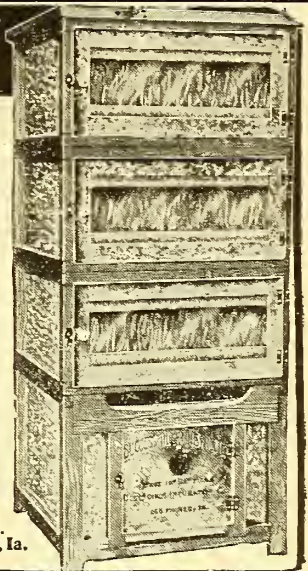
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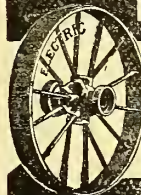
"Successful" Sectional Grain Sprouter

will enable you to get three bushels fresh, succulent, egg-making green food from one bushel of oats, wheat or rye. It sprouts grain in 24 hours. Then gives an inch of crisp green sprouts every day. With it you can make your winter chicks grow faster—get them ready for market sooner—when prices are highest. You can make your hens lay more—100% more eggs—lay when egg prices are highest. It's a wonder! Can't warp, shrink or swell as wooden sprouters do. Has large glass doors and metal trays. It will make money for you. Send today for Free Book.

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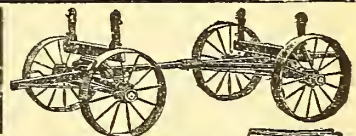
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This book is brimful of information of vital importance to poultrymen.

Feed your hens right—you'll average 200 eggs a year. "The Golden Egg" tells exactly what and how to feed them. Fresh cut bone, prepared in a Humphrey Bone Cutter, makes bone, muscle, feathers and eggs. Feed your hens *The Humphrey Way*. Thousands of farmers have tried it out. They've found it means big profits for them.

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will save half your feed bills and double egg yield. Guaranteed to cut more bone, in less time, with less labor, than any other. Send for Special Trial Offer and handsome catalogue.

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CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use **PILLING CAPONIZING SETS**

Postpaid \$2.50 per set with free instructions. The convenient, durable, ready-to-use kind. Best material. Wealsomake Poultry Marker 25c. Gape Worm Extractor 25c. French Killing Knife 50c. Capon Book Free.

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SHOEMAKER'S BOOK ON POULTRY

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There is nothing in the world like it. It contains over 200 large pages, handsomely illustrated. A number of most beautiful Colored Plates of Fowls, true to life. It tells all about all kinds of **Thoroughbred Fowls**, with life-like illustrations, and prices of same. It tells how to raise poultry successfully and how to treat all diseases common among them. It gives working plans and illustrations of convenient Poultry Houses. It tells all about

Incubators and Brooders

It gives full instructions for operating all kinds of incubators. This chapter is remarkably complete and worth dollars to anyone using an incubator. It gives descriptions and prices of incubators, brooders and all kinds of Poultry Supplies. In fact, it is an encyclopedia of chickoodom, and will be mailed to anyone on receipt of only 12 cents. Your money returned if not pleased.

C. C. Shoemaker, Box 928, Freeport, Ill.

The Globe Incubator. Best in the World.

DOES JARRING EGGS KILL THE GERMS.

One of E. P. Roes' novels is entitled "The Earth Trembled." That is just what it did here last spring although it was not caused by an earthquake as in the story.

As there is quite a general opinion that eggs won't hatch if subjected to jarring in any way during the process of incubation, a few words upon that subject may prove of interest to some one and my own experience may help some sister or brother who is still open to conviction, if such there be.

Last spring was not a favorable time to hatch out chicks by hen power nor by incubator to judge by the scarcity of stock and the price of eggs this winter.

There seems to be a shortage in the supply of pullets and as most of the old hens have gone on their annual strike, the egg yield is light for this season although some flocks are making good records trying to make the supply equal the demand. Our own flock is one of them, making 45 per cent egg yield at this time in January.

But what about the trembling earth? This about it. The road overseer decreed about the trees along the highway in front of our house must be removed and dynamite must be the agent. It was just in the midst of the chicken season and our hens were sitting about twelve rods back from the road.

When the first hatch came off it was what is called a poor hatch. The second was worse and when some one said that it was the explosions of the dynamite that caused the poor hatches, I was quite relieved to find something to put the blame upon and I piled it high upon the offending object. You see it could not talk back and the operator did not think that the dynamite did it, for were there not just as poor hatches on all sides of us and some were too far away for this spot of trembling earth to have any effect?

Yes, that was true but what else could it be?

I set more hens and here they came to blow up more trees and it was the same sad thing. It must be the dynamite.

When the last sitting of hens were due to bring forth chicks in a few days, here those men came to make the earth tremble again. I sputtered and fumed around while at my work. Why could not they have waited a few days and not come again and spoil my last hatch when it was so soon due? Oh dear! Oh dear! But when the time of incubation was fulfilled, lo! it proved to be the best hatch of all. One hen showing fifteen lively, little, downy, creamy balls from fifteen eggs. What better could be done?

Now where was all my worry and what had the trembling earth to do with egg hatching anyway?

It was my first experience of the kind and it will be my last worry over the jarring of eggs by dynamite or thunder while the eggs are incubat-

ing and my advice is, do not sit up nights to worry about such a thing happen but go to sleep and rest easy as it will have no effect upon the eggs.

Mrs. A. E. Swain.

Iowa.

WHITE WYANDOTTES.

After growing White Wyandottes very successfully for a number of seasons I desire to tell the Poultry Keeper readers of our methods of feeding and caring for them.

Our birds have free range at all times, except our mated pens which are yarded during hatching season.

We feed scratch grain, morning and evening which we mix ourselves at about two-thirds the cost of same quality feed at retail price, as we use only the best grains we can buy. In mixing our feed we use corn, 55 parts; wheat, 20 parts; kaffir corn, 12 parts; oats, 8 parts; and sunflower seeds, 5 parts. In winter and in summer corn is reduced to 40 parts and wheat increased to 35 parts. We have found this feed to be very satisfactory.

We follow no set rule as to exact quantity fed, but always give the heaviest feed in the evening and feed just enough to keep our birds always eager for any thing which is given them.

All scratch grain is fed in deep litter in the winter and the birds have to work for every grain they get.

We use dry mash the year round fed in hoppers and they are never closed. Bran composes the greater part of our mash, the quantity of cornmeal in dry mash and when desiring from one-third in winter to one-fifth in summer and beef scrap generally about 8 per cent in winter and 5 per cent in summer, but of course if forcing for eggs the quantity of beef scrap should be increased.

When we find our stock becoming too heavy, we lower per cent of corn meal in dry mash and when desiring to put on weight we increase cornmeal.

No kinds of stimulants or condiments of any kind are used, and all mash is fed dry and we use no wet feed of any kind.

For green feed in winter we use golden tankard mangels which we cut in two, fasten on nails and let the fowls help themselves, as this helps to give them exercise.

We give from two to three feeds of the beets per week, giving them what they will eat by night each time and in freezing weather what beets they do not eat are always removed in order to prevent them from eating the frozen beets next day. We also give a feed of chopped onions occasionally.

Grit oyster shells and charcoal are kept constantly before the fowls in hoppers and we also feed some beef scrap in hoppers to our growing stock. Water dishes are washed every morning and kept always filled with clean, fresh water.

We find that by housing our birds, both old and young in large roomy, open front houses, and keeping houses and grounds in strictly sanitary condition that disease is practically unknown.

Another important item we believe in growing strong, healthy stock is to always use fully matured stock in the breeding pens, and we use nothing but yearling or two-year old hens and cocks or large, vigorous, fully matured cockerels.

All our chicks intended for stock purposes are hatched and reared with hens, as we believe them to be stronger and better. In buying stock or eggs for hatching, it always pays to buy the best you can afford in your chosen variety.

There are many excellent varieties of chickens and probably no "best" but some birds seem to do better for certain people than others do.

After breeding four of the most popular varieties we finally settled on the White Wyandottes and find they exactly suit us in every way and as we started with one of the best strains in America, we soon had a fine flock of

large, vigorous, snow-white birds, the very best of layers and having good stock soon had a profitable trade in stock and hatching eggs.

We have found that it always pays to give a customer his money's worth or more as a satisfied customer is a good advertisement.

Energy, perseverance and careful attention to small details are three of the important factors of success in the poultry business.

Arthur Zimmer.

Indiana.

100 YEARS IN BUSINESS.

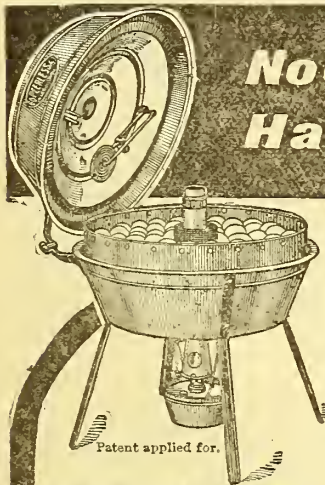
There are but few concerns in this country that can boast of being a century old. When a business does survive that long it is a pretty good sign that it is built upon the right principles and is conducted in the best interests of its customers. The celebration of its 100th anniversary in business is an event of which the George P. Pilling and Son Company of Philadelphia are deservedly proud this year.

These folks started the manufacture of the Pilling surgical instru-

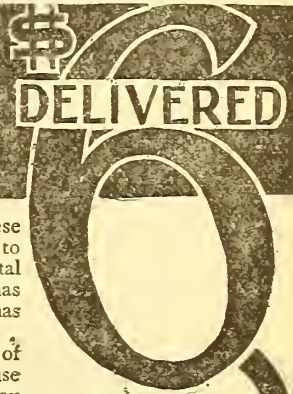
ments in 1814, and although they had but one expert workman, they turned out nothing but the highest grade of instruments which were soon popular because of their accuracy, fine materials and careful construction. They soon added the manufacture of Pilling "Easy to use" horse, cattle and poultry instruments, which are considered the best by veterinarians, stockmen, dairymen and poultrymen.

From the small beginning in 1814, the Pilling folks have grown to be the largest makers of special horse, cattle and poultry instruments in the world. The plant now covers over 60,000 square feet of floor space and they keep over 100 expert workmen employed full time the year round. Their factory is equipped with the most modern machinery and is a model of neatness.

This growth and record during the past hundred years is indeed one of which the George P. Pilling and Son Company may well be proud. To survive the wars, panics and strenuous competition of the nineteenth century and come out with a clean name is almost without a parallel in this country.



No Other Incubator on Earth Has the Features of This



NEW methods—new processes—new labor saving materials—these and 25 years' experience have made possible the latest addition to the great Peerless Blue Ribbon line of incubators—the little metal wonder, the "Peerless-60." No other incubator you have ever seen has the design and features of this. No other incubator you have ever used has given the results this is giving.

More than 11,000 of these incubators were ordered before one line of advertising appeared—months before the hatching season. Why? Because in design, in results, in economy, the Peerless stands unique—the climax of the genius of Sheer in incubator design. One poultryman, after test, ordered 50. With even just one Peerless Hatcher and a few feet of space in your back yard you can add \$150 to \$200 to your income. Results—that's the answer.

This is the first practical, all metal, fireproof, everlasting machine ever produced. The first machine of its size with a perfect heating and heat distributing system. The first incubator ever produced alike adapted to the largest poultry raiser, and the beginner with one machine as well.

Why the "Peerless-60" Is This Size

Experience has proven the small machine the most profitable. Nature knows that eggs to hatch must be newly laid. No man ever lived who could be sure of being able to place hundreds of eggs of equal fertility in a machine all at one time. The Peerless-60 is the absolute unit. Small enough to give the greatest efficiency. Large enough to give the greatest economy. Good enough so it will last for years—just add more units as the plant expands.

Not a "Leader"

The Peerless-60 is not a bait to get you to answer this advertisement with the hope of selling you a higher priced machine. It's not a cheap machine designed to "get you interested." It is true that the price is absolutely unheard of. Never before has such a price been named on a highest grade machine, delivered—but remember the price is the price fixed by enormous production, new materials, new processes, new design. The Peerless-60 could be no better at ten times the price. Of no other incubator ever sold at anywhere near the price could this be said.

Let Us Send You the Facts

We could not tell you in ten times this space all the facts concerning this revolution in incubators. We want to put these facts in your hands. Let us tell you the story of the Peerless-60, why and how it was produced, how it is made—the wonderful new application of the principles of artificial hatching. You are safe in sending your order now—today, but if you wish, write us for the whole story.

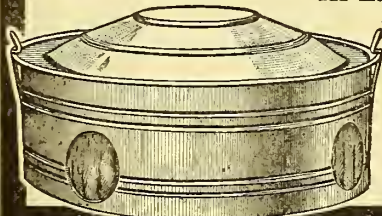
Special Introductory Offer

When you figure the cost of an incubator figure its cost set down. Figure the freight. The special introductory price of the Peerless is \$6.00, delivered to you. This offer is made to give the widest use to the Peerless in the least possible time. It may be withdrawn any time. Now is the time to secure the Peerless. Save the freight now. \$6.00, delivered.

Round Like a Nest

No cold corners. The Peerless is just nature, that's all. Natural Heat. Natural Ventilation. Natural Moisture.

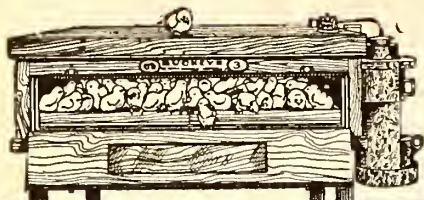
In the Peerless, eggs are heated from above with the patented triple wall heat radiator. All heat is used—that's economy. Regulation of heat, ventilation and moisture are all automatic. The machine is equipped throughout with the famous Sheer fixtures. The wonderful Sheer Wafer Thermostat Regulator automatically turns lamp flame up and down to meet temperature in egg chamber. Overheating of eggs is impossible. It uses less oil than any other incubator on earth of same capacity. Four of these machines, with a capacity of 240 eggs, will use one-third less oil, require less attention and give more healthy chicks from the same quality of eggs than any 240 egg machine ever built.



The Peerless Brooder all metal—fire-proof—\$3.00 heated but lampless by a simple device that gives no bother and keeps chicks healthy, comfortable and warm, no matter what the weather. It's of 60 chick capacity—a companion to the Peerless-60 Incubator. Here is the perfect brooder—the one you have wanted, for..... Delivered



H. M. SHEER CO., Dept. 3, Quincy, Ill.



THE
**BEST JUDGE OF
Incubators**
IS THE MAN
WHO SELLS THEM

He must know—because his reputation is at stake in every sale. He cannot afford to risk losing your trade by selling you a machine which will not do what the manufacturer claims for it. On the other hand, you take absolutely no chance when you buy an incubator which is backed both by the manufacturer and dealer with such a broad, sweeping guarantee as we offer with the

“BUCKEYE”

It is
GUARANTEED
to hatch every hatchable egg. There are no exceptions and no strings to this statement. Anybody can hatch chickens with a “BUCKEYE.” Sold and guaranteed by over a thousand dealers. Over 325,000 in successful operation.

OUR FREE CATALOG
tells why the best dealers prefer to sell the “BUCKEYE.” Let us give you the name of the “BUCKEYE” dealer in your town who will be glad to show you the machine in operation and prove to you that it will hatch more and better chicks than any old hen or incubator you ever owned. Write us today.

THE BUCKEYE INCUBATOR CO
607 Euclid Ave., SPRINGFIELD, OHIO

Made in 5 sizes and Sold
As Low As \$10.00

Chamberlain's Setting Hen

\$5.75

Incubator and Brooder

Freight Paid East Rocky Mountains Holds 26 Eggs A Complete Incubator Easy to Operate You can always get fresh eggs enough to fill it.

The Baby Incubator

\$5.75

Incubator and Brooder

Equals Two Hens. Always Ready to Set

Never leaves her nest. No Lice. No broken eggs.



Chamberlain's Perfect Chick Feed

TRADE MARK



Has no Equal. No Corn. No Bowel Trouble. The Only Original Dry Chick Feed and the World's Standard.

“Lady Showyou,” winner of the National Egg laying Contest at Mountain Grove, Mo., with a record of 82 eggs in 82 days, and 281 in a year and recently sold for \$800, was raised on Chamberlain's Perfect Chick Feed.

We have agents all over the U. S., but if our agent is not near you we will deliver 100 lb. sack freight paid to your railroad station for \$3

W. F. Chamberlain Feed & Incubator Co.
107-109 Olive St. Desk 18 St. Louis, Mo.



Baby Chicks, Eggs for Hatching, Breeding Stock

“Tywacana Quality” means heavy laying ability combined with fine marketing qualities and “Standard of Perfection” requirements. Improve your flock or start anew with some hardy and vigorous day-old chicks, breeding stock or eggs for hatching from

TYWACANA White Leghorns, Barred and White Plymouth Rocks

Book your order now for eggs or day-old chicks, as the demand for “Tywacana Strain” stock is increasing each season. Tywacana Baby Chicks and Eggs are shipped in strong, light, safe and sanitary boxes especially designed to save transportation charges and insure protection of chicks or eggs during long shipments.

Write for Free Illustrated Catalog

Send today for our big, beautiful catalog describing Tywacana Farms Leghorns and Rocks and giving prices on chicks, eggs and breeding stock. Prompt shipments. Satisfaction guaranteed.

TYWACANA FARMS POULTRY CO.

A. E. Wright, Supt. Box 57 Farmingdale, L. I., N. Y.



MOISTURE AND VENTILATION IN HATCHING.

I notice an article under the above heading in Poultry Keeper by Mrs. D. H. of Ohio, in which she says “When I start the incubator again I shall close the bottom tight and just leave room for a saucer of water the last ten days of the hatch.” She does not say that her machine ventilates through the bottom but if it does and there is no other ventilator, she will surely ruin her hatch. I have used six different makes of incubators and am using eight machines of four different makes now, and I must say as another has said that the longer I run incubators the better I know there is more in the operator than the machine and more in the eggs than either one.

To get the strongest germed eggs several things are necessary. First, constitutional vigor in the breeding stock. Second, plenty of bulky feed, (green if possible) for the hens and third, proper handling of the eggs. That is, they should not be subjected to a very low or a very high temperature and should not be severely jarred or shaken.

I once hatched 23 fine chicks from 32 eggs taken from Armour's Kansas City cold storage plant, the eggs being 9 or 10 months old. Later experiments I made proved that they must be kept as they are in storage at a temperature a little above 32 degrees F. Even a little below will kill the germ and the eggs will “test out” clear as though infertile. This accounts for some of the poor hatches from Feb. laid eggs. In zero weather they should be gathered 5 times per day.

On the other hand eggs kept at a temperature much above 60 degrees F. for an extended period will become unhatchable especially if kept in a very dry place.

As to ventilation in incubators, I once closed the ventilators, 12 holes, in the bottom of one of my Queens. When the lamp had blown out about the 7th day and then promptly forgot all about it till the eggs began to hatch, when I knew at once something was wrong, for the chicks all acted tired and weak, a great many of them pipping the shell but dying without getting out. I knew it was not because the lamp had gone out, as like every other experienced man we had obtained good hatches before in spite of that accident. After puzzling over it for some time I discovered the closed

ventilators. None of the chicks that did hatch proved strong and the experience was costly for it was a hatch of about 200 valuable Ancona eggs.

As to moisture; I once used an old “Hiawatha” hot air machine for two hatches. All the air that went through the heater into the machine was fresh air, also the body of machine had cracks one-fourth inch wide where it had been damaged by a gas explosion. In the first hatch I used some moisture and 215 good fresh eggs. I got 15 chicks out with a very great number dead in the shell. I condemned the machine as worthless as I had a good hatch from some of the same flock's eggs set in a Cyphers at the same time. However, the former owner vowed it had always done good work before and offered to furnish the eggs for another hatch, so I thought I would put in all the water I could get in and try again. I used six granite pie pans full of water on the bottom and was agreeably surprised to get 157 lively chicks from a total of 205 eggs put in.

My belief is that most incubator hatches do not get either air or moisture enough.

Illinois. Earl Peebles.

“A PAYING PROPOSITION.”

You are always interested in a paying proposition. If you are a farmer or a poultry raiser, your poultry and eggs are the best paying proposition that you have on your farm or place for the amount of energy expended, provided that you properly feed, house and care for the hens. They must be properly fed, housed and cared for and experience intelligently applied teaches you the best results. One of the very necessary adjuncts to your feed is Crys-co Grit, and experience will teach you never to be without it.

Now what is Crys-co? It is the crystalized or petrified shell formation, in plain words petrified sea shells turned into stone, guaranteed to contain 99 per cent pure carbonate of lime. Silica is contained in the formation which is a natural glass, improving the plumage of your birds. Being hard sharp and cubical it saves the buying of separate grit, you therefore have a perfect grit and shell combination which will give you greater egg production without extra cost. Ask your dealer or write for booklet, see ad. elsewhere in this journal, W. A. Neusitz & Co., St. Louis.



Jim Rohan
Pres.

Jim Rohan and Winners of Belle City's Eight World's Championship Hatches



Mr. Geo. W.
Black,
Ind.



Wm. C.
Schott,
Iowa



Mrs. Laura J.
Clark,
Illinois



Mrs. Alta
Hamlyn,
Ind.



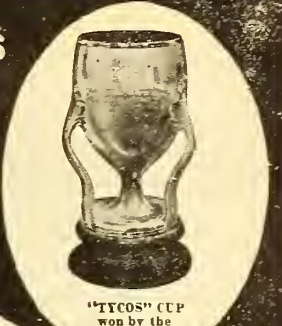
Mr. F. E.
Bennett,
Ohio



Mrs. F. H.
Osman,
Ohio



Mrs. M. J.
Clifton,
Oklahoma



"TYCOS" CUP
won by the
Belle City

Write Today for My Free Book "Hatching Facts"—It Means More Money to You

GET the whole story of these Championship hatches with the Belle City. Get the stories of thousands of men and women who are getting 100% perfect hatches. Satisfy yourself. This great book is free. Write for it today. No other incubator made—not even the highest priced—approaches this amazing record of my Belle City. I have the letters of owners to prove it. Many of these letters are printed in this book "Hatching Facts." They tell you how Belle City owners are making *the most money* in the Poultry business. You certainly want this book. A postal gets it.

When You Buy from Me You Get an Exact Duplicate of the Prize Winning Eight Times World's Champion Belle City

I send you an exact duplicate of the hatching outfit used by Mrs. Alta Hamlyn of Indiana, who joins the Belle City's list of World's Champions with TWO 100% hatches scored by her Belle City Incubator in Successful Farming's 1913 contest. Mrs. Hamlyn says: "I can hatch every fertile egg in my Belle City and regard your honesty the keynote to success." I send you an exact duplicate of the Belle City Hatching Outfit used by William C.

Schott of Iowa, who shares the 1913 honors. His 100% hatch, 140 chicks from 140 eggs, won another World's Championship for the Belle City in Successful Farming's 1913 Contest. Mr. Schott writes: "The Belle City is the best incubator made—has given much more satisfaction than high-priced machines." I send you an exact duplicate of the Belle City Outfit used by each of the other world's champions whose pictures appear above.

The Kind "Uncle Sam" Uses

I send you an exact duplicate of the Belle City machines chosen by the U. S. Government. The Department of the Interior is one of my customers. The department asked for prices on 300-egg sized machines, but ordered my 140-egg Belle City machines, because even "Uncle Sam" wants to have Championship hatches, too.

I send you an exact duplicate of the Belle City Hatching Outfits used by leading agricultural colleges.

I send you an exact duplicate of the Belle City Hatching Outfit that won the gold lined silver "Tykos" Cup and the Championship for Mrs. Osman.

A Postal Brings You the Big Portfolio, "Hatching Facts"

In addition to the facts about the 90 to 100 per cent hatches, it tells you how the Eight-Times World's Champion Belle City Hatching Outfit is made—illustrates it in actual colors. Shows that it has everything worth having in and on an incubator, yet it is the lowest priced.

copper tank and boiler, safety lamp, double walls and double door and dead air space all over, with roomy nursery and strong egg tray. Of course, the thermometer is right: I use the "Tykos." I also supply egg tester, Edw. Miller sun hinge burner, funnel, everything you need, including valuable instruction book on operating, hatching and care of chicks. The book tells you all about my world famous 140-Chick Belle City Brooder—the only double-walled, hot water, top heat brooder made, guaranteed to raise largest percentage of chicks every time—a fitting companion to my World's Championship Belle City Incubator.

My Eight-Times World's Champion Belle City Incubator has Oakes double disc self-regulator, correct hot water heating system,

Ask for My Low Price

I will show you why I can send you my Belle City Hatching Outfit at half or less than half what others cost you! You buy direct from me. You pay no agents' or dealers' profits. I have prepared to build fifty thousand Belle City outfits to supply the demand for this season. This big volume enables me to cut my profit down lower than anybody else can afford to take—and I prepay the freight to all points east of the Rockies and allow it that far to points beyond.

Don't turn this page without either writing to me or else tearing out this advertisement as a reminder. Whether you order or not, you get all my valuable World's Championship "Hatching Facts" absolutely free! But be sure to write to me today. Just say, "Send World's Championship 'Hatching Facts.'" Address Jim Rohan, President.

Belle City Incubator Co.

Box 145


Racine, Wis.



Get My
1-2-3 Months'
Home Test Plan
Freight Prepaid




Be sure to write for this book




WHY FEED CRY-CO GRIT?

10 REASONS




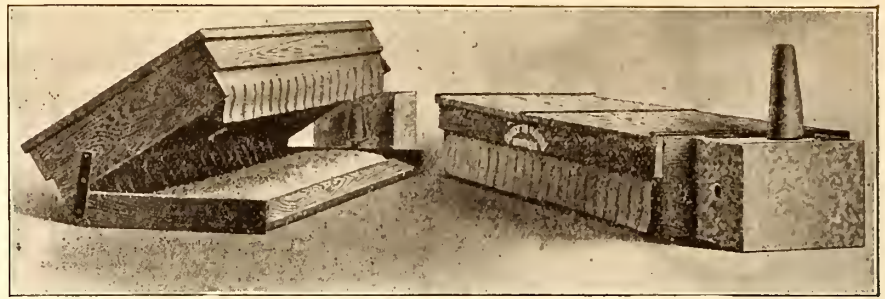
1. BECAUSE it increases the egg yield considerably, therefore **Your Profits.**
2. BECAUSE it contains 99% Pure Carbonate of Lime which makes the shells—hard shells which means less loss in shipping.
3. BECAUSE it contains pure silicate grit, giving the hen finer plumage and being cubical in form a perfect grinder, thereby insuring digestion of the food.
4. BECAUSE in Cry-co you have a perfect shell producer and grit combined, far superior to oyster shells and ordinary grit.
5. BECAUSE it means economy, as Cry-co goes half as far again as shells, as there is no waste, and you need no additional grit.
6. BECAUSE it promotes digestion, keeping the hens healthy, and in a great measure prevents egg coating.
7. BECAUSE it costs no more than ordinary shell or grit.
8. BECAUSE it has the hearty endorsement of many of the most prominent fanciers and poultry raisers in the U. S. Men who know (Original letters on file.)
9. BECAUSE you are raising chickens for the results and not for the pleasure only of seeing them around or the work there is in it.
10. BECAUSE as a wide-awake poultry raiser you want better results and in Cry-co you will find them. Let us prove it to you.

Therefore buy a sack from your dealer to-day, but look for the trade-mark on a white sack, or write us. Valuable booklet free.



W.A. NEUSITZ & CO.
DEPT. A
3845
Connecticut
Street.
ST. LOUIS, MO.





CLOSE-TO-NATURE HOVERS.

The accompanying picture is of the Close-to-Nature Open Air Hovers showing one closed and the other open for cleaning out, airing and caring for the chicks. These hovers are a decided diversion from the usual portable hover in the following characteristics First, the heater is a new idea in construction employing the well known principle of induction so that a hover six feet long is equally warmed from one end to the other; second, the hovers are extremely long and narrow which enables them to take care of large flocks of chicks without their packing into compact masses; third, the roosting bed is made of chaff or earth or both and is slightly elevated

over the floor level bed; fourth, the construction of the roosting bed and the contact heat retainer is such that piling up and over-crowding are prevented; fifth, the manner of warming is by actual contact of the chicks' backs against the felt bottom of the thermal chamber thus giving a mild warmth as with the hen; sixth, the ventilation is open, fresh air, not hot air; seventh, the entire hover together with the roosting bed and chicks may be moved; eighth, combines the fireless with the lamp inasmuch as the lamp may be used for very young chicks and discarded as they grow older, or used in daytime but extinguished when chicks cluster for the night. Full particulars and very low prices on this hover and brooder may also be had by addressing the Close-to-Nature Co., 20 Front St., Colfax, Ia.

CAUSES FOR POOR HATCHES.

As I enjoy reading other peoples' experiences in Poultry Keeper and derive a great deal of benefit therefrom, and the subject of fertility of pullet eggs being up in the past two issues, I thought in justice to Miss Pullet as well as to the incubator I would give my last spring's experience along that line. I saw from the orders I was getting for eggs that I could not supply them from the pens I had made up of hens and have any for my own use so I mated 10 nice R. C. R. I. Reds with a 3-year old cock and used these eggs for my own hatching and I have never had better success hatching and raising chicks than I had last spring and summer from this mating and I incubated in a 200-egg incubator.

Here is the record of the three hatches I made with the machine: 1st, 205 eggs, 163 chicks; 2nd, 198 eggs, 174 chicks; 3rd, 207 eggs, 179 chicks. I call this fairly good, about as good as I ever could do with hens, but the test, if you want to call it a test, did not stop here as I sold a number of sittings from this pen and they all report good hatches except one man who got two sittings and reported only seven chicks, as well as I can remember. I think I can account for that as he got them from my house and hauled them over the country for one week before he got them home and then I think he told me he did not have hens to set them under for a week or ten days.

Now for the proof that neither of these writers is correct in his ideas. I had a pen of White Orpington pullets, seven in number, mated to cockerels. I gave both pens the same care

under hens, or most of them, and never got as good as a 50 per cent hatch and more than half of what did hatch died before they were one week old. I would like to add here that the Orpington pullets were earlier hatched than the Reds, also they did not lay as many eggs through the winter as the Reds. Now I know very little about the chicken business but am trying to learn all I can every day and I find Poultry Keeper the best teacher I have ever found except experience. The conclusion I have come to as regards these 2 pens of pullets was: 1st, success with Reds account of three year old cock; 2nd, failure with Orpingtons account of cockerels. I do not know that my conclusions are right but I think both Mr. Hardenbrook and Mr. Foreman can be wrong in theirs. Before closing would like to ask if you don't think it would be a good idea to have feed records through Poultry Keeper. Say keep a record of what it costs to have a chick ready for market at various ages and give it along with the feed method used in the columns of Poultry Keeper. I think many of us could be benefited by reports of this kind.

W. S. Keyton.

Virginia.

The Pemberton Poultry Yards, Isaac Green, prop., Pemberton, Ohio, advise us of the following winnings at the Bellefontaine Show, Dec. 8-13, 1913, on Ringlet Barred Rocks; best pair; color and shape specials; first cock in class of 19; fifth hen; third pullet; first and third pens, every winning bird being of their own breeding.

BOURNE "BIGNUM" POULTRY BAND.



Big-num-ber band, black letters from 1 to 100, showing 10 feet away, printed on white, light blue, pink, green, yellow, cherry and red celluloid. Withstands weather and water.

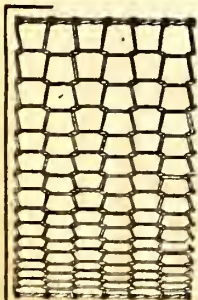
BOURNE "ALUMINE" POULTRY BAND.



The plain double clinch band in common use. Cheaper than the "Bignum" band. All aluminum, no celluloid. Numbered to order. Send two one cent United States stamps for samples and descriptive circulars of these poultry bands. Mention P. K.

Dept. L. 216 Howard St., Melrose, Mass.

POULTRY FENCE



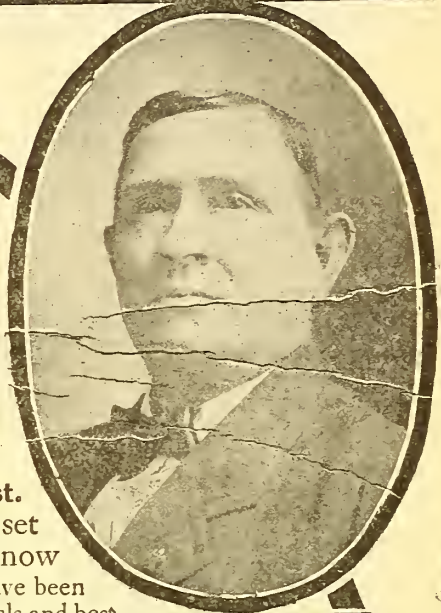
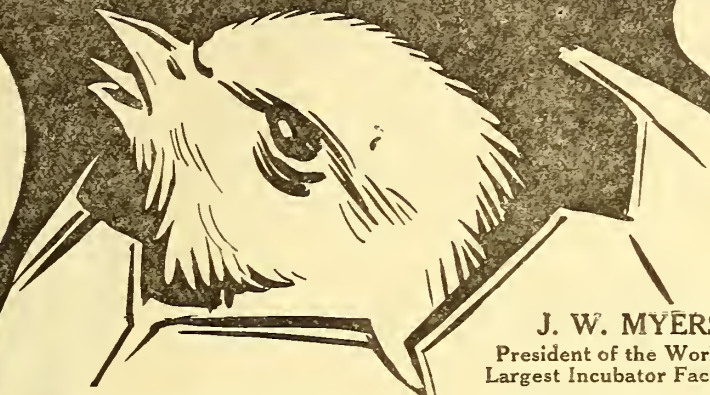
22½ cts. a rod
48 inches high. Has 4½ inch mesh and graduated spacing of line wires from 1½ at bottom to 3½ inches at top. Fewer posts and no base board or top rail required.

STRETCHES UP LIKE A FARM FENCE.

27½ c. for a 48-inch combined Poultry and Stock Fence made of heavier wire and having 6-inch mesh. From Factory Direct to Consumer. 100 styles and heights.

of Poultry, Farm and Lawn Fence. Catalog FREE. Box 229 **KITSELMAN BROS. Muncie, Ind.**

Don't Take A Chance—Get The Facts About Incubator Values



J. W. MYERS,
President of the World's
Largest Incubator Factory

I PROMISE you a revelation in how to get the utmost in **quality** and **results** at the **least possible cost.** My 1914 prices on good old "Reliable" machines set a new standard of value in incubators. You should know the inside facts. Let me place them in your hands. For 32 years I have been building the best incubator that experience, knowledge, the finest materials and best workmanship can produce. Reliable Incubators are the choice of experienced poultrymen—the leaders in the industry. They are the machines of widest use not only in this country but in all parts of the world as well. They give results. This is not theory or advertising bunk, but facts. Every hatchable egg you lose in unknown machines means a loss to you of at least 50 cents. I say, buy the machine of known results. I can name an unheard of price on the **highest** grade incubators because I have the largest incubator and brooder factory in the world. Every department is equipped with the latest labor saving, cost reducing machinery.

Let Me Name My 1914 Price on "Reliable"

If I were to name here my price on this famous incubator you would think I had cut quality. Such is not the case. It's the same good, old "Reliable," with every 1914 improvement—the best at any price. It's guaranteed to hatch every hatchable egg. Nothing but the finest materials used throughout. Perfectly seasoned, beautiful, everlasting Red Wood lumber, with top and bottom tongued and grooved. Has double heating system built right into the machine, yet you can get at it instantly. Has accurate regulator—tanks of cold rolled copper—metal chimney—government standard tested thermometer—all metal safety lamp and the whole machine is thoroughly insulated. Every "Reliable" is carefully tested before shipment. I know the kind of a machine you get. The "Reliable" simply can't help giving perfect satisfaction, no matter about the weather or the altitude. It gives results—that's what you want. Send for my 1914 prices today.

The Reliable Brooder

is built on the same thorough principle, and is of the same excellence of construction as the Reliable Incubator. Can be furnished with either Hot Air or Hot Water heating system. Built in four sizes—for 80, 120, 220 and 300 chicks. Roof is of heavily painted, galvanized iron.

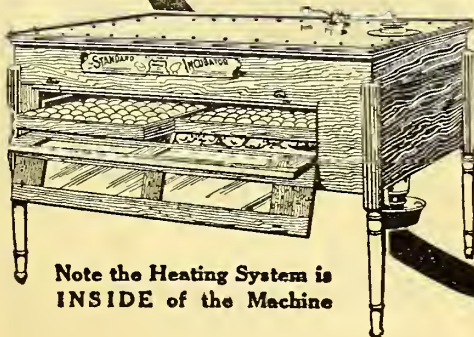
Every machine backed by an iron-clad guarantee of money back if not perfect in every way. Don't buy until you have investigated the "Reliable" line, and have my 1914 prices.

If You Want Stock

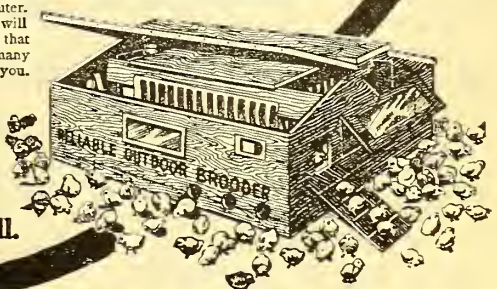
This is one of the largest and most noted pens in America and only pedigreed stock is bred. All varieties of chickens, ducks and geese. Birds or eggs successfully shipped anywhere. **We Also Handle All Manner of Poultry Supplies**

including our Reliable Grain and Oat Sprouter. Send now for prices and descriptions. We will also send you free our new poultry catalog, that you will find interesting and to contain many suggestions that will prove profitable to you. Just a postal—send tonight.

J. W. MYERS, President
Reliable Incubator
& Brooder Co.,
Box A-15 Quincy, Ill.



Note the Heating System is
INSIDE of the Machine



BROODING AND HOUSING CHICKS.

For the benefit of those interested in raising chickens in large flocks I will give my experience. The gasoline heated colony brooder has given me the best satisfaction of any brooding device I have tried so far, I find with it I can raise nearly every strong healthy chick, also with less expense and labor and at the same time produce stronger chickens and pullets that will lay and can be depended upon to fill the egg basket when prices are highest.

The first season I used them I remodeled an old building that was used for a hog house, by tearing out all inside fixtures, laying a new floor making all sides tight by papering the outsides. The front was fixed by putting in two large muslin curtains and 3 windows, six 3x6. The house measured 14x25 inside and about 2 ft. from the ground and the brooders, 6 in number were installed and partitioned off with a 12 ft. board (with the gasoline tank outside of building).

Each brooder received 200 chicks, 1200 in all. By the time they were a week old they were flying over the partitions which were promptly removed letting them all run together and by this method reduced the labor item to a mere nothing, and I brought 95 per cent to maturity which gave a good account of themselves.

Of course I cleaned and disinfected the floor every night for the first four weeks, also washed water fountains

and every morning I cleaned and disinfected under the hover while chicks were eating their breakfast.

The next season I placed brooders in "A" shaped colony houses, which were portable as they were made on runners. These houses are 8x10 and brooded 300 chicks each. I think I will put 400 chicks to a brooder this season.

I was intending to build another laying house which I will use for brooding as long as chicks require artificial heat then I will put them in colony houses which are moved to new ground or wherever I want them. I think by this method it will save lots of time and give chicks more floor space while confined and be more satisfactory. In conclusion will say that we use the Cornell System of feeding chicks and laying hens which in my opinion is the best method yet discovered, for it has a variety of feeds blended in such a way that it keeps youngsters growing all the time, keeping them healthy and hardy. Of course to be successful you must be very careful to select your eggs with care from good laying strains that are housed properly and fed right with absolute freedom from disease or weakness of any kind, and from free range stock only; this is important for if you breed from pen raised stock look out for disappointment and mighty few eggs.

For disinfecting we use Chesol soap which is cheap and powerful, also harmless to chicks and fowls with

no bad odor. For Mites and lice we use "Avenarius Carbolineum" finding that a thorough application once a year gives absolute freedom from these profit suckers.

A. J. L. Warnken.

New York.

SELECTION OF INCUBATORS AND BROODERS.

In selecting an incubator, I would advise one to send for a number of catalogs and select the machine with the following advantages. One with double walls with a dead air space between and a copper water tank which should go around the entire egg chamber. It must be equipped with a double disc regulator which raises or lowers the lamp damper. The incubator should have a strong egg tray and under this a day old chick nursery. The door must have double glass. One needs plenty of light inside so the thermometer can be plainly seen.

Do not buy a round galvanized incubator with only one thickness for the wall. The wall is not thick enough to keep the temperature inside from changing as the outside temperature as it does in spring when the days are warm and the nights cool.

The brooder should be made of one-inch lumber with a light hover with a hinged roof so it can be easily cleaned and the lamp should be under the brooder. Sam H Mergenhardt.

A BIG JOKE




It's a big joke on the other Hover makers to claim they have the only Portable Hover on the market that is Self-ventilating and Self-regulating, Warmest at the curtain, and a lot of other claims, when these features are found in the Ideal Portable Hover. Another indisputable fact regarding this Hover is its Originality, the inventor didn't copy his neighbor and then try to make a bigger noise than the real owner. The Ideal is next to the oldest Portable Hover on the market. It's the first one that could be picked up with one hand and carried any place with lamp burning. It can be set in any room suitable for brooding young chicks. Use it in a Brooder, Colonyhouse or Layinghouse, sets on level floor with no bridge for chicks to climb. The Double Drum Hot Air Heater will produce 15% more heat from the same amount of oil than a Hover using a single Drum Heater. This makes it a great Hover for Winter use. Our Automatic Lamp was especially designed for a Portable Hover; the oilfount is on the outside of the lamp box, feeding cool oil to the wick and just enough to keep it covered at all times, this makes it possible to place the burner close to the floor allowing the use of a tall chimney with a large airburning space around the lamp flame and still this chimney is not pushed up into the Heater to become overheated and cause trouble. This Lamp will never cause trouble by smoking. The Hover is all metal, but the double curtain is 24 inches in diameter, and will brood 100 chicks, and it is the lowest priced machine on the market. We have a Special Offer for you this month.

Used on Ohio State Farm. 17 Ideal Hovers were used on the State Farm at Dayton, Ohio, last season with wonderful results, the picture in this advertisement shows two Ideal Hovers used in an A shaped hoghouse on that Farm.

Queen Incubator and Ideal Hover. We sell the Queen Incubator, which we consider the best low priced machine on the market, and we make you a Special Combination Price on this and the Ideal Hover. We want you to write us at once for circulars of our Hover, Incubator, Oatsprouter, and Poultry Supplies, we will tell you all about our 12 months' course in Practical Poultry Keeping, Free to our customers and if you will mention this paper when writing, we will inclose a copy of "How to raise 90% of your Chicks." Write today. Dealers wanted to handle the Ideal Hover.

Pick it up and carry any place with lamp lit

New Carlisle Mfg. Co., New Carlisle, Ohio
Successors the Duplex Incubator Co.,

Buy Your Incubator of Chas. A. Cyphers



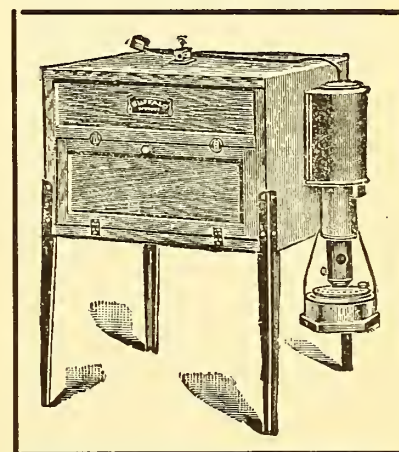
The Original and the Only "Cyphers" in the Incubator Business.

The Cyphers who is "The Recognized Authority on Artificial Hatching"—The Cyphers who made Commercial Hatching possible—The Cyphers who discovered the Cyphers Principle—The Cyphers whose Incubators Circle the world—The Cyphers who will sell you his latest creation, the "Buffalo" at

HALF THE STANDARD PRICE

Every vital Principal that made my original Cyphers a world success is embodied in the "Buffalo." The same three-compartment heater; the

diffusive ventilation; and sensitive and accurate regulation; combined with heavy insulation and durable construction. For Durability, Reliability and quality, the "Buffalo" is a wonder. "Buffalo" Incubators insure you big hatches of strong chicks that live and are easily raised to make money for you. 80 per cent of the output of "Buffalo" Incubators are sold to poultry raisers who must make a success of their work to live. 80 per cent go to men who know; who have used my incubators in the past; who would use no others. You can't make a better selection.



THE BUFFALO HANDY HOVERS

The Buffalo Handy Hovers are just what their name implies.

The Buffalo "Handy" is a floor level hover. You can set it any old place.

Sanitary—All galvanized iron.

Heats Easily—Walls are heavily packed with good insulating material.

Uses But Little Oil—Flame burns with a white light, which indicates complete combustion.

Hottest at Outer Circle—heat is brought lowest at that point.

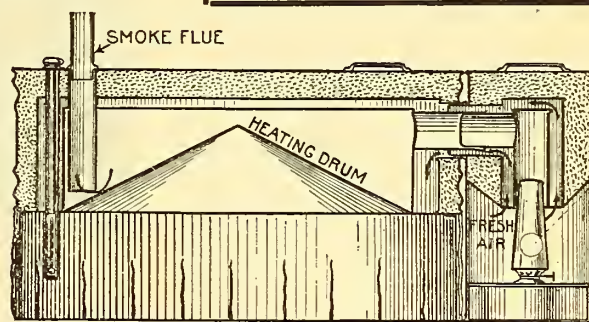
Perfectly Ventilated—heater is double with fresh air flue.

Handy—just pick it up and set it aside to clean the floor.

Lamp flame can be seen without stooping. Lamp compartment or heater is attached to hover with "rolled-edge slip-joint," and is quickly detached for tending lamp.

Has all the good points of others, with thick walls and complete combustion added. Others are thinly insulated and are hard to heat. Other lamps burn a yellow flame, and waste oil. The Buffalo Handy Hover will heat 10 degrees hotter with same oil consumption; and in a room too cold to use any other hover.

Send postal for fuller description.



Buffalo Handy Hover 100 Chick Capacity.

CHAS. A. CYPHERS

President Buffalo Incubator Company

467 Dewitt Street

BUFFALO, N. Y.

EARLY HATCHES MOST PROFITABLE.

By. H. H. Johnson, Clay Center, Nebr.

A GREAT many people, and among them are some who are pretty old hands at raising poultry, too, don't like to trust their luck by setting incubators in the winter months, such as February.

Doubtless everyone who has followed poultry raising closely, who has studied conditions carefully, will certainly admit that early hatches, when at all successful are the most profitable. It stands to reason that the pullets that are hatched early will begin to lay in the fall, and that the early cockerels will bring the best price in the spring for broilers, but no doubt this fear regarding very early hatches is based on a good deal of disappointing experiences which people have suffered in the way of being unable to keep the proper temperature in the machine during very cold spells.

There is too much advantage, however in the early hatches to let one unfavorable experience guide one in future seasons. It is simply a question of getting an incubator that is made well enough to get the proper temperature in the coldest weather without an excess amount of oil.

For something over fifteen years, father, mother, Ben and I have preached early hatching and the tremendous advantages over the waiting for the weather to moderate to set out the incubator. In our judgment, the incubator that cannot hatch chicks when chicks are most wanted and most profitable, should not be trusted with eggs at any time—that it is a poor specimen regardless of price, and I believe that I will find a great many in the business who agree with me on that to the letter. Certainly I know of half a million successful poultry raisers whom we have done business with that feel exactly as I do, and who know the ease with which chicks can be hatched at any time when the season is right, and who know the larger profits that come to one equipped with an all-weather incubator.

Just figure for a minute the possible difference between a February or early March hatch and the April or May hatch. The early hatched pullets are sure to come to maturity in the fall before the cold weather and begin to lay, and when they get this start, they very likely will keep on laying right through the winter months when the price of eggs is high, when fresh eggs are at a premium and sometimes at any price.

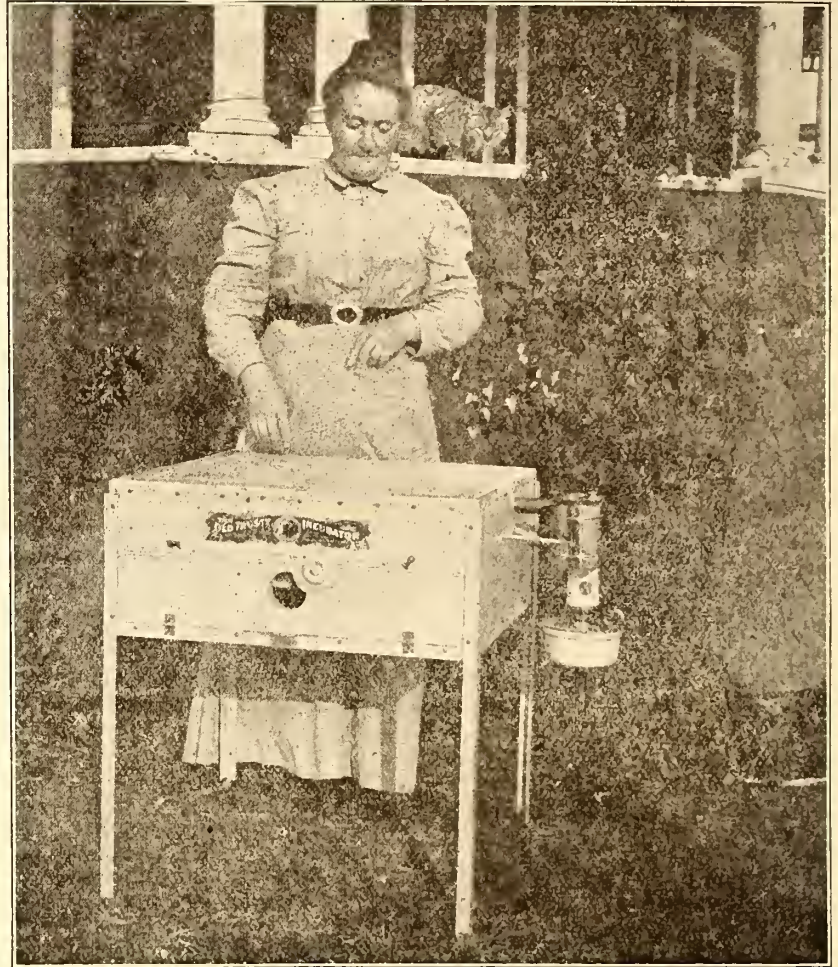
Also the cockerels that have been hatched early come to good weight and fine flesh early in the spring, before the market is well supplied, and thereby always find ready sale at a good price. Now in the case of the later hatched pullets, these may not come to bearing maturity before cold weather in the fall. This is likely to check their egg-laying development and inclination and they will come into the winter without producing anything but they will need to be fed and housed all the time without returning you a profit until early spring. There is profit in

that of course, but there is not the same amount of profit, there is not the profit you are entitled to compared with the early laying pullets.

The situation in the egg market this fall and winter gives us all a good lesson. Perhaps many poultry raisers read some of the large daily papers wherein the shortage of eggs was discussed very liberally and the cold storage factors clearly exposed. In Chicago, for instance, the situation

regular demand for our eggs at such prices.

It is because we have always thought that a thing that is worth doing is worth doing well, that we have built our incubator—The Old Trusty—of such material and so substantially and with cement walls and a big enough heating system to enable the operator to keep the temperature at the right degree in any weather without the use of much oil. We figure that if one is going to raise chickens, he might as well get all there is out of it and it is certain that he cannot do this unless he has a machine that will hatch right straight through the cold



Mrs. M. M. Johnson and her "Old Trusty" incubator.

became very aggravated and the women's clubs in that city banded together to boycott the commission people who were charging 50 and 60 cents for storage eggs. The women of Chicago went on record as being willing to pay as high as 32c and stated they would not buy eggs until that price was reached. At the same time fresh eggs were selling at most any price and people were willing to pay 50, 60 and even 75 cents for fresh laid eggs during the cold period.

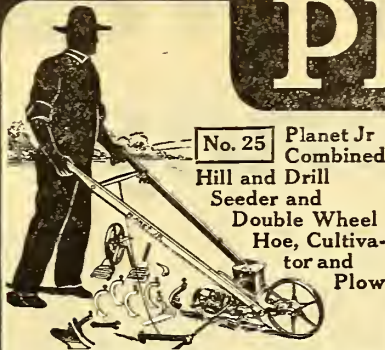
But just suppose that the poultry keeper only got 30 or 32 cents for his fresh eggs, the same that housewives were willing to pay for the storage eggs. Certainly there are none of us who would not be pleased with a

weather any time and all the time, without needing constant attention and without needing so much heat from the lamp as to use more oil in the few hatches than the actual machine cost.

In other words, we figure it poor policy to save a few dollars on an incubator with thin walls, and thereby lose entirely the advantages of early hatches, for in order to get early hatches it consumes so much oil that the added expense means far more than money saved on the machine itself.

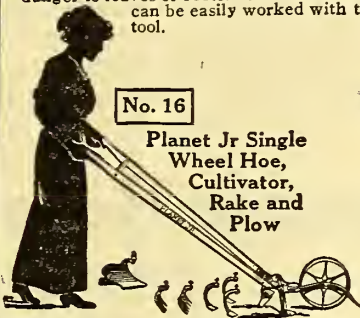
Our plan has been to put every dollar into a machine that is necessary to get the actual hatching results, but not to put an unnecessary dollar or an

Planet Jr.



No. 25 Planet Jr. Combined Hill and Drill Seeder and Double Wheel Hoe, Cultivator and Plow

A capital implement for large-scale gardening especially. It has steel frame, and complete seeding and cultivating attachments. The hoes run close to row without danger to leaves or roots. Two acres a day can be easily worked with this tool.



No. 16 Planet Jr. Single Wheel Hoe, Cultivator, Rake and Plow

The highest type of Single Wheel Hoe made. It is light, handy, and adapted to use by man, woman, or child. Has leaf guard for close work, and a durable steel frame. A most useful tool in the family garden that makes the work really a spare-moment pastime.

You need these scientific soil-tillers to save time, lighten labor and get bigger crops from your farm and garden. Planet Jr tools are backed by more than 40 years' experience. They range from \$2 to \$100, and are fully guaranteed.

FREE Our new 72-page illustrated catalogue of 60 of the latest tools, for all cultivation. Write postal today.

S L ALLEN & CO
Box 1106C Philadelphia



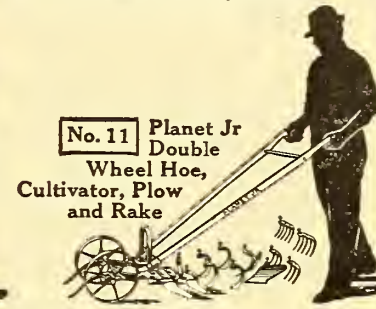
No. 8 Planet Jr. Horse Hoe and Cultivator

The best-known cultivating implement made. It is so strongly built that it withstands incredible strain, yet it is light and easy to handle. Has new steel wheel—will not clog with stones or trash. Cultivates to any depth and adjusts to any width. Opens and closes furrow, and hoes right up to plants without danger of injuring them.



No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow

This is a practical every day time-, labor-, and money-saver. It combines in a single implement a capital seeder, an admirable single wheel hoe, furrower, wheel-cultivator, and a rapid and efficient wheel garden plow. Sows all garden seeds in drills, or in hills 4, 6, 8, 12 or 24 inches apart.



No. 11 Planet Jr. Double Wheel Hoe, Cultivator, Plow and Rake

The greatest cultivating tool in the world for the grower of garden crops from drilled seeds. It has steel frame. The plow opens furrows for manure, seed, etc. and can be reversed for covering. The cultivating teeth are adapted for deep or shallow work and for marking out. Crops can be worked both sides at once until 20 inches high.

unnecessary cent in to it from the mere standpoint of fancy fixings or remarkably beautiful finishing, for needless decoration of any kind is a complication.

We have always handled the chicken and incubator business on the basis that it is a straight dollars and cents proposition to all of us, whether we are in the business to produce eggs, or poultry flesh, or fancy fowl; keeping that in mind, we have always figured that the lowest price that a machine can be built for to work is the right price to get and to pay. As our business has grown and our output increased in years past we have been able to deliver a better machine at a lower price and the same way with our brooders.

This has pleased us and pleased our customers, because one of the essentials to success in poultry business is not to have to put out much of an investment to start with. The less capital involved the better, of course, providing you have an equipment that will do the work.

Up to date we have something over half a million customers who saw our point on this question of wise economy and we do not know of anyone of them that was not more than satisfied and is not doing good business with these hatchers today.

It is hard to talk along these lines, of course, without being prejudiced in favor of "Old Trusty"—and, of

course, perhaps I am, but the fact remains that half a million poultry raisers throughout the country in every state are "Old Trusty" users, and this means that our customers are as much prejudiced in their favor as I am, and with this volume of evidence back of me, I hope I'll be pardoned for my references to business.

If the editor is willing, I shall be glad to close my talk here with an offer to all readers of a copy of my 1914 "Old Trusty" Book. This is a catalogue, it is true, but I am not afraid to say that it is really more than this. This book states the experience of the Johnson family, so to speak, in poultry raising, incubator and brooder making, and that experience goes back some twenty-five years when mother began to help out the family income with her poultry raising.

I know too that father in his day helped a great number of people, experienced otherwise, to get a fine start along profitable poultry lines, so we continue to run in the catalogue much of his simple philosophy and straight-forward common sense on what's what in the incubator and chicken raising line from the dollars and cents viewpoint.

Write Johnson, the Incubator Man, Clay Center, Nebraska, stating that you saw this notice in the Poultry Keeper, and let him send you a free copy of his 1914 "Old Trusty" Book.

EGGS IN ABUNDANCE—ALL WINTER.

The weather is colder. Your hens are eating their heads off. You're lucky if you get one egg per hen a week. You can't stand this state of affairs—you must remedy it. If you don't, your hens will cost you money instead of bringing in big profits.

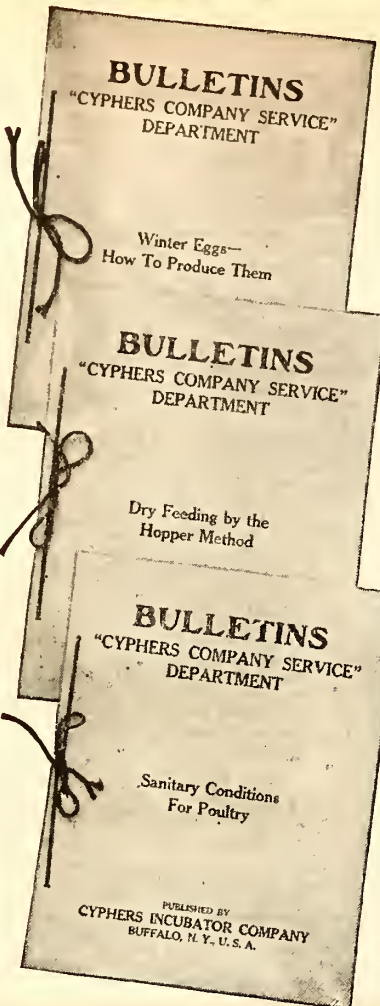
There's no earthly reason why they should not earn you big money if you go at it right. The feed is the whole secret. What's the best feed? Why, fresh cut bone! Your hens will simply have to lay if you feed them this.

What's the cost? Why, it's the cheapest feed you could buy. A piece of raw bone the size of a turnip will feed 10 to 20 hens. Cost to you, at the most, 2 or 3 cents—in many cases, nothing.

How can I prepare the bone? The Humphrey Green Bone Cutter is the one best thing. We've tested it and found that it beat's all.

How can I get it? Write the makers Humphrey & Sons, Glass St. Factory, Joliet, Illinois. They publish a free book, "The Golden Egg," brimfull of valuable, practical information of vital interest to every poultryman. Tells you all about right feeding—how to make your hens deliver the goods—how to feed for profit, not loss. It would pay every poultryman to write them at once.

Don't Waste Money!



YES, READER, a Standard Cyphers Incubator costs somewhat more *at the start*, than does a cheaply built, wrongly-constructed, "bargain price" machine, but before the *first season's work* is ended, the genuine latest improved "Cyphers" will have *more than made up* THE DIFFERENCE IN COST, and then you will own a strictly high-class, *dependable hatch machine* that will last ten to twenty years without a cent of repairs. If you are going to buy an incubator, buy a good one—*the best to be had*. If you decide that you would like to own a Cyphers, we strongly urge you to buy *first*—not after you have "tried" some cheap machine and met with discouraging losses. When you buy one cheap incubator, discard that and buy another that is no better, you are *overpaying* the Cyphers price, *without* getting Cyphers *results* and Cyphers *satisfaction*.

Recent Sample Reports

"1,925 Chicks Out of a Possible 2,220"

New Brunswick, N. J., July 3, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I have two Standard Cyphers Incubators, a No. 3 and a No. 1 machine, and have been getting excellent results. In all, we hatched 1,925 chicks out of a possible 2,220, as follows: NO. 3 MACHINE—from 372 fertile eggs, hatched 356 chicks; from 381 fertile eggs, hatched 364 chicks; from 341 fertile eggs, hatched 327 chicks; from 382 fertile eggs, hatched 366 chicks. NO. 1 MACHINE—from 132 fertile eggs, hatched 121 chicks; from 141 fertile eggs, hatched 133 chicks; from 132 fertile eggs, hatched 126 chicks; from 139 fertile eggs, hatched 132 chicks. We are more than pleased with these results. Your Paradise Brooders also have given us the best of satisfaction. We have successfully raised as many as one thousand chicks in two of your complete four-section Paradise Brooders, with a loss of comparatively few. All chicks were strong and vigorous.

O. POLINSKY,
Per S. Pollins, Mgr.

"Out of 144 Eggs I Got 130 Chicks"

Gaviota, Cal., April 20, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I received my Standard Cyphers Incubator in March and am very much pleased with it. I thought that you would like to know it is doing very good work. Every egg that is fertile is hatched. Out of 144 eggs I got 130 chicks. The results from your incubator are better than I ever expected, and I gladly recommend to any and everybody the Standard Cyphers Incubators. No one can run a machine that will hatch more chicks than the same number of eggs. I would not mine for any price if I could not get another Cyphers Incubator, and I cannot praise enough. I am just starting to raise chicks and I would like to have some of your poultry books, and also your catalog.

M. ERR

1,293 Fertile Eggs—1,266 Chicks

Battle Creek, Mich., Mar. 11, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

The two Cyphers Incubators I purchased from you have given excellent satisfaction. My results: first hatch, 236 chicks from fertile eggs; second hatch, 204 chicks from fertile eggs; third hatch, 199 chicks from fertile eggs; fourth hatch, 232 chicks from fertile eggs; fifth hatch, 178 chicks from fertile eggs; sixth hatch, 217 chicks from fertile eggs. Naturally I am well pleased with the work these machines have done and will recommend the Standard Cyphers to any one wanting the best machine for hatching strong, healthy chicks—and let them.

ALBERT G. KOVE

"2,530 Fertile Eggs, 2,456 Chicks."

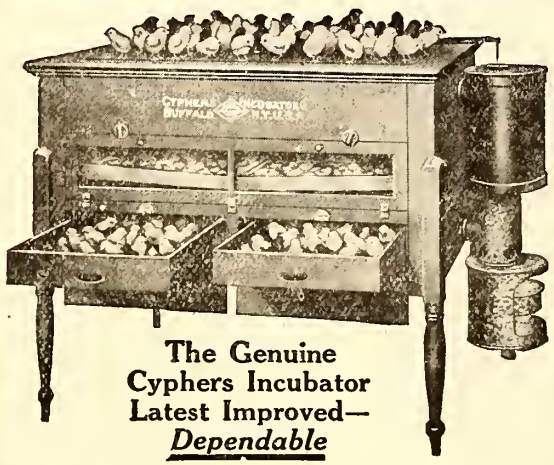
R. F. D. No. 8, Shelton, Conn.

Sept. 2, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

Early in March I started my Standard Cyphers Incubators and finished late in June. From 2,530 fertile eggs, I got 2,456 good, strong chicks. Several hatches were 100 per cent. I have no trouble whatever with your incubators and like them better every time I start them up. Am sending you, under separate cover, a photograph of my last hatch for this season, 175 chicks from 175 fertile eggs.

ALFRED SHAW.



The Genuine
Cyphers Incubator
Latest Improved—
Dependable

Cyphers Company Bulletins

- | | |
|---|---|
| No. 1—Winter Eggs and How to Get Them. | No. 14—Poultry Raising for Profit on the Farm. |
| No. 2—Dry Feeding by the Hopper Method. | No. 15—Poultry Houses, Their Proper Construction. |
| No. 3—Sanitary Conditions for Poultry. | No. 16—Special Fattening of Fowls. |
| No. 4—Back Yard Poultry Keeping. | No. 17—Selection and Care of Breeding Stock. |
| No. 5—Green Food for Poultry. | No. 18—Late Breeding and Trap Nesting. |
| No. 6—Dryness Essential in Poultry Houses. | No. 19—Best Markets for Table Poultry. |
| No. 7—Common-Sense Feeding of Fowls. | No. 20—Where to Start in Poultry Business. |
| No. 8—Important Don'ts for Beginners to Memorize. | No. 21—Common Diseases of Fowls and Chicks. |
| No. 9—Proper Brooding of Chicks. | No. 22—Common Mistakes in Poultry Keeping. |
| No. 10—Proper Feeding of Chicks. | No. 23—Combining Poultry and Fruit Growing. |
| No. 11—Handling of Incubator to Get Best Results. | No. 24—Common Poultry Pests. |
| No. 12—Marketing Eggs at a Profit. | |
| No. 13—White Diarrhea of Chicks. | |

Free Bulletins and Booklets

If you have not already sent for *three sample* free Bulletins (your choice) of the Cyphers Company's series of twenty-four, *do so today*—and fill out the coupon on opposite page, asking for copies of the two 52-p *free booklets*, "Best Methods of Brooding" and "Poultry Foods and Feeding," each of which should be worth a *five dollar bill* to you, if you are determined to make out of your poultry work this season *all the profit* possible. See list of twenty-four Bulletins herewith.

CYPHERS INCUBATOR CO.
Department 23, Buffalo, N.

Don't Waste Time!

BEAR IN MIND that a merely "built-to-sell" incubator is a *losing proposition* right from the start. First to last, it will never give you the *right kind* or the *right number* of chicks. And it is no respecter of eggs—fertile or infertile—fancy sittings or eggs bought at a store *are all alike* to the "bargain machine." The cheap, flimsily-built, wrong-in-principle incubator starts working *against your interests* as soon as it starts doing anything at all. Remember, also, that it takes more than an "occasional" good hatch to prove that an incubator is *truly dependable*—that it is the hatching machine you *can afford to adopt* as the foundation of your *personal success* in any branch of the poultry business. We have received *hundreds upon hundreds* of reports like the samples published herewith.

What Our Customers Say

Won't "Trust Them Under Hens"

R. F. D. 1, Comstock, N. Y., July 28, 1913.

Cyphers Incubator Co., Buffalo, N. Y.
I use and strongly advocate the Standard Cyphers Incubators and Brooders. Have used them three years now and they never yet have been beaten. Have tested them with other machines, but the Cyphers is the winner every time. In setting high-priced eggs I will not trust them under hens, or in other incubators, but put them in the Cyphers and raise the chicks in your brooders. Following are hatches made early the past spring in my Cyphers machines: from 150 untested eggs, 129 chicks; from 148 tested eggs, 144 chicks; from 133 tested eggs, 126 chicks. Of these 399 chicks, I raised 98 per cent, so you see they must have been extra strong. There was not a cripple among them. I am going to buy more machines of you next winter. I raise only White Wyandottes, and this past spring, at two and one-half months old, they weighed three pounds each on an average—some of them a little more.
SPRINGSIDE POULTRY FARM,
Harold C. Thomas, Proprietor.

"Have Never Had Less than 300 Chicks"

R. F. D. 3, San Diego, Cal., June 29, 1912.

Cyphers Incubator Co., Buffalo, N. Y.
I have four Standard Cyphers Incubators—three 390-egg, and one 244-egg. My first hatch I set 440 eggs in a large machine, tested out 58 infertile eggs, leaving 382 and I hatched 338 fine, strong chicks. In another machine I set 440 eggs, and I hatched 372 chicks—a 93 per cent hatch. In the other machine I set 400 eggs, and hatched 306 chicks. In the 244-egg machine I set 260 eggs, and hatched 200 chicks. Those were all my early hatches and I had never run an incubator before. From the 390-egg machines I have never had less than 300 chicks. I think that the Cyphers Incubators are very easy to run and regulate. I thank you very much for the "Cyphers Company Service" Bulletins I have received. I find them a great help.
MRS. R. H. POTE.

"Worth the Price and More"

R. F. D. 19, Elsie, Mich., July 21, 1913.

Cyphers Incubator Co., Buffalo, N. Y.
Last March I purchased a 144-egg Standard Cyphers Incubator and a Style B Outdoor Brooder through your agent, Mr. E. A. Phillips. I set the incubator four times. The first hatch I secured 110 chicks from 128 fertile eggs; the second hatch, 118 chicks from 130 fertile eggs; the third hatch, 116 chicks from 124 fertile eggs, and the fourth hatch, 110 chicks from 129 fertile eggs. I have raised them partly in heated brooders, partly without artificial heat. But for all-round use I much prefer the Cyphers Adaptable Hover, there being no danger of smothering and the temperature can be kept even. There is no question about Cyphers Incubators being worth the price and more. If the eggs are right, they are hound to hatch in the "Cyphers."
MRS. A. J. FIZZELL.

"Hatch was 92 Per Cent of Fertile Eggs, No Deaths!"

Las Vegas, Nevada, May 15, 1913.

Cyphers Incubator Co., Buffalo, N. Y.
You may be interested in learning of my success this year with a No. 1 Cyphers Incubator and Cyphers All-Metal Adaptable Hover. The first hatch was 92 per cent of fertile eggs. I placed the 116 chicks in an Adaptable Hover and fed them by the deep litter method from the day they were taken from the incubator, supplying nothing but chick food at any time. Today they are six weeks old, and NO DEATHS. The second hatch gave me 89 per cent of chicks from all fertile eggs. These chicks (120) were raised in the same way as the first lot and today are three weeks old and only one death. What do you think of this?
W. S. PARK.

Free Catalog

We manufacture over *one hundred standard articles* for the use of *practical, successful poultry and egg producers*, including Incubators, Brooders, Hovers, Poultry Houses, Colony Coops, Balanced-Ration Foods, Insecticides, Remedies, etc. Send today for our latest 244-page Complete Catalogue, entitled "Poultry Keeping In All Branches"; is fully illustrated and contains *eight valuable chapters* of down-to-the-minute poultry information and advice. Address our place of business nearest you.

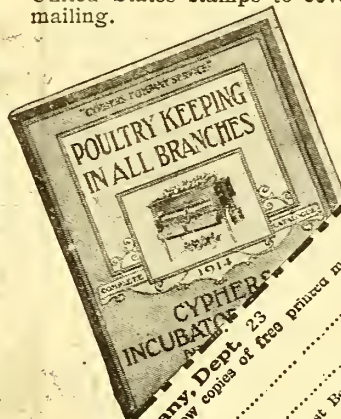
Branch Stores and Warehouses:

New York, N. Y., 41 Barclay Street. Boston, Mass., 12-14 Canal Street. Chicago, Ill., 329-331 Plymouth Court. Kansas City, Mo., 317-319 Southwest Boulevard. Oakland, Cal., 2127 Broadway. London, Eng., 121-123 Finsbury Pavement.



\$1,000 Prize Contest Book

This remarkable book contains reports—"fact-stories"—from men and women chicken-raisers all over the country—who won success in spite of hard conditions, of uphill work—who met difficulties and downed them—who succeeded because they were earnest, careful, efficient. This book is a gold mine of valuable suggestions to any one interested in poultry growing or in egg-production. A free copy will be sent to any address, domestic or foreign, on receipt of 10c in United States stamps to cover cost of mailing.



Cyphers Incubator Company, Dept. 23
Customers—Please mail to address below copies of free printed matter, as follows:
Also send 10c (in postage \$1,000 Prize Contest Book, for which find enclosed fee in stamp)
Name _____
Address _____



Don't Waste Money!

Don't Waste Time!

YES, READER, a Standard Cyphers Incubator costs somewhat more at the start, than does a cheaply built, wrongly-constructed, "bargain price" machine, but before the first season's work is ended, the genuine latest improved "Cyphers" will have more than made up THE DIFFERENCE IN COST, and then you will own a strictly high-class, dependable hatching machine that will last ten to twenty years without a cent of repairs. If you are going to buy an incubator, buy a good one—the best to be had. If you decide that you would like to own a Cyphers, we strongly urge you to buy first—not after you have "tried" some cheap machine and met with discouraging losses. When you buy one cheap incubator, discard that and buy another that is no better, you are overpaying the Cyphers price, without getting Cyphers results and Cyphers satisfaction.

Recent Sample Reports

"1,925 Chicks Out of a Possible 2,220"

New Brunswick, N. J., July 3, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—
I have two Standard Cyphers Incubators, a No. 3 and a No. 1 machine, and have been getting excellent results. In all, we hatched 1,925 chicks out of a possible 2,220, as follows: NO. 3 MACHINE—from 372 fertile eggs, hatched 356 chicks; from 381 fertile eggs, hatched 364 chicks; from 341 fertile eggs, hatched 327 chicks; from 332 fertile eggs, hatched 366 chicks. NO. 1 MACHINE—from 132 fertile eggs, hatched 121 chicks; from 141 fertile eggs, hatched 133 chicks; from 132 fertile eggs, hatched 126 chicks; from 139 fertile eggs, hatched 132 chicks. We are more than pleased with these results. Your Paradise Brooders also have given us the best of satisfaction. We have successfully raised as many as one thousand chicks in two of your complete four-section Paradise Brooders, with a loss of comparatively few. All chicks were strong and vigorous.

O. POLINSKY,
Per S. Pollins, Mgr.

"2,530 Fertile Eggs, 2,456 Chicks."

R. F. D. No. 8, Shelton, Conn.

Sept. 2, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—
Early in March I started my Standard Cyphers Incubators and finished late in June. From 2,530 fertile eggs; I got 2,456 good, strong chicks. Several hatches were 100 per cent. I have no trouble whatever with your incubators and like them better every time I start them up. Am sending you, under separate cover, a photograph of my last hatch for this season, 175 chicks from 175 fertile eggs.

ALFRED SHAW.

"Out of 144 Eggs I Got 130 Chicks"

Gaviota, Cal., April 20, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—
I received my Standard Cyphers Incubator in March and am very much pleased with it. I thought that you would like to know that it is doing very good work. Every egg that fertile is hatched. Out of 144 eggs I got 130 chicks. The results from your incubator are better than I ever expected, and I gladly recommend to any and everybody the Standard Cyphers Incubators. No one can make a machine that will hatch more chicks from the same number of eggs. I would not name for any price if I could not get another Cyphers Incubator, and I cannot praise enough. I am just starting to raise chickens and I would like to have some of your poultry books, and also your catalog.

M. ERRO.

1,293 Fertile Eggs—1,266 Chicks

Battle Creek, Mich., Mar. 11, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—
The two Cyphers Incubators I purchased of you have given excellent satisfaction. Here are results: first hatch, 236 chicks from 242 fertile eggs; second hatch, 204 chicks from 204 fertile eggs; third hatch, 199 chicks from 204 fertile eggs; fourth hatch, 232 chicks from 232 fertile eggs; fifth hatch, 178 chicks from 178 fertile eggs; sixth hatch, 217 chicks from 217 fertile eggs. Naturally I am well pleased with the work these machines have done and will recommend the Standard Cyphers to any one wanting the best machine for hatching strong, healthy chicks—and joys of them.

ALBERT G. KOVEN.

Won't "Trust Them Under Hens"

R. F. D. 1, Comstock, N. Y., July 28, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—
I use and strongly advocate the Standard Cyphers Incubators and Brooders. Have used them three years now and they never yet have been beaten. Have tested them with other machines, but the Cyphers is the winner every time. In setting high-priced eggs I will not trust them under hens, or in other incubators, but put them in the Cyphers and raise the chicks in your brooders. Following are hatches made early the past spring in my Cyphers machines: from 150 untested eggs, 129 chicks; from 148 tested eggs, 144 chicks; from 133 tested eggs, 126 chicks. Of these 399 chicks, I raised 98 per cent, so you see they must have been extra strong. There was not a cripple among them. I am going to buy more machines of you next winter. I raise only White Wyandottes, and this past spring, at two and one-half months old, they weighed three pounds each on an average—some of them a little more.

SPRINGSIDE POULTRY FARM,
Harold C. Thomas, Proprietor.

"Have Never Had Less than 300 Chicks"

R. F. D. 3, San Diego, Cal., June 29, 1912.

Cyphers Incubator Co., Buffalo, N. Y.—
I have four Standard Cyphers Incubators—three 30-egg, and one 24-egg. My first hatch I set 440 eggs in a large machine, tested out 58 infertile eggs, leaving 382 and I hatched 338 fine, strong chicks. In another machine I set 440 eggs, and I hatched 372 chicks—a 93 per cent hatch. In the other machine I set 400 eggs, and hatched 306 chicks. In the 24-egg machine I set 260 eggs, and hatched 200 chicks. Those were all my early hatches and I had never run an incubator before. From the 390-egg machines I have never had less than 300 chicks. I think that the Cyphers Incubators are very easy to run and regulate. I thank you very much for the "Cyphers Company Service" Bulletins I have received. I find them a great help.

MRS. R. H. POTE.

"Worth the Price and More"

R. F. D. 19, Elsie, Mich., July 21, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

Last March I purchased a 144-egg Standard Cyphers Incubator and a Style B Outdoor Brooder through your agent, Mr. E. A. Phillips. I set the incubator four times. The first hatch I secured 110 chicks from 128 fertile eggs; the second hatch, 118 chicks from 130 fertile eggs; the third hatch, 116 chicks from 124 fertile eggs, and the fourth hatch, 110 chicks from 129 fertile eggs. I have raised them partly in heated brooders, partly without artificial heat. But for all-round use I much prefer the Cyphers Adaptable Hover, there being no danger of smothering and the temperature can be kept even. There is no question about Cyphers Incubators being worth the price and more. If the eggs are right, they are bound to hatch in the "Cyphers."

MRS. A. J. FIZZELL.

"Hatch was 92 Per Cent of Fertile Eggs, No Deaths!"

Las Vegas, Nevada, May 15, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

You may be interested in learning of my success this year with a No. 1 Cyphers Incubator and Cyphers All-Metal Adaptable Hover. The first hatch was 92 per cent of fertile eggs. I placed the 115 chicks in an Adaptable Hover and fed them by the deep litter method from the day they were taken from the incubator, supplying nothing but chick food at any time. Today they are six weeks old, and NO DEATHS. The second hatch gave me 89 per cent of chicks from all fertile eggs. These chicks (120) were raised in the same way as the first lot and today are three weeks old and only one death. What do you think of this?

W. S. PARK.

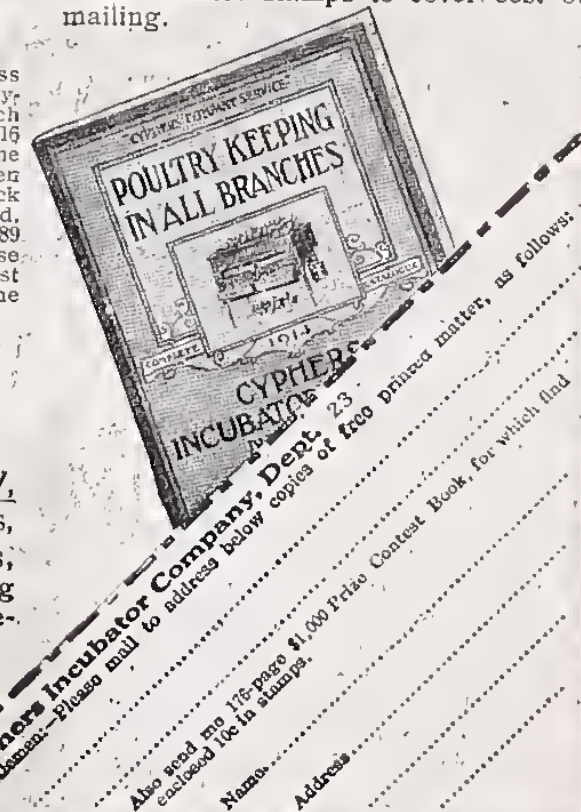
BEAR IN MIND that a merely "built-to-sell" incubator is a losing proposition right from the start. First to last, it will never give you the right kind or the right number of chicks. And it is no respecter of eggs—fertile or infertile—fancy sittings or eggs bought at a store are all alike to the "bargain machine." The cheap, flimsily-built, wrong-in-principle incubator starts working against your interests as soon as it starts doing anything at all. Remember, also, that it takes more than an "occasional" good hatch to prove that an incubator is truly dependable—that it is the hatching machine you can afford to adopt as the foundation of your personal success in any branch of the poultry business. We have received hundreds upon hundreds of reports like the samples published herewith.

What Our Customers Say



\$1,000 Prize Contest Book

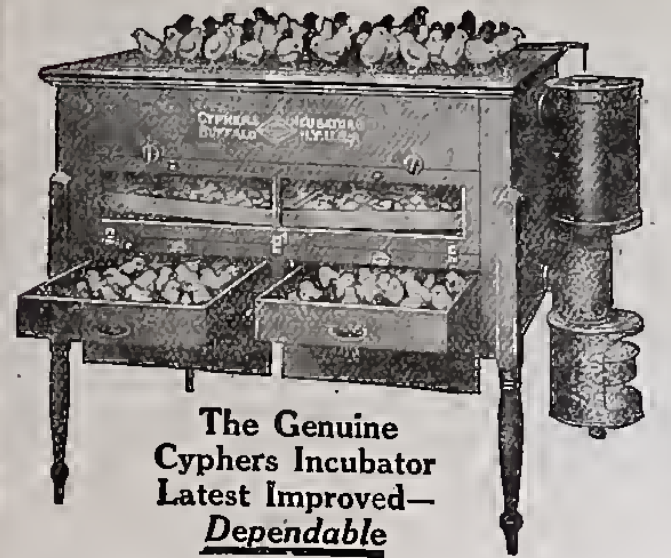
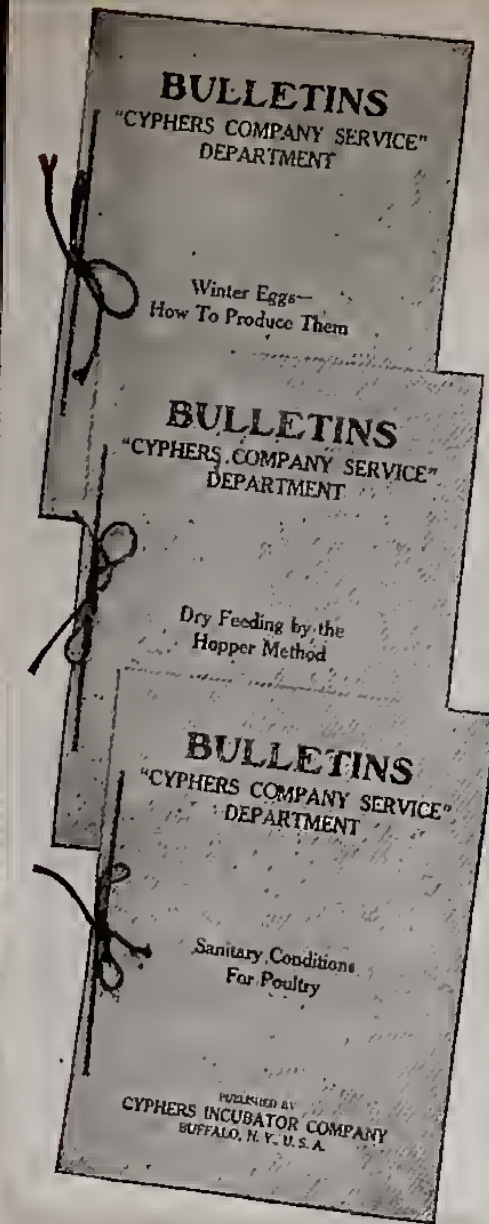
This remarkable book contains reports—"fact-stories" from men and women chicken-raisers all over the country—who won success in spite of hard conditions, of uphill work—who met difficulties and downed them—who succeeded because they were earnest, careful, efficient. This book is a gold mine of valuable suggestions to any one interested in poultry growing or in egg-production. A free copy will be sent to any address, domestic or foreign, on receipt of 10c in United States stamps to cover cost of mailing.



Free Bulletins and Booklets

If you have not already sent for three sample free Bulletins (your choice) of the Cyphers Company's series of twenty-four, do so today—and also fill out the coupon on opposite page, asking for copies of the two 52-page free booklets, "Best Methods of Brooding" and "Poultry Foods and Feeding," each of which should be worth a five dollar bill to you, if you are determined to make out of your poultry work this season all the profit possible. See list of twenty-four Bulletins herewith.

CYPHERS INCUBATOR CO Department 23, Buffalo, N. Y.



The Genuine
Cyphers Incubator
Latest Improved—
Dependable

Cyphers Company Bulletins

- No. 1—Winter Eggs and How to Get Them.
- No. 2—Dry Feeding by the Hopper Method.
- No. 3—Sanitary Conditions for Poultry.
- No. 4—Back Yard Poultry Keeping.
- No. 5—Green Food for Poultry.
- No. 6—Dryness Essential in Poultry Houses.
- No. 7—Common Sense Feeding of Poultry.
- No. 8—Important Don'ts for Beginners to Memorize.
- No. 9—Proper Brooding of Chicks.
- No. 10—Proper Feeding of Chicks.
- No. 11—Handling of Incubator to Get Best Results.
- No. 12—Marketing Eggs at a Profit.
- No. 13—White Diarrhea of Chicks.
- No. 14—Poultry Raising for Profit on the Farm.
- No. 15—Poultry Houses, Their Proper Construction.
- No. 16—Special Fattening of Poultry.
- No. 17—Selection and Care of Breeding Stock.
- No. 18—Line Breeding and Trap Nesting.
- No. 19—Best Markets for Table Poultry.
- No. 20—Where to Start in Poultry Business.
- No. 21—Common Diseases of Poultry and Chicks.
- No. 22—Common Mistakes in Poultry Keeping.
- No. 23—Combining Poultry and Fruit Growing.
- No. 24—Common Poultry Pests.

Free Catalog

We manufacture over one hundred standard articles for the use of practical, successful poultry and egg producers; including Incubators, Brooders, Hovers, Poultry Houses, Colony Coops, Balanced-Ration Foods, Insecticides, Remedies, etc. Send today for our latest 244-page Complete Catalogue, entitled "Poultry Keeping in All Branches"; is fully illustrated and contains eight valuable chapters of down-to-the-minute poultry information and advice. Address our place of business nearest you.

Branch Stores and Warehouses:

- New York, N. Y., 41 Barclay Street.
- Boston, Mass., 12-14 Canal Street.
- Chicago, Ill., 329-331 Plymouth Court.
- Kansas City, Mo., 317-319 Southwest Boulevard.
- Oakland, Cal., 2127 Broadway.
- London, Eng., 121-123 Finchbury Pavement.

Cyphers Incubator Company, Dept. 23
Name: _____
Address: _____
Also send me 175-page \$1,000 Prize Contest Book for which find enclosed 10c in stamps.

IN DEFENSE OF FIRELESS BROODERS—DIFFERENT BREEDS REQUIRE DIFFERENT CARE.

"Many men of many minds" surely differ widely in their views on poultry keeping, and no wonder the average beginner is all at sea after reading the different articles in the poultry press.

For instance, in your last issue before me "M. E. D." berates the idea of using fireless brooders. Now I have as fine and hardy a flock of Silver Campines as there is in this country and practically all were raised with the fireless. Never lost a chick yet with them. So I say, from personal experience, that as strong, healthy and productive chicks can be raised with fireless brooders as with the kerosene hen or old biddy herself. In fact I think a little better.

I believe all this difference of opinion lies in local conditions and in the fact that each separate breed of fowls does need special study treatment and feeding from the egg to maturity and the more one studies his or her special favorite breed, observes their characteristics, likes and dislikes, the more successful the breeder will be in the rearing of them.

It is the "generalization" in talking of chick raising that causes so much confusion in the minds of beginners. I would not have the nerve to try to tell an Orpington breeder for instance, how best to feed and raise his little fellows, because I know absolutely nothing about that breed or their habits, but I do know a good deal about Campines, and that that breed and other varieties require somewhat different consideration, and the brooding, care and feeding for one might not be best for the other.

Beginners with any breed must always take these things into consideration, and while it is well to learn all we can from others, yet the everyday study of and experience with their own particular breed of birds, though discouraging at times it may be, are the most valuable lessons one can learn. It requires observation, patience and perseverance, yet this is the only way to reach the goal success.

The value of experience has been well demonstrated by the Maine Experiment Station in hauling down their flag—the roosting curtain—after some years use and booming of the same.

Poultry Keeper readers may be interested to know that here in the East the beautiful and much lauded Campine is having a tremendous boom. Poultry shows that never had the entry before are receiving hot classes this year, and some very fine specimens are seen.

The interest in this especial fowl is spreading rapidly as they and their big eggs are seen and admired, and soon we shall expect to see the people of the middle west enthused as much as are the people here and in the far west. Perhaps some day if the editor does not fire this into the waste basket, we will get up steam and write about "Campines as We Know Them."

Vermont. A. D. Bradford.

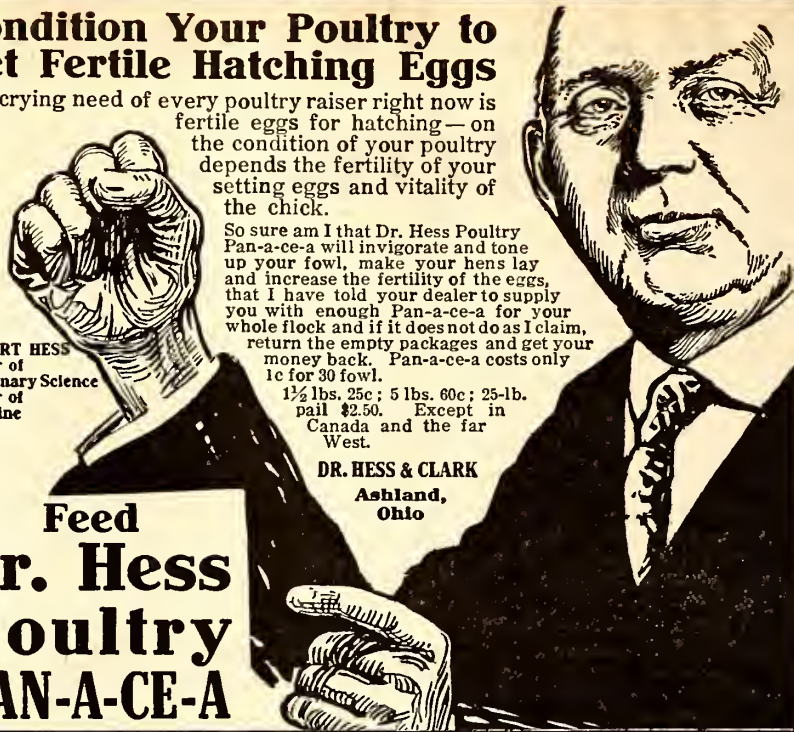
Condition Your Poultry to Get Fertile Hatching Eggs

The crying need of every poultry raiser right now is fertile eggs for hatching—on the condition of your poultry depends the fertility of your setting eggs and vitality of the chick.

So sure am I that Dr. Hess Poultry Pan-a-ce-a will invigorate and tone up your fowl, make your hens lay and increase the fertility of the eggs, that I have told your dealer to supply you with enough Pan-a-ce-a for your whole flock and if it does not do as I claim, return the empty packages and get your money back. Pan-a-ce-a costs only 1c for 30 fowl.
 1½ lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West.

DR. HESS & CLARK
 Ashland, Ohio

Feed Dr. Hess Poultry PAN-A-CE-A



GILBERT HESS
 Doctor of Veterinary Science
 Doctor of Medicine

NO LIVING MAN

5TH YEAR
 SEE THAT "XX"?
 POINTS THE WAY
 START RIGHT
 YOU END RIGHT

can hatch one egg the Magic Egg Tester rejects before incubation. We challenge the world to do it. Why put eggs under the hen or in the incubator that you are not first sure about? You lose if you do it. You are wasting the earliest and best hatching month if you delay its use. Heed this warning, or next May you will wish you had. "The Magic Egg Tester is the poultry raiser's *vade mecum*." \$2.00 each, and no further expense to use. One year's trial, fully guaranteed, and cost refunded if not satisfied. Experimental specialists in incubation, giving the latest and best methods with each Tester. Circular mailed for the asking.

MAGIC EGG TESTER WORKS, Dept. E Buffalo, N. Y., also Bridgeburg, Canada.

As Heat Rises Moisture Must Fall

*High heat must have low moisture.
 Low heat must have high moisture.*

This is a rule never to be violated. A certain definite relation exists between heat, moisture and ventilation. The more closely it is observed, the nearer the hatch comes to perfection.

Mandy Lee Incubator

Adapts the Moisture to the Heat

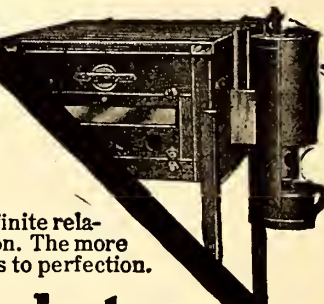
It is the one scientific incubator, because it is the only one that measures and secures right relations of hatching requirements. Hatching with the Mandy Lee is exact work. Thermometer, Hygrometer and Triple Automatic Regulator cannot go wrong like machines watched and "tended" without knowing what is wrong or what is required.

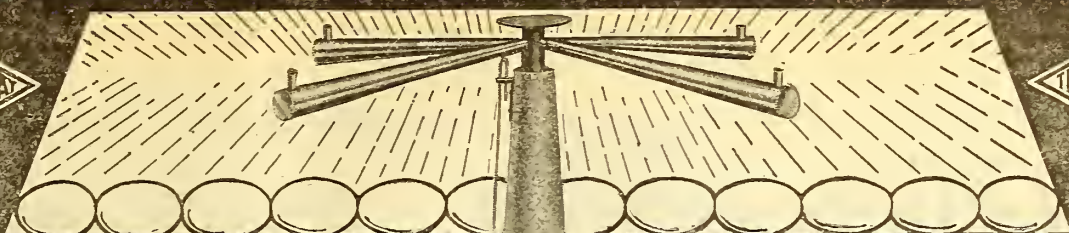
Everything is measured, not guessed at, in the Mandy Lee. All is automatic. See Lee's latest catalog for particulars on modern scientific hatchers.

Use Germozone this year, standard remedy of the world for Roup, Colds, Cholera, Canker, Bowel Complaint, etc. Also Lice Killer, Egg Maker and White Diarrhoea Remedy. All Lee modern poultry books free. Address

GEO. H. LEE CO., 937 Barney St., Omaha, Neb.

Heat
 Moisture
 and
 Ventilation
 Measured—
 No Guessing





How the X-Ray Places Even Heat at Every Point of Egg Chamber

THE Central Heating Plant is the only sensible—the only right principle for the incubator. You know it. You can see it at a glance. Everybody knows it. “Why didn’t they build incubators that way before?” Because the right construction—the simplest construction—is the last to be found. The X-Ray is the only incubator in the world with this construction—and it’s patented.

Here you see how the lamp is placed—squarely underneath—right in the middle—where it can distribute heat *equally* to every corner alike.

How different from the lamp stuck on the end or side—putting too much heat close by, and not enough at the farther ends.



You put oil in the X-Ray just once for the hatch—when you start it. That’s all. No work of refilling! Think of that, you who have filled tanks every day of a hatch—a daily job for 21 days.

You Get More Chicks! You Get Healthier Chicks!

The X-Ray Brooder with lamp underneath is just as far ahead of old-fashioned, wrongly constructed brooders, as the X-Ray Incubator is ahead of other incubators.

Start your business right! If you are an old hand at poultry raising, fire out the old expensive, uncertain, unsatisfactory, greasy, work-making machines. You’ll be dollars and dollars ahead. If you are just starting, start right! Start

with the *scientific* poultry raising plant—the X-Ray, the Incubator and Brooder of today.

Send for Free X-Ray Book No. 12

It shows you the way. It answers every question. It puts you in touch with the methods the big successful poultry raisers are using all over the country.

X-RAY INCUBATORS AND BROODERS ARE SOLD DIRECT FROM THE FACTORY TO YOU. You pay no agents’—no middlemen’s profits. You get the splendid X-Ray outfits—made of the best materials in the largest factory of its kind in the world—at the lowest price at which the best can be built. And we prepay the freight.

Send for the Book today. The coupon will do—a postal will do. The point is, send for it.

The X-Ray Incubator uses only one gallon of oil for the entire hatch. Others use five gallons.

X-Ray Automatic Trip Exactly Regulates the Flame

Another X-Ray feature that no others have, is the X-Ray Automatic Trip. It cuts down the flame at the burner when the egg-chamber gets too hot. It lets on more flame when more heat is needed. You don’t worry over changes of temperature. *It is always the same in the X-Ray egg-chamber*, no matter what the air is outside—you don’t have to watch it or bother with it at all. It runs itself—runs itself right—scientifically right—better than the guesswork of the most expert.

Saves 75c to \$1.00 a Hatch—Many Dollars a Season!

Because the heating plant is in the middle, underneath—and because the X-Ray uses just the right heat—it is a big saver of fuel. It saves four times the quantity of oil others use.

The X-Ray uses only one gallon of oil for the entire hatch. Others use five to eight gallons. Think of the saving! Count up what that means. And it goes right on making this saving the lifetime of the incubator!

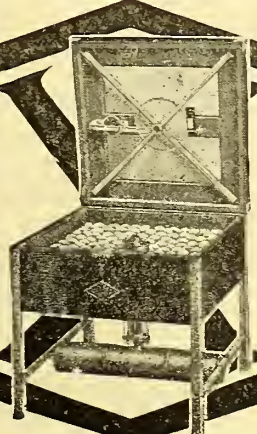
X-RAY INCUBATOR CO.

Des Moines, Iowa

Our new factory at Des Moines is the largest exclusive incubator factory in the world—the most modern equipped. Come and see it, if you can.



X-Ray Brooder Also Has Central Heating Plant



Name.....

P. O.....

R. R. No.....

State.....

More Than Sixty Prizes

Were Placed on Owen Farm Birds

In my own hands and in the hands of customers this year at the **LARGEST SHOWS** ever held in **NEW YORK** and **BOSTON**.

1914 MATINGS IN BUFF and WHITE ORPINGTONS, WHITE PLYMOUTH ROCKS, WHITE WYANDOTTES and S. C. RHODE ISLAND REDS

Are the Best ever made on OWEN FARMS.

EGGS from BEST MATINGS in the WORLD, \$10.00 for 15; \$30.00 for 50; \$50.00 for 100.

BABY CHICKS from THESE MATINGS, \$1.50 each in lots of 20 or more at one time.

EGGS from CHOICE MATINGS, \$5.00 for 15; \$15.00 for 50; \$25.00 for 100. BABY CHICKS from THESE MATINGS, 50c each in lots of 20 or more at one time.

Send for my new **ILLUSTRATED CATALOG** and **MATING LIST**, and **BOOK YOUR ORDER NOW**.

Superb show birds for February Shows and Grand Breeding Birds of all qualities for sale at absolutely fair prices.

I WANT YOUR ORDER, and REMEMBER, your **ABSOLUTE, ULTIMATE SATISFACTION** means my **PERMANENT SUCCESS**.

Maurice F. Delano

127 William Street, Vineyard Haven, Mass.
MAURICE F. DELANO, Proprietor.

FRANK H. DAVEY, Superintendent.



35 VARIETIES Chickens, Ducks, Geese, Turkeys, O. I. C. Hogs, STOCK AND EGGS, **REDUCED PRICES**. Big new Illustrated circular, better than ever. FREE. John E. Heatwole, Harrisonburg, Va.



It's a shame!

to have lousy chickens and stop their laying when you can drive out chicken lice with

Avenarius Carbolineum

One application a year guaranteed to keep your coop free from lice. Write for circular and testimonials. Carbolineum Wood Preserving Co. Dept. 54, Milwaukee, Wis.



Ship Day Old Chicks in This Safe Box

We ship thousands of baby chicks each season from *Tywacana Farms* to all parts of the country in the strong but light and compact

Wright Box
THE RIGHT BOX

The most satisfactory box for shipping chicks. It has adjustable ventilating regulator which meets varying weather conditions more satisfactorily than any other device. Chicks do not trample, smother or get chilled. Made of double, reinforced corrugated cardboard—it is



Strong—Simple—Safe—Sanitary

The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar. Both chick and egg boxes are shipped to you flat and are easily set up and packed for shipment to your customers.

Write today for Free Booklet describing The Wright Boxes for shipping chicks and eggs.

TYWACANA FARMS POULTRY CO.
A. E. Wright, Supt. Box 57 Farmingdale, Long Island, N.Y.



HATCHING AND CARING FOR CHICKS.

My method of hatching and caring for chickens may not be the best but it serves my purpose well and chicks are strong and healthy.

When the hen becomes broody she is taken to the setting pen, where good nests have been made to accommodate the sitting hens, and she is confined closely to her nest for a while until she decides it is all right. After sitting on artificial eggs for two or three days the eggs are changed at night or when she is off the nest for her feed. She has been given a good dusting with insect powder and has feed, water, grit and dust box placed within her reach so that she is ready for business. I usually see that the hens come off for their morning feed and exercise and that they get back to their respective places, then they are less apt to give further trouble.

During the period of sitting, the coops, yards, etc., may be made ready to receive the chicks that are to be cared for. It is best to leave the baby chicks in the nest until perfectly dry. When they get strong enough to want to venture out from the mother hen it is time to take them from the nest and place them in a warm lined basket.

No feed is given them until they are 36 hours old, then crumbs of dry bread and some hard boiled egg are given them, also a shallow dish of water. A little later sand and powdered charcoal are sprinkled on the board floor of their run.

When the hen is ready to receive them she usually gets the chicks of two sittings, unless it is real early when the weather is uncertain. The hens chosen for the mothers are the quick and gentle ones that show the "mother spirit." The mother is lifted from her coop each morning to have a chance to stretch herself and fill her crop with corn or other feed the chicks do not need while the little ones are given their usual breakfast of crumbs and egg. The mother eats with them at other than the morning feed when she has filled her crop and does not want so much herself.

When the chicks are about four days old they get the commercial mixed chick feed for part of their feeds. I usually feed the youngest chicks about five times a day, giving but little each feed, but when they grow older

they will do on feed three times a day and have more at a time. The hen will be allowed only a small run enclosed in a netted yard or coop until the chicks are about four weeks old, the coop and run being changed to fresh ground every few days, and then she will be given free range, only she is not allowed to leave her coop of mornings until the grass is dry. Everything must be kept clean as can be.

Indiana.

A. D.

WASTING FEED.

Have you ever given any serious thought to the amount of chicken feed that you waste each year, how much the rats and mice carry away, the amount you throw on the ground to be trampled upon, left there to decay and later on to be eaten by the chickens when they are driven to it by hunger, causing them to become sick and oft-times die.

These are just a few of the many reasons why poultry feeding by hand is unsuccessful and unhealthy.

With the advent of the Simplicity Kant Klog Poultry Feeder made by the Simplex Supply House, Pontian bldg., Chicago, Ill., these faults have been corrected.

With this automatic feeder your chickens receive the correct amount of food at all times, never too much nor too little, it is always on the job no matter if you go away for days at a time, feeds anything from whole corn to millet seed and never gets out of order, it cannot clog.

What it saves in grain alone will pay its cost in ten days, besides the times and labor you save.

Write today for the catalogue, it is free if you mention Poultry Keeper.

Simplex Supply House, Pontian Bldg. Chicago, Ill.

J. C. Beare Progressive Orpington Farm, Box B, Ft. Gage, Illinois, captured a total of nine leading prizes on his White Orpington entries at the recent Marissa, Illinois, show; also seven prizes on his Blacks and one on Buffs at the same show. At the Murphysboro, Illinois, show he captured a total of five premiums. No variety of poultry has shown the widespread popularity of the Orpingtons. His 1914 catalogue will be ready about February 1st, and he will be glad to send a copy of it to any reader of the Poultry Keeper.

GETS BEST RESULTS FROM INCUBATORS AND BROODERS.

I would like to say to those who have so much trouble with poor hatches in incubators, that in most cases, the trouble is with the operator, or in the fertility of the eggs used. I have used incubators for fifteen years, three different kinds of machines, and I have always had good results. Last year I incubated 800 eggs and hatched 620 eggs and the chicks were fine and sturdy. I now use the Old Trusty and Great Western and always get about 85 per cent hatch. I believe there is much in the care of the incubator. I never reset a machine without first washing it out thoroughly with warm suds, with a little carbolic acid and then leave the doors open and the lamp burning until the machine is thoroughly dry, then close the machine till the temperature reached 100 degrees. The eggs are then put in and it is time to watch the machine closely. The heat should be increased slowly. Too much heat the first week is sure to spoil the hatch. I always follow closely the instructions as to heat the last week. I turn and air the eggs three times a day when the temperature runs up too high which it will do.

I always feed the baby chicks with a dry prepared feed for the first two weeks. Then I mix in some Kaffir corn until they learn to eat the whole grain, then I feed Kaffir, maize and cracked corn and the chicks mature

quickly. The chicks must be kept comfortable and their surroundings strictly clean, such as brooders and water fountains. Keep them supplied with charcoal and grit and you won't have to use medicine. Keep a look out for lice and mites and use plenty of suds and coal oil to scrub the coops clean each week and you won't be bothered with mites.

I like the warm brooder house, with plenty of air and sunshine and deep litter to give the chicks exercise until they are old enough to be given the freedom of the yard. As soon as the chicks learn to go to the warm brooder then your troubles are over. About all an old hen is good for is to trample the baby chicks and pick their heads of, so give me the incubator and brooder and keep the hens busy laying eggs. Oklahoma. Mrs. Ben Long.

KEEPING WHITE DIARRHEA OUT OF THE FLOCK.

Probably no experiment station has devoted so much study and work with white diarrhea in young chicks as has the Storrs Station, Storrs, Conn. Investigations made during the past two years have shown that the period of greatest danger from bacillary white diarrhea lies within the first 48 hours, but that chicks may acquire the disease up to the time they are 4 days old. Hens may become bacillus carriers after they have reached maturity. The infection is, in all probability, acquired through the mouth.

The feeding of sour milk to chicks

appears to be a good means of preventing, or at least holding in check, epidemics of bacillary white diarrhea. Hence, whenever it is impossible or impracticable at once to introduce new stock, sour milk may be an important agent in lessening the dangers of great loss from the disease. The sour milk should be fed early; furthermore, it should be kept before the chicks constantly. Sour milk has an important stimulating effect on the growth and vitality of chicks, and for this reason alone it is a most valuable food.

For the complete elimination of white diarrhea from a poultry farm, the Storrs Station recommends the rejection for breeding purposes stock which harbors white diarrhea infection and the obtaining of eggs or live stock from sources where white diarrhea infection has not been known to exist. It should be considered both a moral and legal offense for persons to sell or exchange eggs, chicks, or mature stock which come from flocks that they know to be infected with the germ of bacillary white diarrhea.

Every precaution should be taken to protect mature stock against infection by the white diarrhea bacillus. It is, therefore, important that mature hens as well as growing stock, be kept in good clean houses and large yards; that they receive wholesome food and the best of care. Finally, that they be not allowed to come in contact with infected chicks or mature stock.—Exchange.

\$8 Buys **150 Egg** **INCUBATOR**
\$8 Buys **150 Egg** **BROODER**

Just Think of It!

Others Are Ordering Direct From This Advertisement

Why Don't You?

Poultry raisers! Get in on this offer quickly. In all of our 26 years' experience we have never been able to make so astonishing an offer as this. Don't miss it. Here, we give you everything you could want in a reliable hatcher, at a low price that has heretofore been impossible. Bear in mind that this incubator is fully guaranteed—shipped ready to use—no extras to buy. We charge only for actual cost of material and labor with one small profit, and depend on enormous production.

Fortunate deals in buying raw materials, our modern factory methods and our direct-to-you plan enable us to cut the price to a fraction. It's the most remarkably low price we have ever been able to make ourselves or have ever heard

of elsewhere. The machine has the best regulator; dependable thermometer; strong, well-built egg-trays; all metal safety lamp with howl stamped out of sheet steel; best lamp bracket; steel legs; best egg-tester. Write for this wonderful proposition on

The ROCKFORD INCUBATOR & BROODER

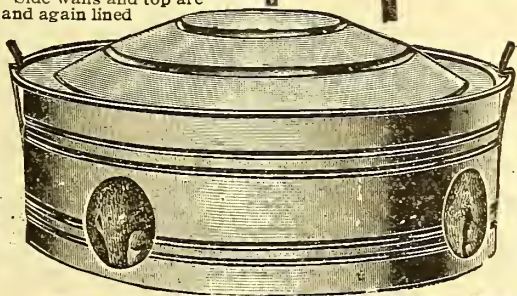
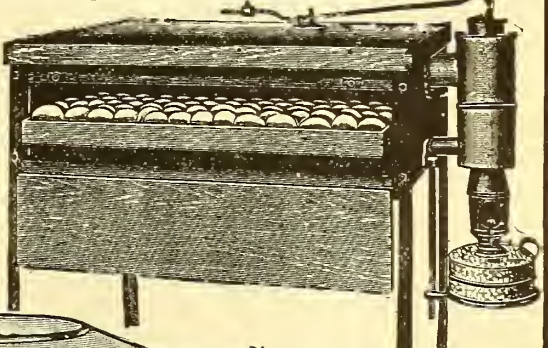
Incubator alone \$6. Metal Brooder \$3. Both Incubator & Brooder \$8.50
 You could not ask for better quality—to pay more is needless

It is heated with warm, pure air. Foul or impure air is carried off. No chance for lamp fumes to enter egg chamber. All parts are heated evenly. Side walls and top are made of 1-inch lumber and lined with heavy deadening felt, and again lined with half-inch lumber inside. Heat cannot get out—cold cannot get in—fuel is saved. The Brooder is water heated—fire-proof and weather-proof—easily handled.

Order Today on Approval—Guarantee Protects You

Don't let anything keep you from this remarkable proposition. The quality is so good—the guarantee so strong and the price too low to let anybody miss it. We guarantee the incubator to satisfy you in hatches and also guarantee the metal brooder to raise chicks to satisfy you or we return your money. Send us your order today or write us for further information.

The Rockford Incubator Co. Box 11 Rockford, Ill.



\$6.00
For This 150 Egg Incubator
\$3 For This 150-Chick **BROODER**
Money Back Guaranty
 It comes to you all set up (not in knock-down form) Just fasten legs and lamp bracket and start the hatch.

200 EGG INCUBATOR COSTS BUT \$3.00.

It is quite probable that a great many of our readers are already acquainted with Mr. J. F. Siems, and his Natural Hen Incubator, which is a product of his own invention.

Mr. Siems has solved the problem that has confronted incubator manufacturers practically ever since the first one was built. He makes use of the actual hen and does away with lamps, oil expense, hot death dealing



Latest Photo of J. F. Siems, patentee of Natural Hen Incubator.

times, uncertainty of temperature, etc. His incubator is practical in every way and leaves no uncertainty about bringing forth strong, healthy chicks. Protected by two United States and several foreign patents.

The Natural Hen has an enormous army of enthusiastic users. It has proven a success in every way. One of the most pleasant surprises in an incubator that can offer such assurance of good results is that a 200 egg size costs but \$3.00.

In the Natural Hen Incubator, where Mrs. Hen is the controlling feature, she is kept strictly on the job until the entire hatch is produced, and it is reasonable to say that her work has a much higher degree of certainty than she has ever been able to show where she worked alone, as this system largely eliminates the possibility of breakage. The uniform hatching produces a larger percentage of chicks.

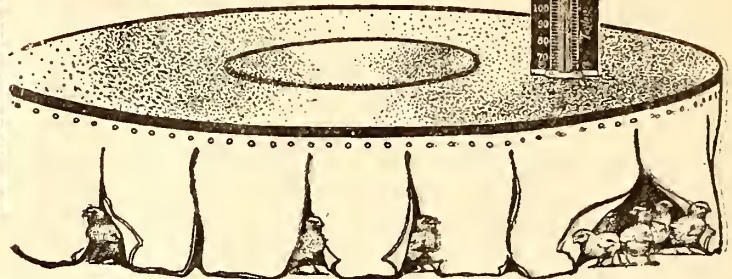
You will find one of Mr. Siem's advertisements in this issue. We suggest that you write him for his catalog, addressing Natural Hen Incubator Co., 1349 Constance St., Dept. 1, Los Angeles, California.

HAWKS.

To be successful with poultry, one must start with birds that are healthy. Any variety may be chosen and good results obtained, if good care is given the flock. Some varieties are best suited for market birds and others for laying, so it depends on what you want them for. If a bird becomes sick,



"ON GUARD"



To show the exact temperature under the hover you need an accurate, dependable brooder thermometer—a "Tycos".

"Tycos" Brooder Thermometers "ALWAYS TELL THE TRUTH"

They are positively permanently accurate. When buying a new brooder or incubator, insist that the manufacturer equip it with "Tycos" Thermometers. Go to your dealer for "Tycos" Thermometers for your old machines. If he cannot supply you—send direct to us, giving his name.

PRICES

Brooder Thermometers	each, \$.75
Hygrometers	" 1.50
Certified Incubator Thermometers	" 1.00
Incubator Thermometers	" .75
"Tycos" Electrical Alarm Thermometer, express prepaid	" 5.00

Write for Booklet, "Thermometer Facts Worth Knowing"

Taylor Instrument Companies,



116 AMES ST.

Rochester, N. Y.

take it away from the rest of the flock to doctor it, but the best remedy is the hatchet. When limberneck gets among your flock, a good remedy is strong copperas water. A dead snake, rat or mole will start limberneck, so I keep a close watch, especially in warm weather. I do not feed moldy corn as it will start bowel trouble sooner or later. Such corn should be burned. Also vegetables that are left over and have commenced to sour should not be fed. Dr. Hess' Poultry Panacea is one of the best tonics for poultry of all ages.

To start the chicks off, I feed them old-fashioned corn bread made of meal, not sifted, milk, soda, salt and a big handful of bran. This is baked very hard and then soaked in fresh milk. I feed lots of fresh milk, not skimmed. It is lots better and should be given twice a day.

I, for one, have a good word for incubators. You can set them any time you want and not have to wait until late in the spring for broodies. Be careful not to set any eggs from rousy hens. I once had about 400 little chicks hatched from a rousy flock and in about ten or fifteen days it was an awful sight to see the blind little ones.

In feeding never put the feed on the ground. I always get some old boards and feed on them and the chicks do not have to eat dirty food. An old stove hearth makes a good drinking fountain and the iron rust is good for the chicks.

I saw in the November Poultry Keeper where some one asked about keeping hawks away. If you are not fortunate to have a good collie dog, get a long pole and two short pieces. Nail one piece up within about two feet of the top and get the reddest

goods and tack on pieces like banners where the wind cannot shake them off. Nail the other short piece near the top of the pole and hang two vinegar bottles down from the ends so the wind will fan them to and fro and the hawks will hunt other folks' chicks.

I prefer the hot water incubators. If the lamps go out, the water will stay warm a long time. It is best to fill the lamps at night so there will always be oil enough to last through the night. If the lamp goes out during the day it can be easily watched and the hot water tank filled with more hot water from the tea kettle.

Mrs. B. M. Knause.

Illinois.

TO STOP ROOSTERS FROM CROWING

I notice the lament of Mr. Eliek in your December issue, but cannot agree with him when he says that the only way out of the trouble is to kill the rooster or to caponize him and make him ashamed of himself. I think there is a way out of the dilemma which is very simple. Take a piece of thin board and hang it up over the roost where Mr. Rooster perches, about a foot or so above the roost, according to the size of the bird. If he does not occupy the same place every night, put him there on the last round at night, when seeing that everything is secure for the night. In the early morning when he thinks it is time to crow he will rise up and the board will rest on his head. He will forget what he stood up for and will always have another crow coming.

Detroit, Mich

T. H. L.

SOME OTHER CAUSES THAT AFFECT FERTILITY.—FROM AN ADVOCATE OF ARTIFICIAL HATCHING.

I believe that as I read the article on "Causes that affect Fertility," I was as "amused and interested" as was Mr. Foreman when he read "used two and three year old hens for breeders." I don't want to be too harsh with Mr. Foreman but if he will investigate the letters of testimony from some of these manufacturers of incubators he will find that the advertisers are honest and are not telling "plain lies" and are not frauds. If such were the case, the matter would be investigated and such papers as the Poultry Keeper and many other papers would not carry their ads. It looks as if he were trying to slam the papers as well as the incubator manufacturer.

I think the trouble with most people who do not have hatches is because they do not take the proper care of the machine. Of course if a person turns the eggs when he gets around to it and attends to it in general the same way he cannot expect to have a good hatch. When you put eggs in an incubator your work is not done, but on the other hand it is just started. For best results an incubator should have as good care as a sick person. It must be regulated and kept at the right temperature; however, when once regulated it will run with very little bother. If Mr. Foreman had told where he kept his incubator and how he cared for it, we might be able to see why he had such poor success.

If the method of incubating chicks by hen is the only way to get results that are worth while, why do so many of the large breeders have so many machines most of them of the same kind? They surely would not spend their good money for worthless incubators that they had tried and found not to be what the manufacturer had claimed for them. If he has such poor success with them why does he continue to use them? After being stung once I would not wilfully repeat the offense.

Of course, there may be some incubators that will not come up to the good qualities that their manufacturers claim for them, but I would not condemn all of them just because there might be one or two "crooks" in the business. If that were the case we might condemn some perfectly honest Partridge Rock breeders. I would not be so "cock sure" that there was no machine that would not hatch a 90 or 100 per cent hatch. For myself, I believe that incubator manufacturers are quite honest, because I know of the success of an incubator and of hatches very near 100 per cent.

Let us put our shoulder to the wheel and help any line of business that will promote the poultry industry as the incubator manufacturer has.

R. E. N.

Nebraska.

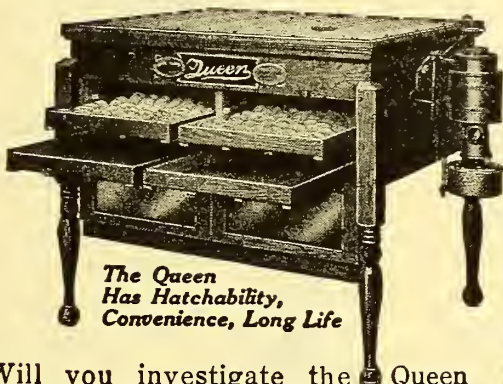
I Stand on the Record of the Queen Incubator

READ the extracts from letters below. What better platform could I have to stand on? These people wrote me voluntarily. They tell of things you are interested in. What you want, above everything else, is a machine that will give you the best possible hatches. You are interested in the great big question of

Read the
5 Short
Letters
Below

What the Queen Will Do for You

The Queen has not made exceptional records for these few people only. It is doing just as well for thousands of others. It will do as well for you. I guarantee that the Queen Incubator, if you follow my instructions, will give you more livable chicks than any other incubator made—no matter what price it sells for. Livable chicks grow—into money.



The Queen Has Hatchability, Convenience, Long Life

Will you investigate the Queen and the Queen Records? If so, let me send you my Poultry Guide and Catalog, free. It tells what many users say, gives names and addresses and is finely illustrated. Write me for it today.

P. M. WICKSTRUM

Queen Incubator Man

Box 2,

Lincoln, Neb.

I hatched 77 chicks out of 83 fertile eggs. The thermometer in the room went down to 28 many nights.

M. E. WEBBER, Winchendon, Mass.

No trouble to run the Queen. I can go to bed and sleep sound, knowing that the Queen will take care of itself.

MRS. J. W. KLINEFELTER, Weiser, Idaho.

I put duck and turkey eggs in my Queen, and a week later put in some chicken eggs. Later I put in some quail eggs. All fertile eggs hatched except one quail and one turkey egg.

MAUDE COLEMAN, Cypress Grove, La.

With my Queen Incubator I out-hatched a \$45 machine (other make) last spring by 25 per cent.

CHAS. SUNDBERG, Schaeffer, Mich.

Have just taken off my second hatch this morning. 94 per cent. of fertile eggs, all strong, healthy chicks.

R. GOLDEN, Navasota, Texas.

COMMENT ON QUESTIONS ASKED THROUGH POULTRY KEEPER.

In nearly every issue of Poultry Keeper some one gives us a short history of his fancy (breed) likewise his famous ability to produce eggs, especially in winter and we want to say to such that they have bees in their bonnet. There is no best breed and to prove our statement we call your attention to Mr. T. E. Quisenberry, director and manager of the contest conducted at Mt. Grove, Mo. In his report for 1912 he states there is no best breed and he gives report, likewise a report of the contest for 1913 which closed Nov. 1st. In each of these reports no one variety or breed had all the high class records, but honors were distributed among many varieties.

We wish to state to our poultry friends that a good egg record strain is spelled with these letters b r e d - t o - l a y . The above has been demonstrated at all of the egg laying contests, judging from their reports, and in one State contest the "old dometeek" was a close third. "What do you know about that?" Of course, the party entering them had bred them to lay by means of trap-nesting or other kindred devices, but they had been bred far above their natural state as four or five dozen eggs per year at most were considered wonderful and we see by the contest report that they laid their ancestors of thirty years in the shade over five fold.

If "like begets like" then by selecting eggs from our best layers (200 egg hens or better) year after year, likewise the males from heavy layers, a good laying strain can be built up in the old "dung hill" class. But, do not draw a conclusion that I favor the scrub stock, as that is a mistake.

It is an acknowledged fact by all poultrymen that birds bred for the show room are attractive to the eye, being of a uniform size, shape and color, that coupled with bred-to-lay makes them much superior to the common scrub and their product commands a much higher price.

In the November issue of Poultry Keeper we saw a report for September of the Nat. E. L. contest at Mt. Grove also a report of "Lady Show-you," the W. Plymouth Rock pullet that broke the individual record on this continent. She is still on duty and making good "her" record of 1912-13. This does not surprise us. (Editor's note—She has died since this was written)

On January 1st, 1910, we separated fifty-five pullets (W. Plymouth Rocks) and on May 27 of same year the (55) pullets had laid 4981 eggs.

From January 1st, 1911, to January 15th, same year, 165 days, eleven pullets laid 991 eggs.

From October 1st, 1912, to January 1913, ninety-six days, 12 pullets laid 549 eggs. We have records for the last twelve years when we first began to breed our White Plymouth Rocks for egg production and it is surprising to compare the records of today with those of twelve years ago.

Send for this free book of Poultry Keeper's New Devices



OAKES MFG. CO. Tipton, Ind.

Eastern Office. 64 Cliff St. New York-Canadian Office. 415 Symington Ave. Toronto

Allen's Strawberry Plants Bear Large, Luscious Fruit

YOUR success as a fruit grower depends largely upon securing berry plants from carefully grown stock. You are sure of the quality of all berry plants and small fruits when you

Buy Allen's True-To-Name Varieties.

We have all the best of the new and standard varieties. Hardy, prolific plants grown in the nursery with nearly 30 years successful experience back of them. Allen's Strawberry plants will yield bigger, better crops.

All Shipments of Plants Guaranteed to be carefully packed — to be from fresh stock and in good condition.

Allen's Book of Berries for 1914

This book is profusely illustrated and full of valuable information to fruit growers. Tells how to plant and cultivate Strawberries and other small fruits.

It also lists and describes Allen's True-to-Name Blackberries, Raspberries, Currants, Grapes, Asparagus, etc. Every gardener, farmer and fruit grower should have this 1914 Berry Book. Write today for free copy.

W. F. ALLEN

145 Market Street, Salisbury, Md.



The Simplicity Kant-Klog Cannot Clog

• Simplicity Kant-Klog Poultry Feeders will feed your chickens better than you can by hand feeding. They absolutely put an end to your feeding troubles. You can go away at any time and rest assured that your chickens will be properly fed. The comfort alone is worth the money, and the saving in grain and the increase in egg production will more than pay for the feeders in ninety days. They feed anything from whole corn to millet seed, save labor, feed and time. Sparrow and rat proof, perfectly adjustable, cannot clog, never fail to work, scatter feed perfectly and work from every direction.

Note These Low Prices

Baby Chick, 1-quart. \$1.25
 Medium 10-quart. 2.50
 Leader 20-quart. 3.00

Special prices on quantities. Send for catalogue of Feeders, Feather Brooders and Poultry Appliances.

SIMPLEX SUPPLY HOUSE
 Peorian Bldg. Chicago, Ill.

Money Back if Not Satisfied

SIMPLEX SUPPLY HOUSE

KANT-KLOG

CHICAGO, ILLINOIS, U.S.A.



Patented Dec. 2, 1913

Insist On This Trade-mark

It Protects Your Chicken

The improvement made can hardly be believed.

We select our pullets for breeders, try them out as layers the first fall and winter, get their records up to May or June, then select about 25 per cent of the best of them and do not encourage laying until about January 1st, using them then as two year olds for breeders.

On page 282 in the November issue of Poultry Keeper, we noticed an article by L. O. Hardenbrook answering E. S. S. in regard to use of pullets as breeders. We think he has struck the key note. In the editor's comment he says he had good results from pullets' eggs but adds that it was warm weather. We would like to say that pullets hatched early by warm weather the next year they would have passed out of the pullet stage into "hen-dom" or about matured.

In same issue regarding rearing of turkeys the editor asks for the experience of other readers, which we will give in brief.

In February of 1913 we purchased four hens and a male of White Holland turkeys, two years old to assure us of strong, vigorous progeny and to use chicken hens for incubators and brooders and the poult began dying from three weeks old and continued one by one in spite of all our experimenting until they weighed six pounds. We managed to pull four through out of a possible 125 hatched. We have decided we do not know how to raise turkeys, while we have raised 98 per cent of chicks.

A reader of Poultry Keeper asks how to exterminate hawks. As hawks migrate South in late fall and north in spring that would be quite a task for one poultryman but we have found that a Scotch collie dog will protect a flock. We are in the Collie business and we have one matron in particular that will make it so interesting for a hawk that it soon has business in another part of the neighborhood. Mrs. G., the writer's co-partner and this particular dog were busy for almost an hour defeating seven hawks of their prey all at the same time. In the skirmish the hawks crippled two half grown chickens. It seems to be natural as the young stock take it up early, even puppies at three months old.

In conclusion, we say to the beginner, stay with it. We had our ups and downs twenty-five years ago. First, had two city lots, then three acres, then ten acres and today have 80 acres, about two hours drive from Denver and seven smaller towns within a radius of five miles, which we devote to poultry, dairying, Scotch collie dog rearing and apriary.

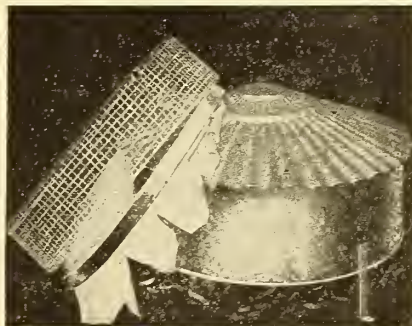
A. W. Gingery.

Colorado.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from the Poultry Keeper office at 25 for 20c; 50 for 35c; 100 for 60c.

One 60-Egg

PEERLESS
—METAL—
INCUBATOR
and one
SIMPLEX
PERFECTION METAL FEATHER
BROODER
50 CHICK SIZE



Simplex Perfection Feather Brooder, showing Brooder with Curtain and Rat Guard Removed.

Both Only \$10 Never before have you been offered such wonderful values.

The Simplex Perfection Feather Brooder raises chicks nature's way—under natural feathers, no fire, gas, fumes, leg weakness, crowding and smothering of chicks where these Feather Brooders are used.



PEERLESS 60 INCUBATOR

The brooder is made in three sizes: 50, 100 and 150-chick. It is guaranteed to raise strong healthy chicks. The body is made of galvanized iron; the feathers within can be raised and lowered by means of a thumb screw. Each brooder is equipped with a felt curtain and rat guard. It is positively the best fireless, least bothersome, most satisfactory brooder made.

Never before have you been offered such remarkable value.—The Peerless 60 is the latest word in artificial hatching.

The incubator is made in one size only—60 egg capacity; it is guaranteed to hatch every hatchable egg, is made entirely of metal, beautifully enameled, raised off the floor by means of four iron legs. No wood to warp, crack and decay. No complicated fixings, just plain common sense consolidated with modern appliances and 25 years of incubator research.

This is an introductory offer

We want every small and large breeder to take advantage of it and find out how chickens can be hatched and raised with least cost and best results. That's why we are advertising these two indispensable poultry necessities at the ridiculously low price of \$10 for the two. We allow freight charges.

GET CATALOG TODAY

Don't class these articles as cheap appliances. The price is cheap, but quality unexcelled. Get our complete catalog today and find out all about them as well as our other poultry appliances. They are guaranteed to please or money refunded.

SIMPLEX SUPPLY HOUSE, PONTIAN BUILDING, CHICAGO, ILLINOIS

CARBO Unit Steel Posts
(A Sectional Fence Post System)

Made Especially for Poultry Yards

Just the practical fence foundation you have been looking for. No fussing with odd sizes. Simply bolting together Carbo unit posts (standard poultry line posts) makes all corner, gate and end posts and braces. Carbo Steel Posts are heavily galvanized, most durable, perfectly sanitary. **Easy to set—take little space—lice, vermin and mite-proof.** Look good and hold fencing everlastingly firm.

Endorsed by Ames Agricultural College and other leading agricultural schools, also by famous poultry fanciers. Used by United States Government.

Ask for Complete Price List
Units for 5 ft. fence 45c from any of our 12,000 dealers. Write for users' offer P. Poultry Post Facts, and name of nearest dealer.

CARBO STEEL POST CO., 897 Rand-McNally Bldg., CHICAGO, ILL.

BROODING CHICKS.

Generally speaking there are two methods of brooding, viz: natural and artificial. Of course, every one knows the difference. We will suppose that the reader is going to use the artificial means. Have your chicks hatched and about 48 hours old and they are ready to transfer to the brooder. While moving them be sure to keep them well covered to prevent chilling, and in cold, damp weather move quickly. After the chicks are placed in the brooder do not disturb them for a couple of hours at least. While being placed in the brooder each chick should be given a drink. This may be done by dipping the beak into a dish of luke warm water. Never give them cold water to drink at first. For the first two days I feed dry bread soaked in sweet milk fed on a clean board, just what they will eat up quickly. After that I feed any good, clean commercial chick feed. Chicks should be confined close to the hover for a few days until they get accustomed to going under. For the first two weeks, feed five times per day; after that four times until they are quite large and able to gather a part of their living. Always be sure there is sufficient heat to prevent crowding and be sure that every chick comes out to eat. Feed chick feed in about two inches of litter so that they will have to scratch for it as this provides exercise and exercise promotes growth. Change the litter often and see that it is dry, clean and sweet. Be sure that you have plenty of ventilation and light but do not let the direct rays of the sun fall upon the glass as this is almost fatal to the chicks. The best way to regulate the heat is to watch the chicks and see when they are comfortable, which can be told easily by watching their actions. When they are warm enough they will stretch out as if dead, but if they are cold they will crowd up in a bunch.

—Chas. E. Swesey.

Indiana.

BUYING AND SHIPPING BABY CHICKS.

While the day-old chick business is of rather recent origin in this country, it is really not a new business. In Egypt it has been practiced for 2000 years we are told and the chicks were carried across the country and peddled out in small numbers. Hence there is no reason why the day-old chick business with our modern transportation facilities should fail to grow to wonderful proportions.

There will always be people who want chicks in the spring of the year yet are so situated that it would not pay them to carry any very great investment or who do not have the money to buy incubators, etc. On the other hand the large hatcheries have plenty of up-to-date equipment and can turn out large numbers of chicks at a minimum expense. Some hatcheries sell chicks as low as 6 cents each hence I think it would not be a very paying proposition to set hens when infertile eggs and losses are considered.



Your Name and Two More

Brings You the Most Startling Incubator Offer I Ever Made

My three party offer is proving a wonderful success. Selling three hatchers where I formerly sold one enables me to make you an offer on the famous "Ideal" that you simply cannot overlook. Send in your name today and get the details. Remember this startling offer is on a hatcher that has been known for years—conceded to be the surest and easiest profit maker for poultry raisers.

MILLER'S IDEAL INCUBATOR and Brooders

Made by the Man Who Knows—26 Years at It

You couldn't build a better incubator. I give you the best and most economical heating system—the best regulator—automatic ventilator—safety lamp—handiest egg tester and egg trays. Easy to operate, easy to understand, simple and practical in every way.



Unconditional Guarantee and All Extras FREE

And you are sure of success right from the start, for I'll give you all the coaching you want. My 26 years' experience is for you to draw from. Ask for my latest book "Poultry for Profit" Free. Send me your name and the names of two of your friends who could be interested and get my great money-saving offer. Write today. Address

J. W. Miller Co., Box 19, Rockford, Illinois

120 Egg Size

Get in on this Three Party Offer Quick Write Today

What could be more logical than that the party buy his chicks from the larger plants? Some may think it impossible to ship baby chicks any distance but it is writer's experience (and I have shipped thousands) that there have been but few complaints from customers regarding the condition of chicks.

I have shipped them successfully south as far as Mississippi, Alabama and Georgia, and customers were pleased with their condition upon arrival. The chick is shipped and handled under the most favorable conditions and there is not the slightest evidence to support the claims of cruelty.

Still another reason that makes this business a success, is the fact that little chicks just hatched should not be fed for the first 48 to 72 hours to ship at this time without having to feed or water in transit.

It is our experience that we have more pleased customers and fewer complaints from shipments of day-old chicks than from the sale of eggs for hatching. The purchase of day-old chicks always knows what he is getting. He runs no chance of a poor hatch from any cause whatever. He may buy any number of chicks and all will be uniform in size and age, a great advantage in itself. We shipped thousands of baby chicks last season and expect to ship twice as many next spring. Other breeders report a similar successful growth in their business which is itself the best evi-

dence of the satisfaction the day-old chick business is giving.

D. W. Goodling,
Pennsylvania.

BIG PROFITS IN RAISING POULTRY THE MODERN WAY.

Almost any farmer who keeps poultry can figure out a 100 per cent profit on his investment in this line. No other business will yield such big returns.

Very much better results are had when the modern way is adopted with incubators of standard make. Prominent among the high class machines on the market, is the Sure Hatch Incubator, manufactured by the Sure Hatch Incubator Co., Box 2, Fremont, Neb. This machine has been for 17 years a recognized leader. It is so well built that the makers guarantee it for ten years and they are so sure it will do satisfactory work under all conditions that they will send you the machine on 30, 60 or 90 days trial and will even pay the freight. You don't need to keep it unless you are entirely satisfied that it is superior to any incubator you ever saw or tried.

Better write the Sure Hatch Co., now and get started in time to get the big money.



H. H. JOHNSON

I Am Making 100,000 Old Trustys this Year

I Have Fixed a Price That Will Sell Them Quick

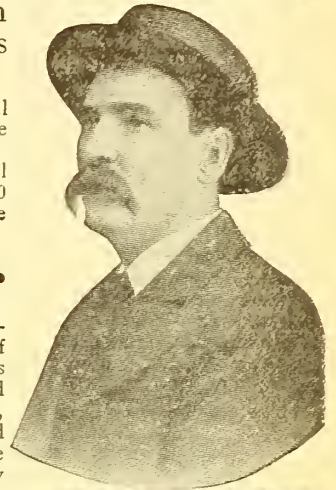
Get My Price to You, Freight Prepaid

I WANT you to be one of my new customers this year. I know if you understand what I have got and will get my terms, you will be as anxious to get an Old Trusty as I am to send you one. I don't feel that the Johnsons or the Old Trusty exactly need an introduction to poultry raisers.

We have been here in Clay Center something over 19 years. We have made and sold half a million incubators, and I think you will agree that the business would not have grown this way if the Old Trusty wasn't right. We wouldn't have half a million satisfied customers if the Old Trusty didn't make poultry profits more surely, easily and steadily

than any other hatcher. We wouldn't have all these customers if we didn't deal in the way people like.

From year to year the business has grown until I can see definitely ahead from 90,000 to 100,000 orders for 1914. I am ready for 100,000 to make sure of no disappointments.



M. M. JOHNSON

Start Now, Old Trusty Gets Big Hatches in Coldest Weather

I don't think I need to tell you much about the money-making possibilities of poultry. You have got that idea or you wouldn't be reading this paper. But you won't know and can't know, until we get closer together, that this money comes easier and quicker through using the Old Trusty Incubator and Brooder than by any other means. And you know, too, that the early hatches, that prove successful, are the most profitable hatches. A "fair weather hatcher" is a handicap. The Old

Trusty hatches in any weather. You will understand this difference when you read the details of construction. The fact that three or four times the number of people in this business have selected Old Trustys than those using any other one make, is my best argument for asking you to get the Old Trusty book, compare the Old Trusty machine with any others you know, compare Old Trusty prices, and figure your own prospects accordingly. Then you'll feel safe in starting your hatches anytime, anywhere, with an Old Trusty.



FREE The A-B-C of Poultry Profits

Send Your Name for Johnson's 1914 Book

The book is 120 pages this year and it isn't entirely given over to extravagant talk and big claims about the Old Trusty business either. It's got the same kind of stuff in it that has helped half a million other folks enlarge their poultry operations and increase their profits.

Just send me your name and address anyway, so I can mail you a copy of this book, with the understanding that you are not to be hounded for an order.

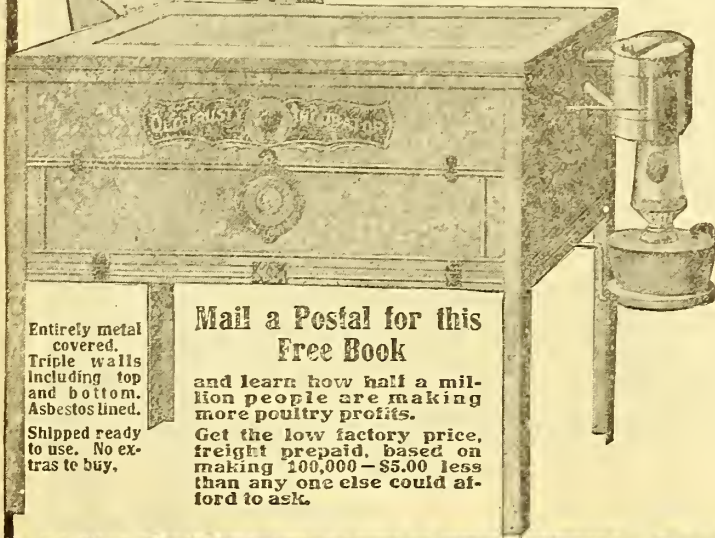
90 Days' Trial—20 Year Guarantee

That's about all I need to give you here as an indication of Old Trusty quality. If it doesn't make good from the start, we trade back. If it doesn't last you through the years making good right along, it's up to me to make it right, or still trade back.

I make this 20 year guarantee because the Old Trustys put out over 10 years ago are still doing the business just as good as new. And right here I want to say that when you are convinced that the Old Trusty is the machine you want, you will get it when you want it. We ship the day your order is received—always within 24 hours, and generally within a few hours the Old Trusty is on its way. But the book explains it all. Just send your name on a postal and we will send it by return mail.

Address

JOHNSON, INCUBATOR MAN,
Clay Center, :: :: Nebraska



Entirely metal covered. Triple walls including top and bottom. Asbestos lined. Shipped ready to use. No extras to buy.

Mail a Postal for this Free Book

and learn how half a million people are making more poultry profits.

Get the low factory price, freight prepaid, based on making 100,000—\$5.00 less than any one else could afford to ask.

HOW MANY BREEDERS TO EACH MALE?

I have often read in the Poultry Keeper about how many hens to mate to one male. I have raised chickens for about forty years and have noticed that no matter how many hens there are with the rooster or how few, he will pay no attention to those that are not laying. The hen that is not laying will not receive his advances. One way to tell the layers is to watch the roosters. Would like to know what others think of this.

C. A. C.

Marshall, Michigan.

TWO GOOD LAYERS.

Record of two Barred Rock hens, sisters, hatched May 25, 1912, the property of Supt. and Mrs. Myron E. Keats, Oconomowoc, Wis.

No. 1442 began laying Dec. 2, 1912.

December (to the 30th)	19 eggs
January	24 eggs
February	21 eggs
March	26 eggs
April	20 eggs
May	19 eggs
June	20 eggs
July	15 eggs
August	11 eggs
September	16 eggs
October	24 eggs
November	19 eggs
December (to the first)	1 egg

236 eggs

No. 1466, "Lady La Belle" began laying Dec. 31, 1912.

December	1 egg
January	23 eggs
February	22 eggs
March	26 eggs
April	27 eggs
May	30 eggs
June	26 eggs
July	23 eggs
August	23 eggs
September	26 eggs
October	29 eggs
November	22 eggs
December (to the 30th)	19 eggs

297 eggs

This bird produced 300 eggs in 369 days and is still laying.

A pen composed of 4 S. C. White Leghorns, 7 Barred Rocks, and 2 mixed birds, laid 2,729 eggs from Jan. 1, 1913 to Dec. 31, 1913, inclusive, an average per bird of 210 eggs.

A pen of 6, composed of 4 S. C. White Leghorns and 2 Barred Rocks, laid 1,445 eggs from Jan. 1, 1913 to Dec. 31, 1913, inclusive, an average of 241 eggs. One Leghorn died at the end of 10½ months.

LIKES POULTRY KEEPER BEST OF ALL.

Editor Poultry Keeper:

Enclosed find order for my renewal subscription to Poultry Keeper. I like your paper better than any of the poultry journals I take.

Mrs. W. P. Catterton.

Clifton Hill, Mo.

A Colony Brooder

More than Just a Coal Stove

The Newtown Giant Coal-Burning Colony Brooder not only soon earns its cost by cutting down fuel expense 75%, but its

Automatic Coal Feeder holds a 24 to 48 hours' supply of coal, feeds it just as needed, and insures a constant, even fire, easy to control.

Heat Radiator prevents the heat escaping up the chimney, distributes all of it to the chicks and saves much fuel.

Automatic Temperature Regulator opens and closes the draft by the expansion of a thermostat, placed just above the chicks, and holds the temperature at the right degree all the time without any attention.

Fire proof. No lamp fumes or soot. Can be installed and put to use in barn, colony house, or regular poultry building. Gives solid comfort to the chicks day and night.

Newtown Giant Colony Brooder

saves worry, time, money and labor. It is practical, simple and dependable. Try it and learn how easily you can grow plenty of good chickens.

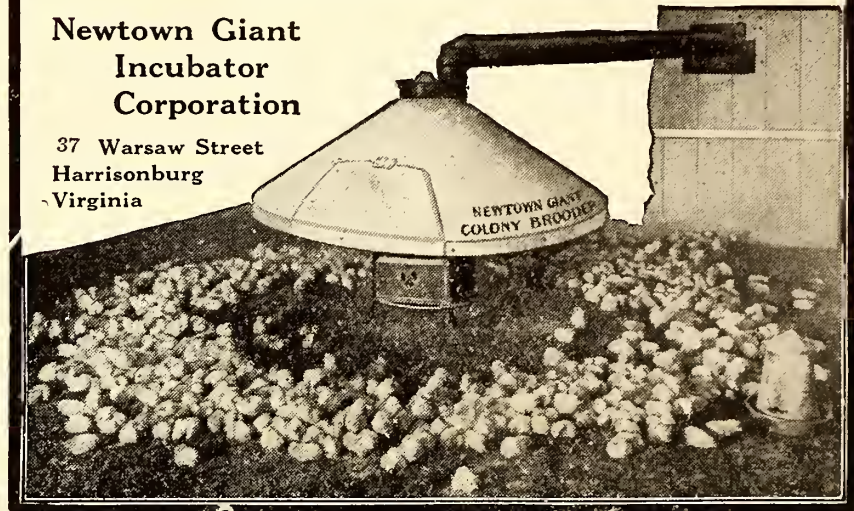
This brooder is made in two sizes. The smaller accommodates any number of chicks up to 500; the other, 1,000 to 1,500. The chicks may be brooded in one flock, or divided by low partitions into two or more flocks if desired. Chicks of different ages may thus be brooded at the same time.

The Newtown Coal-Burning, Self-Feeding, Self-Regulating Colony Brooder will insure your success this season.

Ask your dealer for a demonstration, or write today for our Brooder Circular. Mailed free. We prepay freight if there is no Newtown dealer in your territory.

Newtown Giant Incubator Corporation

37 Warsaw Street
Harrisonburg
Virginia



Caution Any Bone Cutter claiming to be Mann's without F. W. Mann Co. cast on its surface, is an imitation. If made in Milford, Mass., it is Genuine.

SEND FOR IT

This Book Tells How

Make Hens Lay When Eggs Are Worth Most



Do you know there is four times the egg-producing value in fresh-cut raw bones with the adhering meat and gristle, such as you get at the market for little or nothing than there is in grain? We've demonstrated it to thousands of poultrymen. The raw-bone way is the true way. Send for and read our good books that explain why. They make you master of egg-getting—eggs in abundance when eggs bring money. More eggs, fertile eggs, stronger and more healthy chicks, larger fowls.

Raw market bones are easily prepared for use with a

Mann's Latest Model Bone Cutter

The only machine that works satisfactorily. It turns easily and cuts rapidly—cuts larger bones as well as small, with adhering meat and gristle, and never chokes. It automatically adjusts its cutting to your strength—any one can turn it. You can try it before you buy it. We'll ship you one on

TEN DAYS' FREE TRIAL No Money In Advance

If not satisfactory, ship it back at our expense. Whether you want a bone-cutter right now or not, you should have our books. They are free. Write for them today.

F. W. MANN & CO., Box 57, Milford, Mass.



Wisconsin Incubator Co.'s New Factory

A Monument to Merit



We have the pleasure, this month, of publishing a brief review of the history and progress of the Wisconsin Incubator Company of Racine, Wisconsin, who for the past twelve years have successfully produced a very efficient combination set of incubators and brooders for an exceptionally nominal price.

Mr. J. T. Collier, owner and manager of the Wisconsin Incubator Co., was himself engaged in the poultry raising industry before he began to manufacture incubators. On his poultry farm, although he bought a number of incubators, Mr. Collier was unable to find a machine that exactly suited him, so he built an incubator of his own patterned after his own ideas and his own needs. These home made machines produced better hatches and stronger chicks and were so successful that he soon began to make them for his friends and neighbors.

In 1902 he sold his poultry farm, founded the Wisconsin Incubator Co., and began the manufacture of his new hatcher. The factory then was a small frame building but as his business increased each year he had to enlarge that building until finally his business had increased to such an extent that he was compelled to sell the old building and put up a new plant.

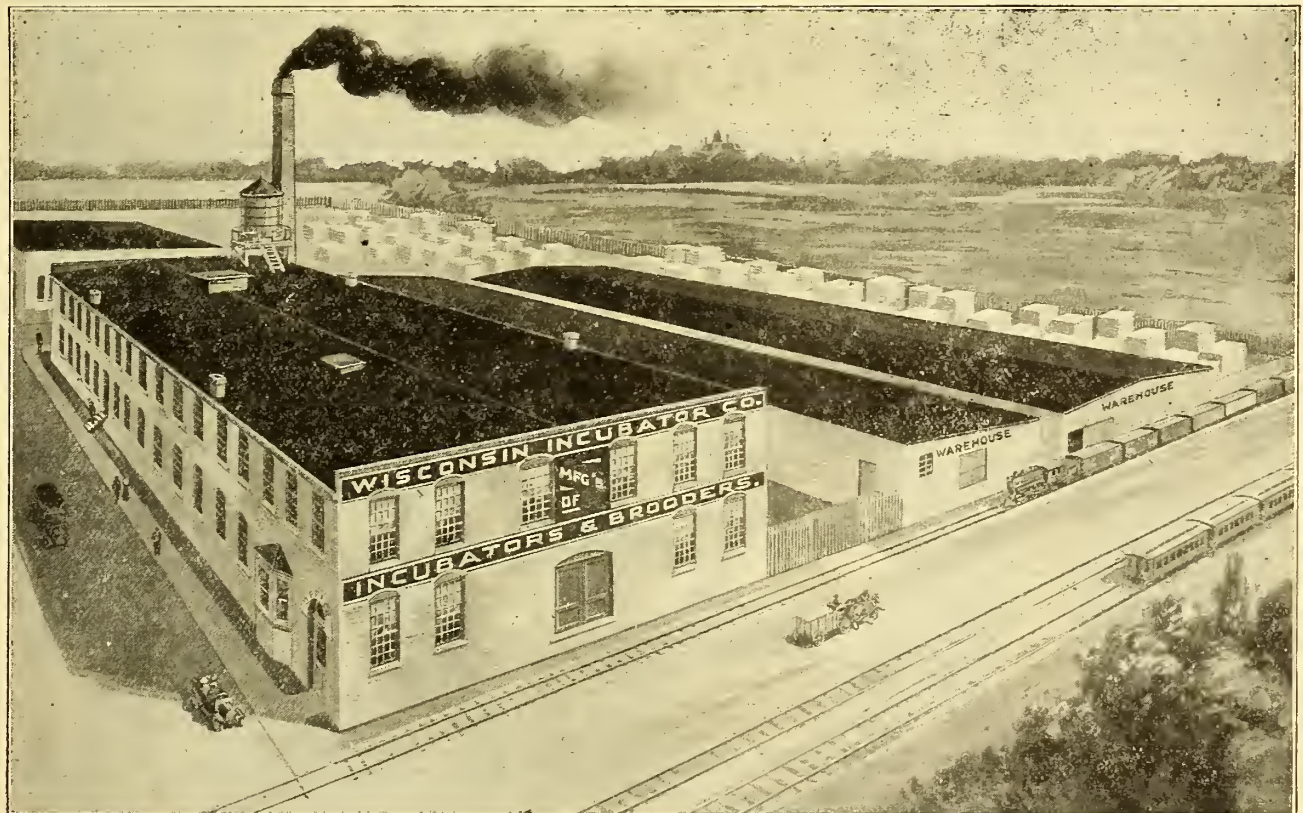
The New Wisconsin Incubator Factory is a model brick plant consisting of a large two-story building for

manufacturing purposes and two large fire-proof warehouses. The new plant is situated with a frontage along the Chicago and Northwestern R. R. tracks making it possible to fill orders and make very prompt shipments. It is equipped with the latest machinery adapted to incubator manufacturing, with each separate machine run by individual motors. Neither time nor money was spared in furnishing the new factory with every modern convenience for the turning out of not only a much larger number of Wisconsin machines but better Wisconsin machines than ever.

One strong feature which has helped to bring success to this well-known concern is a policy and a practice of giving the purchaser of a Wisconsin outfit, the biggest value possible for his money and selling it to him on a positive guarantee of satisfaction or money refunded.

Mr. Collier was the first to put on the market a standard incubator and brooder, both for \$10 freight paid anywhere in the U. S. east of the Rockies. Though many predicted he would soon go out of business his success proves his genius and practicability were far above the average. As his business grew he has been wise enough to improve his product and each year put out a better machine and thus keep well in the lead of all imitators.

He has also improved the quality of the material and in order that purchasers can see the kind of lumber he uses and compare it with others, he has arranged to send a sample of the California Redwood from which his incubators are made, to anyone sending for his catalog. Turn to his advertisement on page 421 and read it. The Wisconsin Incubator Co. is one of our oldest advertisers and we can assure our readers they will receive the best of treatment in dealing with them.



HATCHING AND GROWING CHICKS BY NATURAL METHODS.

As the hatching season is near at hand, most poultrymen are seeking the best and most up-to-date methods possible to secure the chicks that will prove winners. As I have had more experience with hatching with hens I can give a description of a nest which I have found to be very efficient. Securing a box of suitable size, I placed it in the cellar so that an even temperature and quietness could be maintained. This is one important feature of a successful hatch.

The material used in the box was mainly ashes which were filled to about five inches from the top of the box. On these ashes was placed about an inch of straw so that the eggs would not get buried in the ashes. Of course, the nest was thoroughly dusted with insect powder before the hen was placed on the eggs. I never wash the eggs unless they are dirty as it would wash the chalky substance away from the shell and so would injure the hatching quality to a certain extent. The ashes serve as an insulator to the heat so that the heat does not radiate into the ground or air. The ashes also serve to hold the moisture from the hen's body. By constructing the nest in this manner and by taking these precautions I have hatched one sitting after another getting one hundred per cent hatches providing the eggs were fertile.

After hatching the chicks, comes the task of rearing them. One very great aid to young chicks is fresh ground for them to run on and exercise by scratching to their heart's content. I had one fine hatching of young chicks this last summer that were growing fast. As wet weather came on and the chilly winds began to blow I had to remove them to a coop with a board floor. Although I had gravel and soil on the floor the chicks began to grow duller than before. Finally several died and the chicks, which I had expected to be my best, diminished till only about thirty per cent were left. This proved a lesson for me.

I have found one great help to the growth and vitality of chicks and that is ground mustard seed. I had read of spices such as pepper being used but I have heard that it has an ill effect on the fowls. The mustard seed mixed with their food makes them wide awake and alert. The older fowls seemed to acquire much good from it also. From a pen of ten R. I. Reds I received an average of fifty-five eggs a week during the spring by mixing the mustard with bran and feeding in hoppers. It made them lively so that they were scratching all day long.

Robert T. Svendsen,
Indiana.

QUICK GROWTH IN LITTLE CHICKS

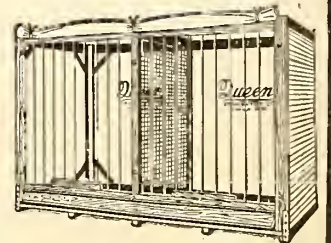
Is only obtainable when they are fed an abundance of green stuff. Green feed such as sprouted wheat, rye or oats is always quickly, easily and cheaply produced in the Successful-Sectional Double Steel Wall Grain Sprouter. Dry grain contains a lot of dead starch which is sometimes detrimental to their quick growth. We therefore recommend to germinate or pre-digest the grain which can be done with very little trouble and outlay in from 24 to 48 hours in one of these high grade sprouters.

When it is further considered that the feeding of sprouted oats is the cheapest feed to give your fowls to maintain their health and vigor, to induce them to lay more, to reduce the cost of feeding them there is no doubt but that the purchasing of one of these Sectional Sprouters will be found a money-making investment

Their indestructible construction enables you not only to use it this year and next year but for years to come. If you have not written for their descriptive matter yet, we advise you to send at once for their 8 page folder, containing instructive and interesting information. Address Des Moines Incubator Co., 565 Third St., Des Moines, Iowa.



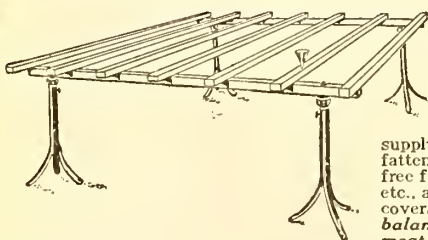
Poultry Supplies



Are the best that experience, honesty and careful workmanship can produce. The Queen label on anything is a guarantee of quality. It is the assurance, to you, of success. Queen appliances and supplies are approved by the largest and most successful poultrymen as being dependable, thoroughly up-to-date, efficient, and exactly as represented. The line includes: *Exhibition Coops, Lice-proof Raosts, Trap Nests, Shipping Boxes, Poultry Netting, Food and Grit Hoppers, Water Faunts, Sprayers, Braader Heaters, Poultry Markers, Clover and Bone Cutters, Feed Grinders, etc.* Quality of design from the standpoint of efficiency is just as important as the quality of material or the quality of workmanship. The Queen label assures quality—whether it is an incubator, one of the many poultry appliances, or the all-important item of poultry feed.

The Queen Poultry Guide

is as distinctive in poultry books as are the Queen poultry supplies among other supplies. It will be found helpful—whether you own a large or small flock, or no more than a city-yard pen. It will prove a money-saving, money-making book to every owner of an incubator—whether the machine is a Queen or not. It contains just the information that you need about incubators—just the information so many books leave out. Get this new book now. A one-cent postal card will bring it to you. If you are interested at all in chickens, whether for pleasure or profit, you cannot do a wiser thing than get this book. Remember, it is free. We pay the postage on the book to you. It just costs you one cent to ask us to send it.



Success in Raising Chicks

depends very largely on what you feed and how you feed. Queen feeds are special purpose feeds. Adapt your chick-feed to the chick-need. Don't feed the young chick with its undeveloped stomach the same feed that you supply to a developed hen. Don't fail to supply grits. Don't expect your laying hens to produce eggs on fattening feeds. Feed both chicks and hens clean, sound grains, free from weed seeds, sweet meats, finely ground meal and bones, etc., and you will find that you feed for profit. The Queen line covers the whole range of poultry feeds and includes *chick feed, balanced-ration mash, scratch feed, blood meal, ground bone, meat scraps, alfalfa meal, granulated charcaal, grits, etc.*



Write for catalog and guide with full descriptions, prices, etc.

QUEEN INCUBATOR CO., Box 2, Lincoln, Neb.

Order Now

Get Busy—The Rush Is On

Pure-Bred, Strong, Livable

Barred Rock **Pittsfield** White Rock

Day-Old Chicks

\$7.00 Cheaper Per 100 This Year

Orders for Pittsfield day-old chicks are pouring in upon us. The big majority of them are coming from old customers—people who have been dealing with us for years, because they know the quality of the famous Pittsfield strain of Barred and White Rocks. In fairness to everybody we must fill orders as we receive them. The main purpose of this advertisement is to save disappointments—we want every customer and inquirer to be happy. Therefore we urge you to *reserve your order now*, so that you can be sure of receiving your required number of chicks about the required time.

We Guarantee Safe Delivery—Your Money Back If Not Satisfied

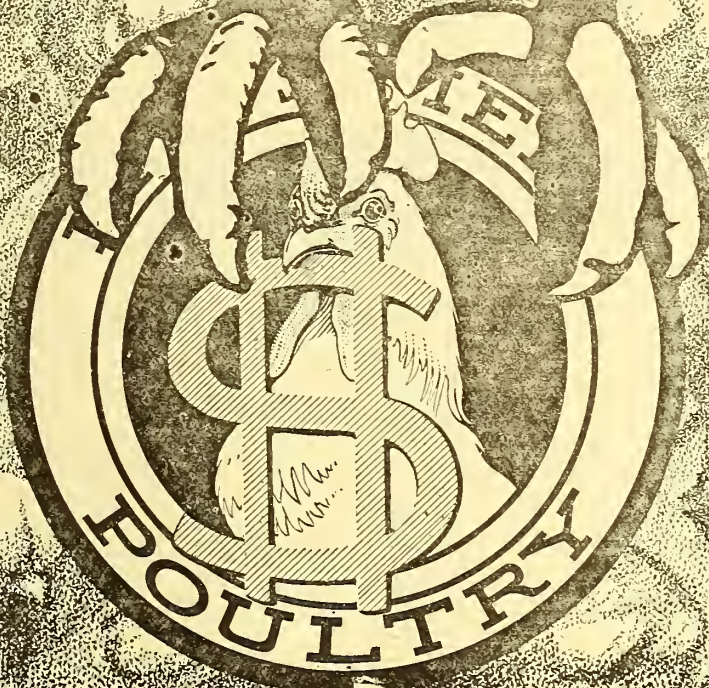
Pittsfield is unquestionably the leading strain in Barred and White Rocks in the United States. Pittsfield stock is pure bred—they have the blood. Only hens of heavy egg production are admitted into our breeding pens and mated with cocks of stamina and grit. Day-old chicks from such stock cannot help but reach maturity strong and healthy. Our two mammoth poultry farms—110 acres at Pittsfield, Me., and 150 acres at Holliston, Mass.—are devoted to the production of money-making poultry—the kind of poultry that will surely bring profits to buyers.

The beauty of our proposition is this—we offer you pure-bred, pedigreed Pittsfield stock at the same prices as you would be asked for scrubs, as these prices will prove:—

\$7.00 per 25 chicks; \$11.00 per 50 chicks; \$18.00 per 100 chicks.
How many do you want? Which kind? When do you want them? Reserve your order now. Don't send any money.

PITTSFIELD POULTRY FARMS CO.

410 Main St., Pittsfield, Me.





Jim Rohan, Pres.

Belle City's New Free Book "Hatching Facts" Makes A Big Sensation

By Jim Rohan, Pres. Belle City Incubator Co.
Racine, Wisconsin



"Tycos" Cup
Won by the
Belle City

I would rather let my new free book "Hatching Facts" tell this story. Any reader of this publication can have a copy by writing to me for it. All you have to do is to put your name and address on a postal card and send it to me. I'll know what you want. My address is Belle City Incubator Co, Racine, Wis.

goes into that fully. Here are the facts in brief:

Two more World's Championships were added to the Belle City Hatching outfit's list in 1913.

As the Belle City already had six World's Championships to its credit, these two additions make it the Eight Times World's Champion.



Mr. Geo. W. Black
Ind. Winner 1911

The book has just come from the printer, and already it has created a big sensation among poultry raisers. Men and women who have seen the first copies tell me it is the most remarkable thing ever gotten out on the poultry business. I can agree with them heart and soul, because the owners of my Eight Times World's Championship Belle City outfits did



Mrs. Alta Hamlyn
Ind., Winner 1913

more to get up this book than I did. It is jam full of their stories of how the Belle City makes 90 to 100 per cent hatches. These accounts are given in their words, not mine. All I have done is to put these stories into print in a great big portfolio with illustrations of my Eight Times World's Championship Incubator and my World Famous Brooder in exact colors. It took sev-

Every one of these World's Championships was won by a perfect score—a 100 per cent hatch.

These World's Championships date from 1910, so they cover a period of four years.

These World's Championship's won by men and women users of the Belle City in widely separated localities, cannot be charged to accident or luck.



Mrs. M. J. Clifton
Ok., Winner 1910

eral printings to do that—but as it shows you just what the Eight Times World's Champion looks like, it is well worth it. There is a great two page "spread" showing the incubator and the brooder in natural colors—so life-like that it is almost as good as setting the incubator and brooder down before you. The outfit is also shown part by part with pictures and full description. My ten year personal money-back guaranty is printed, and my one-two-three month's home test plan is given in full. Not a thing is left out.



Mrs. F. H. Osman
Ohio, Winner 1910

I want you to know everything there is to know about my Eight Times World's Champion, because the more you know, the more certain you will be that you get your money's worth when you join the Belle City army of successful poultry raisers.

Mrs. Alta Hamlyn, of Indiana, joined the Belle City's list of World's Champions in 1913. She scored TWO 100 per cent perfect hatches with her Belle City Incubator in Successful Farming's 1913 contest. Mrs. Hamlyn says: "I can hatch every fertile egg in my Belle City." William C. Schott, of Mt. Pleasant, Ia., shares the 1913 honors, his 100 per cent perfect hatch—140 chicks from 140 eggs—winning another World's Championship for the Belle City in Successful Farming's 1913 Contest. Mr. Schott writes: "The Belle City is the best incubator made... has given much more satisfaction than high priced machines."



The other six Championships already well known to the 276,000 Belle City users, were won by F. E. Bennet, of Mr. F. E. Bennet Ohio, with THREE 100 per cent perfect hatches, won in Successful Farming's 1912 Contest—George W. Black, of Indiana, who won in Successful Farming's World Championship Contest in 1911 with TWO 100 per cent perfect hatches—Mrs. Laura J. Clark, of Illinois, whose Belle City with its 100 per cent perfect score, 140 chicks from 140 eggs, took TWO MORE World's Championships from 2000 competing hatches in the Great Missouri Valley Farmer and Nebraska Farm Journal Contests—Mrs. F. H. Osman, of Ohio, winner of World's Championship and the beautiful gold lined silver "Tycos" Cup awarded by the manufacturers of "Tycos" thermometers in 1910—Mrs. M. J. Clifton, of Oklahoma, whose 100 per cent perfect hatch won in Successful Farming's Contest in 1910.



Mrs. Laura J. Clark
Illinois Winner 1911



Wm. C. Schott
Ia. Winner 1913

When I was a kid, my father said, "Jimmy, always give 100 cent's worth for every dollar you get." I've always stuck to that principle. Belle City users tell me they find I am giving more than 100 cent's worth for every dollar they put into my incubator and brooder, when they compare their results with those of ordinary machines. I'm proud of that. I think you will agree with me that I have a right to be proud.

The Belle City Incubator World's Championship Roll of Honor is growing. I take great pleasure in showing here pictures from photographs of the Belle City World's Championship winners.

But the book has it all—and it does not cost you any more than a one cent postal to get it. Whether you buy a World's Champion Belle City or not, you want to know what's going on among winners. So write to-day if you can.

And I will close by saying to the reader: I want your photograph for my next list of World's Champions. Why not get your Belle City and prepare to enter now?

Nearly everybody now knows how the Belle City gets its title, Eight Times World's Champion. The book

P. S.—Write for the new book to-day.

QUESTIONS and ANSWERS

LIVER AND KIDNEY TROUBLE.

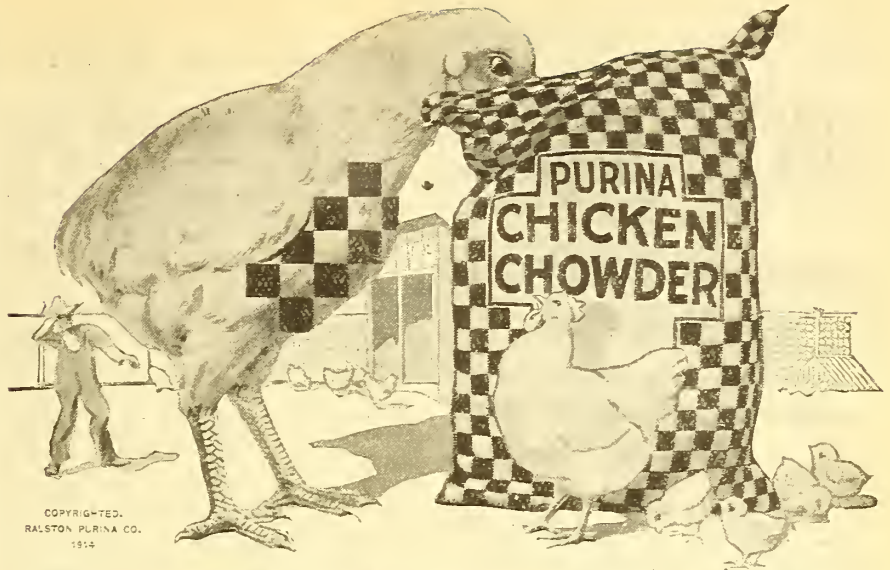
Will you please tell me what ails my hens? The first symptoms are lazy, moping movements, staying on the roost after the flock has left in the morning, in fact do not run with the flock at all, but stay in some corner alone. The pupils of the eye dilate so as to entirely cover the eye and remain so, the toe nails and beak grow to an abnormal length, and a few go blind. They live from ten days to two weeks. Never refuse food and will still eat when too weak to stand. Not more than two are sick at one time, nearly always only one. None ever get well.

I lost them this way all summer and they are still dying. Some of my neighbors have had the same trouble, but we do not live near each other. I killed two this morning. One was nearly dead and the other showed the first symptoms of the complaint. Crops of both were empty, lungs normal in size and appearance, but the liver and kidney were covered with white spots the size of No. 5 shot. In the worst case were very large and a solid mass of these shot-like tumors. In the liver they were soft but those in the kidney were hard and gritty. In the hen that showed only mild symptoms the liver and kidney were normal in size and had but a few of the spots. The hearts of both were unnaturally small and almost covered with a fatty coating that was attached to the heart. It was not a membrane but a solid growth. Not any of the males have been affected, nor any of the young stock, only hens one and two years old. The contents of the gizzards looked natural and contained plenty of grit. Bowels were much contracted and contained nothing but a small quantity of watery fluid streaked with a whitish limelike substance.

My flock is pure bred White Wyandottes. I have on an average 275 to 300 laying hens. I keep them in three houses in two different parts of the farm. My houses are well lighted and ventilated and always perfectly dry. Have scratching sheds and am never troubled with lice or mites as I have a spray pump and use whitewash and insecticides freely.

They have farm range that consists of an orchard, an alfalfa field, a field of red clover, a pasture and a large tract of natural woodland. I never feed any patent dope to stimulate egg production. I keep gravel, old plaster, charcoal, oyster shell and fresh water before them all the time. Feed sweet milk all the year and alfalfa hay of the best quality in winter.

I feed oats and barley in the litter in the forenoon and a feed of shelled corn at night. Once a week I give them sprouted oats when they can no longer find green feed. I make them a mash of cooked potatoes, a few cracklings and linseed meal which I thicken with oats, allowing it to stand until the oats are well steamed through. I also add to this a small quantity of salt and pepper. If there is any detail that I have omitted kindly let me know, as I am very anxious to find the cause and cure for my trouble. My Wyandottes are my pride and the admiration of the neighborhood. If you can tell me what



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1914

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For your dealer's name we will send you this 48-page Poultry Book, containing plans of houses, breeding and feeding charts, space for daily egg records, cures of diseases, care of baby chicks, etc. It also contains information about Col. Purina's half price galvanized iron Chick Drinking Fountain (2 for 25c) and more details about his Automatic Chicken Chowder Feeder (50c). Write today.

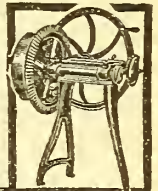
Col. Purina, Purina Mills, 803 Gratiot Street, St. Louis, Mo.



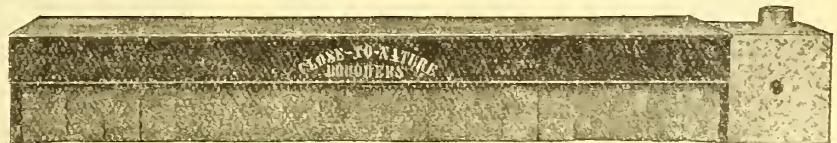
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Applies the three Close-to-Nature Principles: (1) Contact Warmth—the chicks nestle against a warm body as with the old hen; (2) Open Air Ventilation—fresh temperate air, not hot air like in hot air brooders; (3) No Piling or Over-crowding—chicks in long narrow rows.

Combines the Fireless with the Lamp—use the lamp for very young chicks but discard it as they grow older; use it in day time when chicks are running out but extinguish it when they cluster for the night. Nothing like these hovers and brooders now on the market. Get full information and very low prices.

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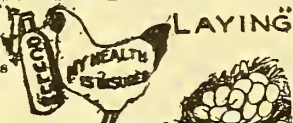
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Disease Paralyzes the crop (totally or partially). Why pour medicines into a "paralyzed crop," there to lie dormant, while disease destroys?

GET OCULUM AND INJECT

it, and Cholera, Rump, W. Diarrhea, Black-head and Leg Weakness will "get out and stay out."

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QUINCY, ILLINOIS.

to do you will earn my everlasting gratitude and I shall regard the Poultry Keeper with greater esteem than I do now, if such a thing be possible. It is my best poultry paper.
2. Which do you consider of the greater value as an egg product, beef scraps or blood meal?
Mrs. J. M.
Hooper, Nebraska.

1. This disease is usually so far advanced before it is discovered that treatment is of little avail. As a preventive place a small amount of permanganate of potash in the drinking water; just enough to turn it a bright wine color. Birds that are not too far gone may be treated individually, but it is a good deal of trouble and expense. Give the following three times a day for a week: Hyposulphate of sodium, 3 grains; sulphate of iron, 1 grain; sulphur, 10 grains; sulphate of quinine, 1 grain. This can be mixed with a little flour and water to make a dough ball and forced down the fowl's throat.

2. There is nearly double the quantity of protein in blood meal that there is in beef scrap, and yet you will probably get the best results by feeding meat scraps. Blood meal is so concentrated that it must be used cautiously and intelligently. It is used best in a dry mash where the other ingredients contain an excess of fat. Beef scrap is a safe feed, when perfectly sweet, and can be used up to 15 and 20 per cent of the ration, though we do not deem it

advisable to use more than 10 per cent as a general thing.

SPROUTED OATS.

Kindly advise me if I should water sprouting oats every day. I am trying the experiment as they do at the Maine Station such as you tell about on page 266 of the November number.
North Andover, Mass.
A.H.

Our plan is to warm them every day with warm water. It depends somewhat on the kind of a sprouting device you are using. Some sprouters keep a vapor of warm air around the oats from an open water pan heated by a lamp. The main point is to keep them moist and warm.

BREEDING—DUCKS STOPPED LAYING.

1. I have three pens with 25 to the pen with male bird in each pen. Would you advise separation of males until the hatching season?

2. I have Indian Runner ducks that commenced to lay when six months old. They laid six eggs and then stopped short. How do you account for it?
J. T. R.
Tiffin, Ohio.

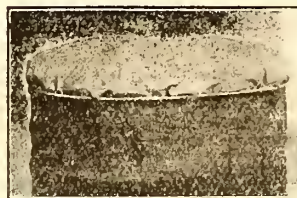
1. No, it is better to leave the male birds in the pen as it is so near breeding time.

2. There may be several reasons for this. Inclement weather may have caused it; the ducks may not have fully matured, or the ration given them may not have been such as to enable them to lay

SIGILIAN BUTTERGUPS

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1914 Mating List now ready. 12 Blue Ribbons won by above Reds and Buttercups. DR. C. S. BROUILLET, Box P. K. Gardner, Mass.



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..... Name

FEEDING BEEF SPLEEN.

I would like to know if beef milt (spleen) is good for chickens. I have been told that it is poisonous, but I have never had any trouble by feeding it to my chickens. I boil it and cut it up fine and feed it twice a week and they just go for it.

H. N.

Cincinnati, Ohio.

We do not know that this is poisonous. It is doubtless safe to feed in reasonable quantities.

FEEDING BARRED ROCKS.

I have a flock of 25 Barred Rocks consisting of 6 hens and 19 pullets. March hatch, and at this time (Dec. 25th) they are not laying more than two dozen eggs a week, which I believe is far below what it should be. No doubt the small showing is due to mismanagement in feeding. Either I do not feel the right kind of feed or do not feed it in the right way. I use at the present time, Henola Feed and Henola Mash with plenty of grit, fresh water, etc., at their command. My method of feeding the scratch feed is in a Norwich feeder; also have a litter where I scatter feed in the evening so as to give them plenty of feed to go to roost on. The mash I have before them at all times in a box so constructed that they can have easy access to it at all times. About 4 o'clock I give them about two quarts of this mash. I put both meal and scratch feed in 100 lb. bags and they (100 lbs. of each) usually last for four weeks. My house is fashioned after the Woods open front design, size 8x10, and 2½ feet from the ground, with an additional covered run 10x10. My hens look well and are very active, but do not do much singing, such as I like to hear around the hen house. If you can advise me where the fault lies. I will appreciate it very much. If you have a formula for feeding Barred Rocks, would be pleased to have you give your plan with your reply.

C. C. N.

York, Pa.

It is probable that your pullets are doing most of the laying, as hens do not usually get over their molt and down to business much before the first of the year. They are probably doing well by this time. Your method of feeding seems good. We do not know that we can give you a formula for feeding but change the ingredients

with the season and availability and price of feed. Rock hens are very apt to get too fat if allowed all they will eat and are not forced to exercise considerably. There is no danger of pullets eating too much. That is why it is not advisable to keep hens and pullets in the same pen. You might get better results if you feed more meat and cut down on the grain and mash. At the Cornell station they close the feed hopper for half the day and this may prove to be the best way with the Rock hens.

THE BEST MASH.

Which is the best ration of mash? I buy my mash ready mixed, but mix my own grain.

1st; I feed wheat, corn and oats, equal parts, by measure. Dry mash analysis is, protein 25 per cent, fat 6½ per cent, fiber 6½ per cent, 1¼ of one per cent salt.

2nd; Grain feed, corn, wheat and oats, equal parts by measure. Dry mash, analysis, protein 17 per cent, fiber 3 per cent, fat 6 per cent, carbohydrates 14 per cent. I think grain feed and mash number one, leaves the birds in better condition.

B. J.

Hanover, Pa.

Mash No. 1 is excessively rich in protein and should be fed in connection with a grain ration composed largely of corn. While it is desirable to have an abundance of protein, slightly more than the hens can make use of, too great a quantity taxes their digestive systems and will soon wear them out. Much of this protein will be passed off undigested. If the mash is to be kept before the hens all the time we consider No. 2 the safest when fed in connection with moderate quantities of the grain mixture. It depends much on what these mashes are composed of. Some feeds are better than others irrespective of their value as shown by analyses. Ordinarily, not knowing the feeds composing them, we would choose No. 2 mash.

WHITE DIARRHOEA.

I have two incubators and they both do good work but I always lose over half when they are ten days old. In my first hatch last year, I saved only one chick out of 30 chicks which I got out of the 120 egg incubator. It is the White Diarrhoea. I have tried everything and wash the incubator out between hatches, but I have no

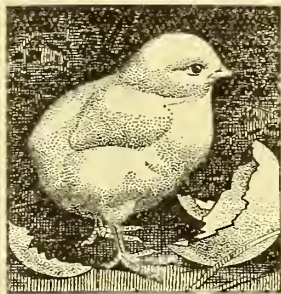
**PROFIT IN CAPONS.**

The wise farmer, looking to profit sees more weight in the steer than the cull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows how farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by caponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of capon tools is sold for \$2.50. A set with full directions including book on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75 we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.



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Shipments guaranteed to reach destination safely. All dead chicks replaced. Book your order now. Our equipment includes the highest priced machines on the market, backed by our twenty years' experience in hatching and breeding enables us to furnish you chicks that are well hatched, vigorous, strong and healthy. Hundreds of satisfied customers. Our aim is to furnish you the best chicks, not the cheapest in price. Poorly hatched chicks always prove expensive items. Start right by sending for our chicklet catalogue today.

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Many first prizes have been won by our birds at these National Shows in the past. Our breeders are placed in condition for producing strong, healthy, fertile eggs by December 1, consequently for the present we will not exhibit, but can furnish you Baby Chicks that will grow into winners for you. Our chicks are well hatched and we can quote you extremely low prices on them. Be sure and get our catalogue. Sent free upon request.

Goshen Poultry Farms.

Route 3.

Goshen, Indiana

brooder. I put them with hens. Would you advise me to get a brooder? Please tell me something to give the chicks as my loss is surely great.

Milan, Ill.

Mrs. F. H.

White Diarrhoea is considered a germ disease which may be transmitted from the parent stock. This germ is very resistant and does not succumb readily to treatment when once it becomes established. There are remedies advertised but we do not know personally of the relative merits. One thing we have learned about this disease, is that while the germ may be present it does not get sufficient development to do the chick serious injury until the chick is weakened by some unnatural condition such as a chill, lice, etc. A weak chick falls an easy prey while a strong chick will ward off the disease. Some dip the eggs in pure grain alcohol or a weak solution of Zenoleum or some like preparation. The interior of the incubator should be sprayed every other hatch with a strong disinfectant and thoroughly cleaned every time it is used. You will need a brooder for early chicks. A hen can care for a very small number of chicks if she can have a warm, dry place to brood them in.

INCUBATING QUESTIONS.

1. On what day should the airing of the eggs begin?
2. How many times a day should be aired and for how long?
3. How long should the chicks be left in the incubator after hatching begins?
4. How many chicks can be brooded in a brooder three feet wide and five long?

E. C.

Ft. Worth, Texas.

1. The third. But very little at first.
2. Eggs should be aired but once a day. The time depends on the temperature of the room and the day of the hatch. At first only long enough to turn the eggs will be sufficient and the time gradually lengthened until after the twelfth day the eggs should feel cold to the touch.
3. Until they are well dried off. After that it does not matter whether they are in the incubator or a warm brooder until feeding time. Some feed when the chicks are forty-eight hours old, others not until they are seventy-two.
4. Fifty would be a fair number, but with extra care and where the chicks have an outside run as many as 100 can be cared for, but the chances of loss are greater.

APOPLEXY.

Can you tell me what is the matter with some of my chickens? They seem to be in perfect health and fall dead off the roost at night, or drop dead during the day time. One hen has knots on her knee joints, and cannot walk. The hens seem to be willing to eat and will eat a mouthful or two.

Mrs. B. S.

Paragon, Alabama.

It is apoplexy, due to an over-fat condition. You should make your hens exercise more for their feed. We do not know what can be the matter with the hen with "knots on her knee joints" unless it is rheumatism. You might try bathing the joints in hot mustard water or some good liniment, but it is hardly probable that she will get well.

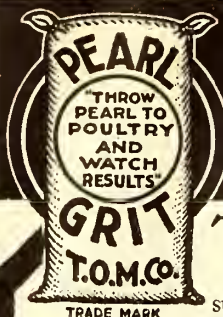
TURKEY RAISING.

Can you tell me anything about turkey raising? How much land would be necessary and what sort of land, whether wood land or cleared land? Can you fence turkeys in like chickens?

J. L. W.

Brevard, N. C.

There is a good deal to this turkey business and much more than we could tell in Poultry Keeper. You want a good book on the subject. Such a book is, "Turkeys Their Care and Management," which is advertised elsewhere in this paper. The price is 75 cents and can be had from this office. The amount of land you would want would depend on the size of the



Pearl Grit Makes Hens Lay

THEY can't help it. It's full of egg-making ingredients. It furnishes the hen just what she needs—lime for the shell—sulphur and carbohydrates for the egg itself. Makes them lay better in winter as well as summer. It's the best and most economical grit money can buy.

Pearl Grit

Not only makes hens lay—it also keeps them in health. Pearl Grit serves the same purpose in a chicken's gizzard that teeth do in the mouth of a human being. It grinds up the food— aids digestion—makes the bird strong, vigorous, healthy and supplies color for most beautiful plumage.

Pearl Grit is especially valuable to hens during the molting season. It furnishes feather-making material as well as strength to lay and molt at the same time. No shells, lime, magnesium, etc., are necessary when feeding Pearl Grit. It serves a double purpose. Saves time, labor and expense.

We have issued a valuable booklet for poultry raisers. It tells how to cure many of the most common poultry diseases with the most common remedies. Also tells why Pearl Grit is such a practical food. Send for a copy today. A postal will do.

THE OHIO MARBLE CO., 13 S. Cleveland Street Piqua, Ohio



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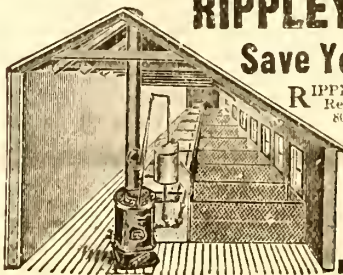
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Experiments in our own yards show net results FIVE times as great from a pound of Vegetable Beef Scrap as from a pound of regular scrap. There's a reason; Vegetable Beef Scrap contains no dry, tough, putrid meat fiber but it contains a high percentage of protein which is available. It is predigested. 10 lbs. enough for 300 of mash, \$1 Formula for making and Practical Poultry 1 year, 50c. all three, \$1.35. NABOB REMEDY CO., Box B., Gambier, Ohio.

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I have my farm so well stocked with egg bred Buff Wyandottes that I am going to offer P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$6, 100 eggs, \$12. Mention P. K. in ordering. My three books, ordered with eggs, \$1 additional. DR. N. W. SANBORN, R. F. D. 24, HOLDEN, MASS.

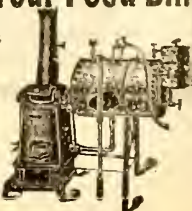
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RIPPLEY MFG. CO.

Box 24 Grafton, Ill., U. S. A.



flock you intend to grow. Uncleared land makes good range for turkeys and a rather open woods is ideal, provided they are not liable to be molested. You can fence in a large area but cannot well keep turkeys in close confinement like hens.

LIVER TROUBLE AND TUBERCULOSIS.

Is there any way to tell liver trouble from tuberculosis? I had several hens ailing last summer. Some would droop around a long time if not killed. I opened several and their livers were large and ulcerated. Sold off nearly all my old hens last fall and cleaned up well, I thought, but lost a turkey hen last week. I opened her and her liver was large and full of spots. In the summer my hens have the full range of farm. I do not feed them but they get some corn from the crib and from the hogs. They have plenty of clean water. I have opened some that had ulcers on their intestines. Is rye better scalded? Mrs. O. W. Warsaw, Indiana.

In liver disease the usual symptoms are loss of appetite, sluggishness and yellowish color to the face. The disease can seldom be detected. In tuberculosis there is rapid and extreme emaciation until the bird is almost a living skeleton. The comb and wattles are so pale that they are almost white. The appetite is generally voracious and in the latter stages the bird is quite dull and sleepy. Your turkey hen may have had blackhead. In this disease there are spots on the liver and the walls of the caecum are thickened and distended and sometimes extraordinarily large. There has been no remedy discovered for this trouble. Rye is not enough better for scalding to pay for the trouble. It is not a very good hen feed, or at least the hens do not seem to care particularly for it.

INCUBATOR IN LIVING ROOM.

Please tell me if a jar of people going about in an ordinary living room is sufficient to injure a hatch in an incubator, provided other conditions are right? We have been told that we could not get a good hatch unless the incubator stood on the ground. Would like your opinion before starting my machine this spring.

R. E. B.

Virginia Dale, Col.

Ordinarily it should not be detrimental. Many good hatches have been made in the kitchen. It is best, however, to have the incubator in a cellar where the temperature does not change rapidly. In a living room, the machine will require more looking after than in a cellar in order to keep the temperature even. It is not necessary that the incubator set on the ground.

WHERE'S THE TROUBLE.

In the spring of 1911 I bought an 80 egg incubator which gave good results the first year. I then moved taking the incubator with me and upon setting it, lost three or four full hatches. I thereupon decided the thermometer was wrong and ordered another and reset it again with the same results. It appears to me that the eggs are not kept hot enough although I keep it up to 103 degrees. Would you advise me to buy a thermometer of egg shape design that is made to stay in the egg tray? I cannot understand this, but it looks like the chicks die in the shell on the 18th and 20th day. This to me looks like too low temperature in the machine. As the thermometer hangs on two wires suspended nearly in contact with the hot water tank, can it be that it is defective and keeps the temperature at a false heat, or if it has not been disinfected, could that affect it? Kindly advise best treatment for thorough re-cleaning. R. S. T. Newport, N. C.

It may be that your incubator sits in a room not sufficiently ventilated or where strong currents of air strike it. In such a case it will not hatch well. Then it may be that the thermometer gets too much heat from the heater and does not record the temperature at the top of the eggs, which may be several degrees colder. Try using the thermometer on the eggs or

Alpena Poultry Farm

Breeders of White Orpingtons, Barred Plymouth Rocks and White Wyandottes. Our birds are the equal of the very best in America. Our birds are prize winners and extraordinary layers. With all standard requirements. If you want to buy day-old chicks, or eggs for hatching, from stock that will bring added pleasure to your life, let us fill your order. Day-old chicks from the above strains, 35 cents each 25 chicks, \$8. 50 chicks, \$15. 100 chicks, \$25. Eggs for hatching from same strains, \$2.50 per 15 eggs, \$5 per 50. \$8 per 100. Our prices are low but quality high. Safe arrival and satisfaction guaranteed. We pay express charges on chicks and eggs. Send in your order at once. We will book the same and ship when you request us to do so.

ALPENA POULTRY FARM

Box 320.

ALPENA, MICHIGAN.

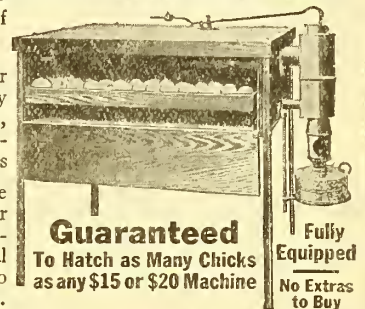
Don't Wait Another Day

Start a Reliance Working for You This Week

By special arrangement with the publishers of
POULTRY KEEPER.

we are granted permission to print our Order Blank in this advertisement so that everybody can get one of our famous Incubators, Brooders, Sprouters without a day's delay or unnecessary correspondence. For instance, send us

\$5⁷⁵ enclosed with order and we ship you immediately our 150-Egg Reliance Incubator, backed by our Special Guarantee. No waits, no trouble or letter writing.



1914 Reliance Incubator

Nothing like this has ever been offered before. We are the first manufacturers to print an order blank in a publication and bind ourselves, in the order, to make good our claims or refund money as per our guarantee. Read our Four Big Bargains. Take your choice of No 1, 2, 3 or 4. See how much you can save. And, remember, when you get a Reliance, you get an incubator that lives up to the manufacturers' guarantee. It practically runs itself; it requires very little oil for a big hatch and it hatches every hatchable egg put on the egg tray.

With the Reliance even beginners can get 100 per cent hatches by merely following simple directions sent with each machine.

The Reliance is guaranteed to make chicken-raising pay big profits. No losses, no repair bills, no extras to buy, no waste of oil. Better order yours—incubator and brooder—right now from this ad

The 1914 Reliance is made of best lumber. Side walls and top are made of three thicknesses—cold can't get in, heat can't get out. Equipped with best regulator, thermometer, egg-tester, lamp, egg trays Beautiful finish, handsome steel legs.

Directions and Money-Making Literature Sent Free

on postal request or with order. Safe delivery guaranteed. Machines come fully equipped—NO EXTRAS TO BUY. Machines come ready for use—NOT KNOCKED DOWN. Order filled same day received.

Order direct from ad and start an early hatch, but if you want particulars first, write and we'll send more proof of Reliance superiority.

RELIANCE INCUBATOR CO.

Manufacturers of Incubators, Brooders, Grain Sprouters

Dept. E Freeport, Ill.

Here's Your Order Blank. Use It.

4 Big Bargains

Bargain No. 1
70-Egg Incubator Guaranteed **\$3.90**

Bargain No. 2
150-Egg Incubator Guaranteed **\$5.75**

Bargain No. 3
70-Egg Incubator - **\$3.90**
70-Chick Brooder - **3.00**
Total - **\$6.90**

Both for Only \$6.50

Bargain No. 4
150-Egg Incubator **\$5.75**
150-Chick Brooder **3.00**

Total - **\$8.75**
Both for Only \$8.25

Big Bargains in Reliance Grain Sprouters

Biggest money-maker for poultrymen since the invention of the modern incubator. Order direct from ad on guarantee of satisfaction or money back. Safe delivery guaranteed. Sprouter comes to you ready for use. Order today.

Prices of Sprouters
No. 1. For 25 to 40 hens, - \$ 5.00
No. 2. For 75 to 100 hens, - 7.00
No. 3. For 150 to 200 hens, - 8.50
No. 4. For 200 to 350 hens, - 11.50



SPECIAL ORDER BLANK

RELIANCE INCUBATOR CO., DEPT E FREEPORT, ILL.

Gentlemen: Please find enclosed \$_____

for which please ship by _____ the article as checked below.

- | | | | | | |
|----------------------------|--|----------------------------|--|------------------------------|----------------|
| <input type="checkbox"/> 1 | 70-Egg Incubator (Guaranteed) \$3.90 | <input type="checkbox"/> 2 | 150-Egg Incubator (Guaranteed) \$5.75 | <input type="checkbox"/> No. | Grain Sprouter |
| <input type="checkbox"/> 3 | 70-Egg Incubator and 70-Chick Brooder (Combination Price) \$6.50 | <input type="checkbox"/> 4 | 150-Egg Incubator and 150-Chick Brooder (Combination Price) \$8.25 | | |

Name _____
Town _____ Shipping Station _____ State _____

It is a condition of this order that the incubator, brooder or sprouter I buy of you, give me perfect satisfaction and live up to your claims or you'll make good by replacement or refund the full purchase price.

Special Notice

EVERGREEN TERRACE POULTRY AND FRUIT FARM. For Sale—10 acres all kinds of fruit, with a well established trade of eggs for hatching and stock for breeding. Last year's sales, \$3,900. Modern improvements—gas, hot and cold water, only 5 minutes to P. O. Electric street cars. Normal school. The Model village of N. Y. State. Wishing to move to Calif. I will sell the place and business at a very low price. Cockerels, sons and grandsons of "Golden Princess" that laid 291 eggs in a year, and eggs for hatching: the kind bred to lay and pay. White Diarrhoea and How to Cure It, \$1.00.

IRA P. WATSON,


Box 17 Fredonia, N. Y.

INCUBATOR SLAVE?

THE WAY OUT

↓

FREE BOOK
tells all



RADIO ROUND
THE HEN'S SUPERIOR FOUND™

I've found cause and cure after 20 years

SAVES 80% Expense—Oil Time and Labor

One filling of lamp; turn eggs without removing. Round like hen's nest; no corners. Center heat. All metal. Write for Book.

DR. J. W. PORTER, Box N-506 COUNCIL BLUFFS, IOWA

CONGDON'S Barred Rocks

BRED FOR Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants.

INCUBATOR EGGS—\$5 per 100; \$45 per 1,000

Our farm consists of 145 acres of land all within the corporate limits of the village of Waterman and valued at \$200.00 per acre.

\$3,000 invested in Barred Rocks and buildings. Booklet free.

W. A. CONGDON,

Box 14, Waterman, Illinois.

RHEUMATISM

A Home Cure Given by One Who Had It.

In the spring of 1911 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally I found a remedy that cured me completely and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism and it affected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. After you have used it and it has proven itself to be the long-looked-for-means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free. Don't delay. Write today.

Mark H. Jackson, No. 8 Gurney Bldg.
Syracuse, N. Y.

among them. Run at 103 to 104. If the incubator leaks air it may be impossible to hold a uniform temperature and there may be cold corners which kill the chicks. Clean the machine every time it is used spraying with a strong disinfectant such as Zenoleum solution

EGG-LAYING TIME.

C. H. Wycoff says that 100 pullets hatched at one time, and raised together, were placed in one house, and when one laid she was taken out. This was continued until there were fifty in each house. A critical examination showed that nearly all that were laying were of a certain type, while those that were still unproductive were of another type—a longer legged, ungainly, slim bodied hen, that spends her time looking for something to get scared at. A record of the two flocks showed a difference of twenty per cent in the number of eggs laid. No. 1 kept laying until nearly denuded of feathers, and after molting began laying before No. 2 did.

A short-legged, deep bodied, full breasted, wedge shaped, large combed hen, with a quiet disposition, has capacity to consume large quantities of food, and return eggs instead of noise and flutter.—Exchange.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; three for \$1.00; four for \$1.40; five for \$1.75; six for \$2.00. Our clubbing list on another page will show what some of the papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.

Too Late To Classify.

PEDIGREED S. C. WHITE LEGHORNS. 500 breeders, prize winners. Eggs, 15, \$1.50 to \$2. Chicks, \$15 to \$30 a hundred. Satisfaction guaranteed. C. H. Harger, Orchardview Poultry Farm, Benzonia, Mich. 2-3

GET MY WINTER bred to lay strain S. C. White Leghorns. 116 dozen eggs during month of December. Eggs, \$1.50 per 15; \$3 per 50. C. L. Shaver, Saranac, Mich. 2-4

ROSE COMB BUFF LEGHORNS, 13 eggs \$1. Leonard A. Waltman, New Albany, Penn. 2-4

R. C. WHITE MINORCA cockerels. Bred from prize winners. Mrs. Roscoe Case, Fabius, N. Y. 2-1

NORTHROP STRAIN S. C. BLACK Minorcas. Eggs for hatching, \$1.75 per 15; \$3 per 30; \$6 per 100. Port Gibson, N. Y. Box 46. 3-4

HOBBS S. C. BUFF MINORCAS. The latest standard variety and coming breed. Also Buff Orpington ducks of the better class. Eggs or stock. Catalog and photo free. Address I K. Hobbs, Hickory Lane, Ky. 2-12

KELLERSTRASS CRYSTAL White Orpington and Barred Plymouth eggs for hatching. Orpingtons direct from Kellerstrass; Rocks have been bred up for twenty years. Both fine layers. Two dollars per 15. William Bowerman, Atwood, Ind. 2-3

GET SEELY'S White Crested Black Polish if you want winners. Won first, third, fourth, fifth and sixth prizes, silver cup for veterans display, Boston, 1914. Stock and eggs. Chas. L. Seely, pres. Crested Fowl Breeders Assn., Afton, N. Y. 2-4

EGGS FROM HEAVY WINTER laying strain of S. C. Rhode Island Reds. Extra choice pens, \$2 and \$3 per 15. Farm range \$1 per 15; \$5 per 100. Fertility guaranteed. Alvin O. Ramge, Plattsmouth, Neb. 2-3

SILVER LACED WYANDOTES, White Rocks, White Orpingtons. Eggs for sale. R. L. Minium, Conneautville, Pa. 2-2

WHITE WYANDOTTE EGGS from high scoring winners at Illinois and Missouri State shows. \$1.50 to \$5 per 15. Write for mating list. Stock for sale. Mrs. Arthur Seymour, Murrayville, Ill. 2-4

IMPORTANT AND PROFITABLE

Secure two new subscribers and take advantage of our special offer of three subscribers for \$1.00. This offer makes it easy for you to get your paper free for one year.

The reader can secure two subscribers at 50 cents each, send us \$1.00 and we will send Poultry Keeper one year to the one who has procured the new ones.

It is easy for one to secure two new subscribers in almost any locality. All it takes is a little energy and a few minute's time.

POULTRY KEEPER, QUINCY, ILLINOIS:

Enclosed find \$1.00 for three subscriptions to Poultry Keeper for one year.

NAME	POSTOFFICE	STATE

There are many interested in poultry raising who would subscribe for the Poultry Keeper if they understood the value of the paper. Others are securing their papers without expense to themselves under this offer. Are you willing to do the same?

Below is a subscription blank on which the names and postoffice addresses may be written. We urge an early effort to secure three names under this liberal offer. A dollar will reach us if sent in a letter.

EXCELLENT RESULTS FROM S. C. REDS.

Seeing the Storrs, Conn. records I thought our record for hatching season and results might interest you.

Our hens are S. C. R. I. Reds, line bred for four seasons, hatched and brooded by hens.

We set from March 23 to April 28, 1093 eggs from 2 year old hens mated with 1 year old cockerels and hatched 993 chicks.

Died or killed	24
Killed in nest by hens	58
Missing	3
Pullets to roosts	442
Cockerels	466

Total993

We put 48 of the first pullets, hatched April 13th, into a house, in August and they laid their first egg October 24th.

Laid October, 6 eggs, November 319 eggs and 907 eggs in December.. 907 eggs 8 months after hatching, figures for the 48, eighteen and nine-tenth eggs each for the month or 29 eggs each day from the 48.

The rest of the 442 pullets are doing equally as well, considering their being a few months later hatched.

We regret exceedingly our loss of 58 chicks by the mothers trampling them in the nests when first hatched, but had artificial brooders been used would there not have been much

We are thinking of adopting a Simplex or Ideal, but as yet are not satisfied with any result we have heard from them. Can you give us any advice on the subject.

[We have tried incubators and brooders for a number of years but find them not as satisfactory as the hen for, say, 1000 eggs, over that I presume artificial means might be required.

Referring to the 48 pullets referred to above during December they had but 2 days (the 1st, 22 eggs and 10th, 23 eggs) that the laid under one-half or 24 eggs. One day they laid 37.

Their weekly progress has been continually on the advance.

Week ending Dec. 6	185 eggs
Week ending Dec. 13,	198 eggs
Week ending Dec. 20	208 eggs
Week ending Dec. 27	212 eggs
Week ending Jan. 3,	220 eggs
An average of 4.6 each out of seven days.	

These are not prize hens as they have never been entered in shows and perhaps would not score any points. They are simply bred to lay the largest number of eggs they can, especially when the price of eggs is high, at the lowest cost of food and kept in good healthy condition all the time.

When our breeders are molting they lay right through, more than enough eggs to pay for their feed.

At seven months from hatching 30 of our last hatched pullets, smallest there were, weighed 127 pounds.

Kidder Poultry Farm.

New Hampshire.

Wins in the Two BIGGEST HATCHING Contests Ever Held

Ironclad TRADE MARK

Why take chances with untried machines when for only \$10 we guarantee to deliver safely, all freight charges paid (East of Rockies), BOTH of these big prize winning machines full, equipped, set up ready for use? Why not own an Ironclad—the only incubator that has for two years in succession won the greatest hatching contest ever held? In the last contest conducted by Missouri Valley Farmer and Nebraska Farm Journal, 2,000 Machines were entered including practically every make, style and price. With 140-egg Ironclad—the same machine we offer with Brooder freight paid, for only \$10, Mrs. C. F. Merrick, Lockney, Texas, hatched 148 chicks from 148 eggs in the last contest.

30 Days Free Trial
Money Back if not Satisfied

Both for **\$10** Freight Paid East of Rockies

140 Chick Brooder

140 EGG
Ironclads are not covered with cheap tin or other thin metal and painted like some do to cover up poor quality of material. Ironclads are shipped in the Natural color—you can see exactly what you are getting. Don't class this big, all metal covered, dependable hatcher with cheaply constructed machines—and don't buy any incubator until you know what it is made of. Note these Ironclad specifications: Genuine California Redwood, triple walls, asbestos lining, galvanized iron covering, galvanized iron legs, large egg tray, extra deep chick nursery—hot water top heat, copper tanks and boiler, self regulator, Tyco's Thermometer, glass in door, set up complete ready for use and many other special advantages fully explained in Free Catalog. Write for it TODAY or order direct from this advertisement.

IRONCLAD INCUBATOR COMPANY, Box 157, RACINE WIS.

Don't Pay Two Prices

SAVE \$6.00 TO \$20.00 ON

Compound Incubators AND Zero Brooders

Our New Galvanized Compound Incubators have all the hatching features to be found in any high class Incubator, and a great many others which are only found in the Compound. Galvanized Iron Case, Deadening Felt Lining, Double Walls, thoroughly insulated Gas-Proof Heater, Automatic Regulator. Deep Egg Chamber and Nursery. Automatic Moisture Device.

ALL INCUBATORS AND BROODERS GUARANTEED

Send for free Circulars and Prices.

Agents Wanted **Warsaw Incubator Company, Warsaw, Ill.**

J. T. FRENCH

BREEDER OF

Exhibition Barred Plymouth Rocks

OF THE HIGHEST QUALITY.

Winners at Toledo, Detroit, Cleveland and Chicago, and many other shows in strongest competition 36 prizes in one season. Stock of my raising has scored 94 points in competition.

Eggs, \$3.00 and \$5.00 per 15 straight.

335 WEST GROVE PLACE. TOLEDO OFFICE.

130 EGG Mankato Incubator \$7.25

SAVE one-half by buying the Mankato. It is sold direct from our factory to you and has behind it our binding guarantee and 18 years practical experience building and operating incubators and raising poultry. There's no incubator at any price that will give you better results—and it's results you want. It's the one high class hatcher that is MADE right and SOLD right.

No Better Incubators Made

Built of real California Red-wood in natural wood finish, three thicknesses of walls, asbestos lined, heavy pure copper hot water tank and boiler, perfect automatic regulator, correct ventilation, safety lamp, high nursery, high legs, tested thermometer, etc. Heavy, well insulated wall construction and special double heating system insures uniform temperature and highest per-cent hatches. All set up ready for use. Simple, sure, safe, handsome and most successful. Big factory output, quick shipments.

Brooders for 120 Chicks \$2.50; for 240 Chicks \$4.00 and up. Send today for our big new annual catalog and see the why of our low prices and how good the Mankato is made—it's free.

MANKATO INCUBATOR COMPANY, Box 767 MANKATO, MINN.

Wolpert's White Rocks

Bred for utility and beauty. My hens averaged 162 eggs each in their pullet year.

EGGS FOR HATCHING.

\$3 per 15; \$5.70 per 30; \$10.20 per 60; \$15 per 100. EDW. L. WOLPERT, 620 Second St., Lancaster, Pa.

Breeders who are selling shipments of baby chicks and hatching eggs can add safety and prestige to their business by using attractive shipping boxes, instead of old boxes and baskets. Nothing adds to the good opinion of the buyer is expected to form of his purchase more than an attractive package that has brought the shipment through safely. The Rippley Hardware Co., Box 24, Grafton, Illinois, manufactures a full line of such shipping boxes and the expense of procuring them is very slight. Write them for a copy of their circular, 40 and learn more about what the boxes are.

A NEW LINE OF HATCHERS AND BROODERS.

The Radio Round Incubator made at Council Bluffs, Iowa, by the Radio Round Incubator Company, is the product of men who have been successful incubator makers since 1893. They are Dr. J. W. Porter and L. N. Porter, originators of both the X-Ray and Rayo incubators, the patents on which they have disposed of to the companies now making these machines.

Into the Radio Round they have put the practical knowledge of 20 year's incubator experience, using such features as they have found the most practical and successful and adding some entirely new features.

The Radio Round is termed "The Equal Heat Incubator." The makers give this condensed description: "Round like a hen's nest—no corners to get cold—heat arises through center with equal radiation. Only hatcher combining round box, center heat, complete circuit radiation, visible egg chamber and safety burner attachment which prevents over heating and explosion. Turn eggs without removing. One filling, less than a gallon of oil, to a hatch."

The company also makes the Radio Bantam Hatcher and Brooder.

EXPERIENCE VERSUS THEORIES.

The best products manufactured today are those which are built on experience. Now, we will take as an example farm fence because this is an article that most all farmers buy each year. A fence built upon shop theories is one thing, but a fence built upon experience to meet the farmer's requirements, one that successfully stood the test for years and years, is quite another matter. The Coiled Spring Fence Company, Box 322, Winchester, Ind., whose ad appears in this issue, is making a fence that is built upon experience. It contains many practical ideas of farmers themselves, as they have been selling it direct to the farmer for 27 years. They have learned from experience what a farmer's fence ought to be to give satisfaction from a farmer's standpoint. You should write for their catalog at once.

"The Rayo Is Especially Recommended to Beginners Because of Its Simplicity, Absolute Reliability and Perfect Results"

This Incubator Hatches!

Boosts Profits—Slashes Expense!



Reader, now that you've decided to buy an incubator, are you going to choose one on promise or performance?

Results are what count. The number of chicks hatched, the amount of oil used, the freedom from care and attention, and the assurance that the incubator will perform season after season, the same as the first time it was used.

Standing beside several types of machines, the "Rayo" has shown its superiority time and again. In one instance averaging 16 chicks more to a hatch with one-fifth the quantity of oil. This superiority of the

RAYO Incubator

isn't just a matter of luck. The superiority is built into the machine and there isn't an oil-style, lamp-on-the-side machine that will ever equal it. Besides saving dollar after dollar on oil and 15 to 20 chicks each hatch, the Rayo puts an end to all the drudgery of old-style machines.

The "Rayo" requires only one filling to a hatch. Eggs and thermometer can be seen through double glass top, which raises for airing, cleaning and turning eggs. Lamp under egg chamber gives perfect radiation. Double wafer thermostat acts on flame—produces exact heat needed—gone thrown away. Automatic ventilator. Turn eggs semi-automatically without touching trays. Clean lamp without removing chimney or tank. Oil tank holds five quarts, a month's supply. Strong redwood case, covered with steel, enameled like mahogany, making it fireproof and handsome.

The Rayo's claims are based on actual facts. Hundreds of experienced poultrymen will have no other machine. Beginners sure of success. Low, direct, freight prepaid prices bring it within reach of all.

Money-Making Book, "Turning Eggs Into Chickens Into Dollars"—FREE

to everyone sending their name and address. This book contains special articles by expert poultrymen which, if followed, will bring the reader greater profits. The reason why we send this book FREE is because it also tells all about Rayo Incubators and Brooders. Write for Book No. 16 today and we'll send you Rayo special low price and combination offers. Address

First and Only Patent Hatching Chart in the World—FREE

To every person who asks for our free Money-Making Book, we will send, absolutely free, a sample of the Rayo Patent Hatching Chart. It tells what to do day by day during the hatch. We also present to you with each Rayo Incubator you purchase a \$1.50 Hygrometer. The hygrometer and hatching chart would cost you \$2.50 if you had to buy them. Remember, we include these with each incubator without extra charge. No other firm does this.

RAYO INCUBATOR COMPANY
1011 S. 13th St., Omaha, Nebr.

Indian Runner Ducks

"GOOD AS GROW." ENGLISH PENCILLED and PURE WHITE. We have superb carriage and type. EGGS AND BABY DUCKS ONLY. My guarantee of satisfaction protects your money.

S. H. LONG

Box P. K.

Elwood, Illinois.

Progressive Orpington Farm

White, Buff and Black Orpingtons

Sixteen entries at one show won seventeen premiums. 5 firsts out of a possible 8. I offer the following specials for February from selected stock: Breeding trios at \$8, \$13 and \$15; Pens at \$12, \$16 and \$22.

Extra Special: On eggs from my prize winners, equal to any matings, \$8 per 15, \$16 per 35, \$20 per 50, \$35 per 100. Prize winners assured from these matings. Comparison invited.

Utility eggs, \$1.25 per 15. Extra choice matings, \$2.00 and \$3.00 per 15.

We have a surplus of exhibition cocks and cockerels. Prices reasonable. Order direct from this ad. Satisfaction guaranteed. Catalog of stock and winnings on request.

Progressive Orpington Farm

J. C. BEARE, Proprietor.

Box B.

FORT GAGE, ILLINOIS

HOW MUCH ARE EGGS WORTH?

An ancient doctrine that is not yet wholly obsolete is, that anything is worth all that can be obtained for it. The fairness of that doctrine depends upon circumstances. It is difficult for many business men of the old school to realize that rights of individual ownership in property of any kind are subject to the will of organized society. The earth and the fullness thereof belong to the inhabitants thereof.

The primal law of nature is force. "Let him get who can and hold who has the power." But that law of nature is opposed to the civilization of man so our present system of organized society is founded upon certain well-defined man-made rules governing the ownership of property by individuals. Those rules were formulated by society for its own protection, and those who do not play the game of life fairly according to those rules are very properly punished by their fellow men and compelled to obey the rules or get out of the game. A great and far reaching re-adjustment of society along that line is now going on, and even the product of the hen is receiving its share of attention.

Life is more complex today than it was in those old days when agriculture, theology and war were the chief occupations of man. We now realize as never before that whatever affects the welfare of everybody is pre-eminently everybody's business. Everything that relates to the production, distribution and pricing of anything that is necessary to support life in a state of high civilization is essentially the business of those who desire to live in such a state.

The egg of the domestic hen is a necessary article of food. It is the duty as well as the right of society to do all that it can that is expedient and equitable to see that eggs are produced, transported and sold in sufficient quantity to meet the requirements of the public, and that the price all along the line from nest to table, shall be just to all parties concerned.

Now then, what is a just price for eggs? Who shall fix the price? The producers and distributors who know what the costs of production and distribution are or the consumers who know nothing and care less about such matters?

Perhaps you will remember a time when you bought eggs for 12 cents a dozen, 50 to 60 cents per dozen this past winter seemed high when compared with the 12 cents per dozen of years ago, but do you also recall that the 12 cent price was in the spring when everybody's hens were laying and the 50 cent price was in the winter when most everybody's hens were not laying? Do you also take into consideration the fact that more poultry keepers than formerly are today figuring the cost of producing eggs?

Years ago it is probable that most producers of eggs sold the product at less than cost much of the time. It is also true that the cost of producing eggs is now much more than it used to be.

People in the mass usually estimate that the lowest price a certain thing ever sold for is the right price for that thing everywhere. That is because human nature unconsciously believes that whatever it wants is right. Any price is "too high" when it happens to be more than we want to pay.

Most everybody claims that the "law of supply and demand" should be allowed to regulate prices. Even so, what product, may I ask, has been more subject to the operation of that law than eggs? Before the days of cold storage, eggs were so plentiful in the spring that they sold for much less than their actual value. In the winter they were so scarce that most people used as few as possible—many people used none—so the demand did not create so high a price at that season as it now does. The advent of cold storage increased the price of spring eggs and kept the price of winter eggs down. High as winter eggs have been in the past few seasons they undoubtedly would have been much higher had it not been for the stored eggs.

The fact seems to be that the demand for eggs is increasing much faster than is production. This situation and the probability that actual costs of production will enter into the matter more and more as time goes on, causes many careful observers to believe that the price of eggs will eventually become higher rather than lower.

From the standpoint of food value, eggs, at their highest, are cheaper than are several other articles of food that everybody buys with less complaint. If the majority of consumers actually believe that "eggs are too high," that does not prove the case. I think it was D'Israen who declared that "The majority is seldom right, and when it is it is usually for a wrong reason."

F. O. Wellcome.

SUCCESS WITH INCUBATORS.

There are still a lot of people with the belief that Incubator hatched chicks are not as strong as those hatched under hens.

Space will hardly permit us to enumerate the different reasons why this belief exists and why it is erroneous. We believe we can do more to eradicate this false belief by citing some facts accomplished with our "Successful" Incubators and Brooders.

Mr. W. Koch, of Bellingham, Wash., started three years ago with one of our hatching outfits and had such good success in hatching and raising the chicks that he now operates 9 of our largest size incubators and brooders. Several of his neighbors have also ordered from 1 to 6 of these 312 egg size Successful Incubators.

Mr. A. Kintlein of Hempstead, N. Y., last year secured one of our No. 5 Successful Incubators. A little while ago he favored us with an order for six of our No. 4—312 egg size Successful Incubators.

Mr. Julius Wurst of Waterville, Minn., was quite skeptical about incu-

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bators and brooders, nevertheless he tried it by ordering one of our No. 9—240 egg size machines and in three batches produced 610 strong chicks from 720 eggs and raised all but 8 or 10 of them. He also ordered additional Successful Incubators and Brooders. Mrs. Laura Allen, of Guthrie, Okla., last spring hatched 734 chicks from 863 eggs and had fine success in raising them.

Mr. Henry Williams, Ledgwood, N. J., has had our 240 egg size incubator for two years and always hatched over 200 chickens, having the record hatches in his neighborhood. He wants 2 more of these machines.

Mr. Fred Pantecock, of Fulda, Minn., wrote us lately that he had seen so many people having such good success in hatching and raising their poultry in the Successful Incubators and Brooders that he wants to try it himself now and ordered a 240 egg size machine of us.

The Inwood Poultry Farms of Daventport, Ia., one of the largest egg farms in the Middle West have used our Successful Incubators and Brooders exclusively and with such success that they have added more from year to year.

We could name dozens of poultry raisers who, a few years ago, started in the poultry business with but one of our incubators and brooders and now operate from five to a dozen Successful machines. They had success from the very beginning both in hatching as well as in raising chicks; otherwise they would not have seen the need of adding more of these machines. "Successful" Incubators require little attention, are dependable and safe, economic in the consumption of oil and are simplicity itself in operating. The Des Moines Incubator Co., 47 Second St., Des Moines, Ia., will be glad to send you their 125 page catalog.

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PURE WHITE RUNNERS. White egg layers. White Rocks (Fishel direct). Eggs from either. \$1 per 12. Leroy McKinzie, Independence, Ind. 2-4

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BUFF ORPINGTON DUCK eggs from exhibition stock, \$2 per 12. Pildon Condon, Box 15, West Chester, Ohio. 2-4

WHITE INDIAN RUNNERS with upright racy carriage. Prize winners. Great layers, large white eggs 15, \$1; 50, \$3; 100, \$5. Circular on feeding ducklings free. B. F. Morgan, Independence, Indiana. 2-4

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FINE COCKERELS FOR SALE, Wyckoff strain White Leghorns. Martin's strain White Wyandottes. George Barsford, Aurora, N. Y. 2-1

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SINGLE COMB WHITE LEGHORNS, Winners in every exhibit made. Stock and eggs for sale. Eggs, \$1 to \$2.50 per 15. Butt & Ewan, Clarendon, Ark. 2-3

"BUSYASTHEBES" are the Clarion S. C. White Leghorns. They would rather lay than loaf, one dollar invested here brings you fifteen eggs and a successful start in the chicken business. Satisfaction guaranteed. W. Foss Littler, Dunkirk, Ind. 2-4

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S. C. BUFF LEGHORN eggs from pedigreed stock, \$2 and \$3 per 15. Satisfaction guaranteed. Mrs. Clemens Keiser, W. Walnut St., Bloomington, Ill. 2-4

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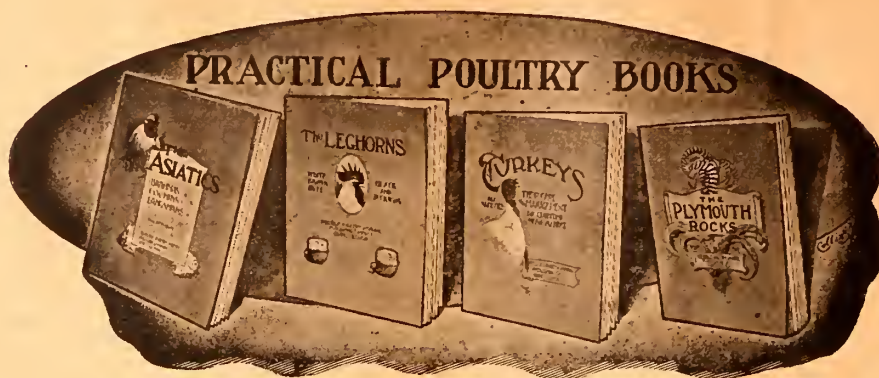
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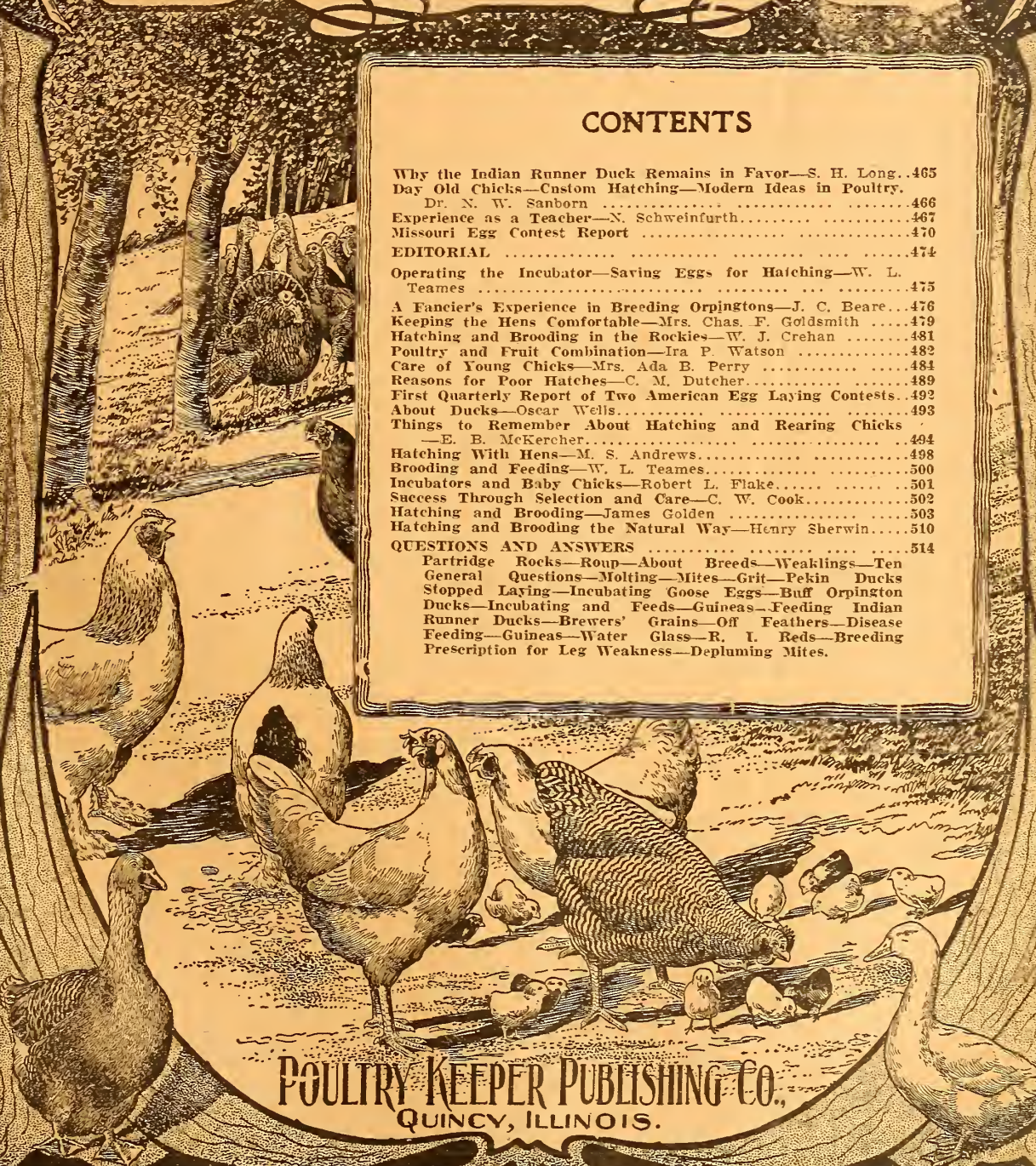
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MARCH, 1914

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QUINCY, ILLINOIS.

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It has long been said that the "proof of the pudding is in the eating of it." The proof of the VALUE of Cyphers Sealed-bag, trade-mark brand, balanced-ration poultry foods *is in the feeding of them*—is to be found in the highly profitable results obtained by our thousands of customers who *use these foods annually* in raising their chicks with uniform success. Following is evidence:

Recent Sample Reports From Customers

"2½ LBS. AT ELEVEN WEEKS"

Cleveland, Ohio, September 25, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

A great aid to success in raising chicks is the use of your balanced-ration, ready-mixed poultry foods which I use in considerable quantities, especially Chick Food, Developing Food and Growing Mash. I find these Cyphers-brand foods to be free from dirt and waste material and my experience is that they are the cheapest foods on the market. My Orpington broilers averaged to weigh 2½ lbs. in eleven weeks throughout the whole flock. These results were obtained by following your printed directions, which are furnished complete in your booklet, "Foods and Feeding." Before using Cyphers Chick Food I lost a great proportion of the chicks. In future nothing but Cyphers Company products will be used by me.

DAVID I. SAWDEY, 2134 E. 107th Street.

"NO TROUBLE WITH CHICK AILMENTS"

Plato Center, Ill., July 29, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

We use your balanced-ration poultry foods exclusively and have not had any trouble with white diarrhoea and other similar chick ailments. Our experience leads us to believe that poor brooding and improper feeding are the cause of most diarrhoea in chicks and there is no excuse for this when Cyphers Poultry Foods and Cyphers Brooding Hovers are used. We have used quite a few tons of your Chick Food during the past year and have not found a single particle of it that did not appear to be first-class in every way—quality uniform, no smutty grains, no waste, no foreign matter used for filling. All of your goods have given us excellent satisfaction.

MUIRHEAD BROS.,
Per G. F. Muirhead.

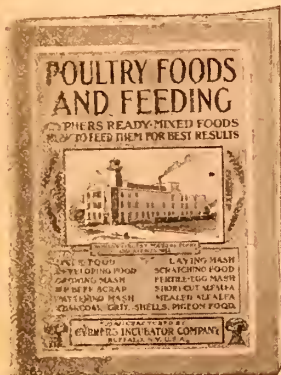
"2-LB. BROILERS IN 11 WEEKS"

Nyack, N. Y., August 9, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I have been delighted with the excellent results obtained by using your Cyphers balanced-ration, sealed-bag brand poultry foods. I get 2-lb. Barred Rock broilers in eleven weeks by following the "Cyphers System" of feeding. I find Cyphers Foods to be clean and sweet, with no bits of straw, pieces of wood or other foreign matter, which we often get when buying poultry foods at the local feed stores. Then again when we handle it in feeding the chicks it has the "feel"—the weight, quality and value are there. The other local foods are light and dusty by comparison and don't have the Cyphers feel. Just received a supply of Cyphers Growing Mash today and judging by the way my chicks went into it you would think they never before had anything to eat.

WALTER B. MANNING.



This Book Would be Cheap at \$5.00 per Copy, Judged by Actual, Detailed Table of Contents. Tells How To Produce Broilers, Fryers, Roasting Chickens and Capons; Also Exactly How to Feed the Layers and Breeders. 52 Pages, 7x10 Inches. One FREE COPY on Request to Any Address.

"SAVES TIME—CHICKS GROW FASTER"

Riverhead, N. Y., August 6, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I am in the poultry business and making money out of it; I do not know any business I like better. I use Cyphers balanced-ration poultry foods and obtain the best of satisfaction. I have tried the Cyphers plan of "deep-litter feeding" for little chicks and believe it is the best system in existence. It saves time and the little chicks grow much faster and are more healthy. I was able to care for a great many more chicks and to do so to better advantage. I have always found Cyphers Foods sweet and clean and the chicks eat it up without any waste. If poultrymen who are not making their venture a success will adopt the "Cyphers Way" of feeding and rearing their chicks, they will surely meet with success.

H. W. TUTHILL.

"TON OF YOUR FOODS PER MONTH"

Kansas City, Mo., August 5, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

I am using Cyphers Sealed-bag brand poultry foods and they have given entire satisfaction. For the past five years I have used nearly one ton of your balanced-ration poultry foods per month, which is sufficient evidence as to how well they have pleased me. I find that the real feeding value is in Cyphers Foods and they do not contain waste material, smutty grains or other objectionable matter, as do so many of the other prepared poultry foods offered to poultrymen. During the past year we made exceptionally fine winnings at the largest western and southern poultry shows and our birds were hatched in Cyphers Incubators, reared in Cyphers Brooders and fed on Cyphers Foods.

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THE POULTRY KEEPER

JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY

VOL. XXX.

MARCH, 1914.

No. 12.

WHY THE INDIAN RUNNER REMAINS IN FAVOR.

Under this head it may lead some to believe that I am speaking for the benefit of my own or some one's else purse. But such is not the case, although I have been in the Indian Runner duck business for several years for their commercial and fancy qualities and have been rearing them and selling eggs on the market and for fancy purposes to breeders both east and west. When the Indian Runner was first heard of on this side of the water it was said of them by many that

sonal experience and observations that they may appeal to you.

Getting down to past history of the Indian Runner will say that I am not the highest authority on the subject but trusting that my past experience may help you I am content.

The Indian Runner was first originated in India almost a century ago. Little attention was paid to them over other ducks until after several years of keeping them pure it was noted that they laid in the winter same as hens. Early in the eighteenth century a pair was brought to England by a ship captain who said that a duck

were brought to America. Some were of pure blood that laid all white eggs and some were not, so to keep clear of the green egg I purchased of Mr. J. W. Walton a trio of English Penciled ducks that were line bred for over 30 years and laid nothing but pure white eggs. True to his statement they laid white eggs. The next year I got two more females from Mr. Walton and again was rewarded with these beautiful white eggs. The next year I disposed of all my American bred Indian Runners that I had before I purchased of Mr. Walton as some of them laid green eggs. That left me



Pen of White Indian Runners. Owned by S. H. Long, Elwood, Illinois.

they would come and go as the tide. Others looked at them as the latest improvement in egg producers and the best part of it was that a duck had laid eggs equal to a hen in number and still larger than that of the domestic hen. And even yet some doubting Thomases do not give them due credit for their ability in producing eggs.

For the benefit of the beginners and in behalf of the Indian Runners themselves, I wish to thank the editor of this publication. I ask your humble pardon for referring to myself or my strains but I am writing this from per-

that laid in winter was a duck with a spirit and I believe that he was right indirectly as they have a spirit of going after a bug or any insect that is remarkable. In England by careful breeding they have changed the color of the eggs from green to white as they lay in such large numbers some were marketed even in a very small flock and the white shelled egg is the market egg. The English breeders gave attention and carefully bred out the green egg and bred better markings and carriage.

Early in the nineteenth century they

with Walton strain only and as I kept them separate from the rest by line breeding I did not infuse any new blood of any undesirable nature.

An old saying is that the sun never
(Continued on page 468.)

X When a subscriber finds this item marked with an X in blue pencil he will know that his subscription has expired. We invariably discontinue sending the P. K. when a subscription runs out, for we have no way of knowing that a person wants its except on receiving his or her renewal. We urgently solicit a prompt renewal on the ground that the paper is worth the money. We are trying month by month to make it better and better.

DAY OLD CHICKS—CUSTOM HATCHING—MODERN IDEAS IN POULTRY.

Dr. N. W. Sanborn, Holden, Mass.

WHILE the selling of day old chicks and the hatching of eggs belonging to other folks was not unknown ten years ago, neither was carried out as today. One poultry farm that I know of shipped in 1913 over 120,000 day old chicks. Another farm that I visited last week, hatched and shipped in 1913 over 60,000 day old chicks. Both of these farms have increased the size of their equipment and are expecting to double the output this season. The larger farm has put in additional hatching machines to take care of custom hatching. They can incubate for other folks sixteen thousand eggs, taking twenty-two days returning the chicks hatched. The day-old chick business has grown far ahead of the custom hatching, although I look to see them nearer together within five years.

Day Old Chicks.

Just what is the day old chick business? Let me tell you as I have seen it develop. I think it began with the demonstration of the various incubators in the winter shows. Every maker wanted to show off his machine in actual operation. So he would engage someone to incubate the eggs and have them due to hatch in the early part of the show week. The eggs would be run in good numbers, tested out finally along the eighteenth day, and sent to the show. It is not hard to ship live chicks in the shell at the eighteenth to nineteenth days, unless it be hard to keep them cool enough. Usually the incubation is done within easy distance of the show, the eggs being brought in baskets by the shipper, or sent by quick express. The trays were well filled, every egg had a big live chick and along the second day of the show the eggs would begin to give forth the chicks. They would come out by the dozens and hundreds, were transferred to the heated brooders, and drew the attention of the folks all the week. Visitors gathered around the chicks all the time. Did you ever notice the difference between the drawing power of a dead or live chick? Fill a show window with litter, put a dead chick in the center of it, and few folks will ever see the chick. In its place have a live active chick, digging in the litter, drinking at the fountain and that one chick will hold an audience that will take a policeman to keep open the sidewalk. It was the attractive qualities of the live chicks at the shows that led to the day old chick business. These chicks had to be gotten rid of, so they were sold by dozens and hundreds to visitors that came to the shows. There grew up call for them. Then the men who produced the chicks for the exhibits saw the handwriting on the wall and commenced to enlarge. They had incubators for the needs of the other seasons of the year, why not use them in winter? They did. They added mach-

ines, hatched early and late and their business grew. Today the day old chick business is a standard one.

Prices of Day Old Chicks.

The prices obtained for day old chicks vary according to the demand and the quality of the stock. I have seen such chicks sold for a dollar each—but they were from a thoroughbred stock and intended to produce winners. A few farms get even more than a dollar for fancy bred chicks but they have not come within my own sight. From the prices given the rates range downward to eight and ten cents each, being for chicks in the later part of the season, as well as from eggs from large range flocks. The price of eggs for eating makes a difference in the price of day old chicks. When table eggs sell for five cents each you cannot expect that any poultryman will sell chicks for less than fifteen cents each. When eggs drop to two to three cents each then you do not wonder how chicks can be had for ten dollars a hundred.

The average price for a hundred day old chicks, today, is not far from fifteen dollars. This year some well known plants have increased their prices from fifteen to eighteen dollars and they plan to make it twenty dollars in 1915. Another large farm that sold chicks for twenty-five dollars a hundred last year has reduced the price to eighteen dollars this spring.

The tendency, today, is to improve the quality of the birds in the matings. Not long ago the utility flock was made up of birds that were rejected in the making up of fancy breeding pens. Today we find large farms that are breeding their utility flocks with the same care as is given the fancier. Large numbers of birds are raised, many rejected because lacking in vigor and practical points and the result is that you see flocks that are made up of birds as alike as birds in a show pen. You cannot own such matings, you cannot sell chicks from them at a profit if you only get eight dollars a hundred chicks. I realize that price does not always indicate the real quality of a purchase but it should be taken into account in deciding whether you can expect to get full value for your money.

Packing and Shipping.

Day old chicks are sent out by express in what amounts to a heatless brooder. These have been so improved that with anything like intelligent care in the express and have two days for the journey, they are better off than if exposed to earlier feedings at home. I have known of more failures when chicks were only a few hours on the trip than when one or two days between hatching and the buyer.

The dangers of shipping seem to be that of overheating because of nearby steam pipes, or to suffocation from

close piling of boxes in cars. There is always the danger that the shipment may be delayed on the way, by mistake or carelessness, getting through several days after it should. The express companies have been well shaken up by the new parcel post, have been getting better business methods and today are treating the shipper as if he had some rights. They are out after new business and are working to make the day old chick shipping successful.

While chicks have been shipped two thousand miles with success it is best to buy them nearer home. When within two and one-half days journey I would not consider distance, but outside of that one should require some guarantee that chicks will reach you in good condition. Day old chick plants are starting up all over the country and it will be but a short time before you can find such a farm within two days of your home.

Custom Hatching.

Custom hatching has been practiced for many years on a small scale but until the past year has attracted little attention. I remember that over twenty years ago I had one hundred and fifty White Plymouth Rock eggs brought to me to hatch. There proved to be seven fertile eggs in the lot, of which three hatched. As my price was three cents for each chicks hatched, I got nine cents for the transaction. The neighbor could find no fault with my results, as he, under hens and in his machine, got no better results at home.

With the wonderful growth of poultry keeping the last few years, there have come conditions that make it seem practical to do without any home incubating. This may be right or not I am not saying, but many people are letting other folks hatch their eggs for them. This is custom hatching. The man will mate up his pens, save his eggs and ship them to the place where custom hatching is done. Not far away is a plant that has two big hatchers for incubating such eggs. Their plan is this: you select and pack the eggs and deliver to the express; the custom hatching folks take your eggs from the express and pay the charges; the eggs go into the machines, are run the three weeks, the chicks hatched; they supply the boxes for returning to you the chicks, deliver them to the express; the chicks arrive at your station with charges collect; you pay your four and one-half cents for each chick sent you, plus the return express charges and the deal is closed. If you send a thousand or more eggs the price per chick drops to a lower figure, ending at three and one-half cents. A smaller custom hatching plant, not far away, charges three cents per chick returned, you to come and get the chicks when dried off in the big hatcher. I look to see both the day old chick and custom hatching businesses grow rapidly. Not every one has made a success of it. This is not always due to the machine installed, but often to the owner. Some folks can no more run a mammoth hatcher successfully than they can a grocery store. It is not in them.

There are people who are doing good hatching, have been doing it for half a dozen years, and there is where you should look for best results.

The Other Side.

Shall I or shall you, have eggs hatched. Is it better to do away with males, produce table eggs and always buy day old chicks? Ten miles from me is a small farm that has no incubators, sets no hens, has no males. Every spring it sends fifty miles away and buys eighteen hundred chicks. Each year it has gone back to the same man—which is speaking good words for his stock and methods. A village friend of mine sends to Maine each spring and buys fifty day old chicks to produce his dressed poultry for table use, as well as pullets to give him his year's supply of eggs. He does no hatching—sells few eggs. These two places seem satisfied with past results.

Another man, one hundred miles away, bought a thousand chicks last spring, put them into one of the modern coal heated brooders with a single hover and raised over nine hundred of them. Last month he booked his order for a thousand chicks this spring with the same man, to be shipped at the same date, to be raised in the same brooder as last season's shipment. Does he believe in the big shipment, the big brooder, the day old chick idea? Let his order answer our question.

There is another side to all this that is worth considering. If you buy chicks you may lose the pleasure of mating your pens, running the machine or hens and being an all 'round poultry keeper. If you have your eggs hatched for you you may miss less. If you belong to that large class who fail to get good hatching results then it may pay you to turn to the producer of day old chicks or to the custom hatching plant. The poultry business is wide and has great possibilities. All of us are not made to do good work in every line. Where we fall short is where the other fellow may help us out. I know men who never produce birds that will win at the shows—who are always obliged to buy—it is not in them. Shall they give up to it because of failure in producing? Surely not. I would have them do the best they can, even though they must buy their winners every autumn. If you do not succeed in getting eggs that hatch the sort of chicks you desire, by all means buy of others.

More than half of us, much more than half, have the needed qualities to breed and handle eggs and stock for good results. We can mate our birds, produce our chicks and get a lot of pleasure and profit out of all our chicken work. There will always be enough of the other sort of folks who will find the custom hatchery very useful and the buying of day old chicks a pleasure. These people are increasing in numbers and will supply business enough for all the plants that can be properly located and handled. Poultry keeping is becoming a big business, is getting commercialized, and along these new lines it is growing more rapidly than in other lines.

EXPERIENCE AS A TEACHER.

An old German once said. "De longer I lif, de more I find, py shiminy, oud."

A very true saying, which most of us have realized. If we do not profit by the experience of our forefathers or the coming generations by our methods, then we shall have lived in vain. The writer has been in the poultry business for twenty-five years, except from 1904 to 1910, and has bred many of the standard varieties; both for fancy and utility and is persuaded that there is no best breed.

When asked by anyone what is the best breed, my answer is; The one you like best. We can succeed with any breed if given proper feed in time of need. Liking a thing is the large part of the battle. Since 1910 we have

out, so chicks can get on the ground and still be protected from storm and wind. To each brooder is attached a small yard covered with pigeon netting, thus protecting the chicks from cats, rats and all prowlers. More chicks are lost from prowlers than any one cause.

From the stage of brooder weaned, to maturity, we use colony coops, six by eight feet floor space, with a height of four feet rear, six feet front, shed roof, open front. Hopper feeding for dry mash and wheat bran, is our method and we find it satisfactory for all ages, excepting baby chicks. A liberal supply of litter is used, in which is scattered fine mixed grains, according to age of fowls. This furnishes needed exercise. For adult fowls a meager feed of fine mixed grain for morning, we find satisfac-



Some of Highland Farm's Fancy White Orpingtons.

been breeding Single Comb White Orpingtons. May, 1913, we, Roy S. Taylor and myself bought 10 acres of land three miles east of Jackson. We have dubbed the farm appropriately, "Highland Farm" and are now expecting to raise poultry on a large scale. We have added Single Comb White Leghorns which to our minds, are the best two varieties, and are pleasing to the eye, as they are all of one color, and will bring us, without doubt, eggs 365 days in the year.

The Leghorns are recognized "egg machines." For a large breed the Orpingtons are unbeatable. In fact, with good care, they cannot help it. They lay because it is their way.

Another enthusiastic breeder says; "The colder the day, the better they lay." To this we say "Yep."

We are using the colony coop system for chicks up to weaning time.

These two coops are two and one-half feet wide and five feet long. They are fifteen inches high in rear and twenty-one inches high in front. The roof is hinged on the lower part, with strap hinges, the front fastened down with a hasp and locked with a padlock. A partition two feet from one end, with stationary floor and provided with a hover, furnishes all necessary warmth. The longer end of the floor is removable and is used for a run in bad weather. When weather permits, the removable floor is taken

out. A heavy morning feed of grain is in our judgment the one great cause of failure with poultrymen. Keep Biddy busy all day with a heavy feed at night and gather eggs to your hearts delight.

N. Schweinfurth.

Jackson, Michigan.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this journal is published, namely "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. The copies will be sent free.

Now is the time to start that classified advertising. This is the form of advertising usually adopted by the beginner and the breeder who raises a limited amount of stock. A four month adv. costing ten cents per word for all four months is quite likely to bring you many times the amount of its cost. A trial will convince any breeder that the "Poultry Keeper" is one of the best mediums to use for this purpose.

Have you any stock or eggs to sell? Our cheap rates shown in the classified ad department will enable you to make the desired sales.

WHY THE INDIAN RUNNER REMAINS IN FAVOR.

(Continued from page 465.)


shines so brightly not to be darkened with a cloud. The fourth year after my first importation I ran short of drakes to keep up with my method of line breeding, so I ordered three drakes from Mr. Walton's yards. These birds and transportation cost me a little over \$60. I mated these drakes as was intended and sold eggs from the matings and also raised a number. But lo! a cloud has darkened the horizon, so to speak. When the offspring from these three drakes started to lay the eggs were green.

There was all that young stock raised and some of my customers were disappointed, to say nothing of the \$60. I either had to quit advertising white eggs or sell these three drakes and their progeny. To make a long story short I realized 56c each for the lot on Water street, Chicago.

The best thing I have ever done for the Indian Runner breed in America and the world, was putting those three drakes and their progeny on the block. I have made some good sales since being in the business which I thought to be for the betterment of the breed but in my estimation this was the best sale I ever made. I could have sold these drakes for even more than I paid for them if I wished. Since that time there has never been a green egg laid on the place. Since then I have learned that Mr. Walton had some new blood from India and again brought on the green egg. Mr. Walton had at the time I purchased those ducks from him the best in the world and I believe he had a right that claim. He now has infused the green egg into his once pure white egg strain and I would not give 50c for all he had of the same breeding as these drakes. I consider my English Pencilled ducks of today far superior to Mr. Walton's present strain. It is my opinion that the greatest asset to the runner is the white eggs, because the commercial value of any breed is their greatest worth.

The great majority that buy eggs or stock from the many breeders have been attracted to them by their large egg production and our statements that you can get 5c or more premium for them over hen eggs. If they laid as we say they do on cheaper feed than a hen and you receive a premium for their eggs, it looks mighty good to a beginner and he buys stock. He may pay little or he may pay much and if he is wise enough to get white eggs, well and good, but on the other hand if he gets a green egg strain, he takes his eggs to market with the extra nickel in view and gets turned down. The people do not want those common duck eggs at even the same as hen eggs. His love for the Indian Runner drops about 50 degrees and if he is not willing to learn the cause of his failure by a little research he will no doubt become a knocker.

The fact is that white shelled eggs sell all the year round on the open market here in the mid-west at from



Cholering
FOR FOWLS

Must Satisfy You or We Return Your Money
A guaranteed treatment for Cholera, Roup, Limberneck; specific for White Diarrhoea and other germ diseases of poultry.

Our Unequaled Proposition
Listen! To quickly distribute CHOLERING and fully demonstrate our claims we will send you postpaid on receipt of 50 cents (coin, money order, or stamps) one dollar's worth of Concentrated CHOLERING. CHOLERING has stood the severest test for ten years. All poultry thrives on CHOLERING. A few drops in their water and feed does the work.
You get DOUBLE VALUE, and if dissatisfied we return your money. Send your order NOW—don't miss this offer. References: American Trust Co., St. Louis. Nat'l Bank of Commerce, St. Louis.

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"The motherliest old hen of them all"
—A Simplex Owner.



This Grand Rapids Simplex Brooder Stove has

No Wick	No Fumes	Broods
No Gas	No Smoke	1500 Chicks

Would you like a Brooder that in each of 300 known cases has paid for itself and paid \$240 profit the first season?

Would you like to have the first brooder you buy or the one you buy this spring be the one that is past experiment, that has called out hundreds of heart felt "A-mens" from almost discouraged poultrymen, the Brooder that really mothers and really raises the chicks? Do you want to dodge the deadly White Diarrhoea in this spring's work and raise every dollar you have figured on paper clear up to one hundred cents of realization? You do, and you know it is vital to your success and so the outcome of your plans to raise the birds you hatch. I'm a poultryman. I've been thru the thin years. I've been disappointed and heart-sick because of the ravages that swept away half my hatches. I've tried a baker's dozen of near-good stunts and finally I've developed this Grand Rapids Simplex that I want to tell you all about. It's a chick raiser! It mothers 'em naturally. And its price has been returned many times in increased net results to hundreds of my fellow poultrymen. Write me your troubles and your plans and I will give you my catalog and recipe for getting the chicks to market.

**SIMPLEX BROODER MAN
SIMPLEX BROODER STOVE CO.
224 Fourth St., Grand Rapids, Mich.
(Hundreds of Last Year's Testimonials)**

SIGILIAN BUTTERGUPS

LARGEST STOCK OF FANCY BUTTERGUPS IN THIS COUNTRY TO-DAY.
STOCK AND EGGS FOR SALE MATING LIST NOW READY

DR. C. S. BROUILLET

Box P. K.

GARDNER, MASS.

5 to 10 cents per dozen over hens' eggs. We are sure that white eggs are at a premium and sell more readily than green ones. It costs no more to produce white eggs than green ones. Now why is it policy to produce the inferior product? Will some one kindly explain to our readers?

I have dwelt quite lengthily on the subject of eggs and my early experience in making Indian Runner history has taught me that eggs are their largest asset, hence I wrote so much. If you were in the Indian Runner business four years ago and now would little wonder at the demand for breeding stock. Buyers who want white eggs and genuine Indian Runners are far greater today than ever in my experience. I sold a great number of eggs last year from over 100 breeding ducks and I have sold all my surplus stock to date, January 20th. I sold my last pen of birds to a party in the east who said he had lost considerable money on the so called Indian Runners so he said he would try me. The birds he says are his ideal and such pure white plumage. To say he was pleased, he said, was putting it mildly.

I say beginner or breeder, if you have stock that you can guarantee white eggs and genuine Indian Runners that go on year after year pro-



Pair of English Penciled Runners.

The duck is an imported bird—now six years old. This is the bird that came from England and laid that season, 92 eggs in 93 days. She was scored that season by Judge Heck: at 94½. The drake in the picture is a son of the duck and is an undefeated grand champion drake of the United States and Canada with a score of 95½. Owned by S. H. Elwood, Illinois.

SUCCESS WITH INCUBATORS.

Five years ago I got the chicken fever and I started a chicken ranch. Having bought an incubator, I filled it with a bunch of eggs laid by mongrel hens and started to get rich. In spite of all my bad luck, I hatched fifty chicks out of 125 eggs, but at the end of two weeks I had only six or seven live chicks and then I began to read and study and write to others for information. Of course the first thing I did was to lay my bad luck to the incubator.

After several more hatches and failures, I discovered that it was not the fault of the machine but mostly in the fertility of the eggs. The first season out of 200 eggs I managed to save only 30 chicks, then along in the middle of the summer about half of these were lost in a rain storm. Later lice and mites began to infest their coops so I came through with only about twelve good hens and three roosters. The latter we ate on the table.

During the first winter it occurred to me that there was something wrong with the little chicks' bowels and as luck would have it, I read an article in a farm paper one day telling to go to the druggist and buy a few ounces of nux vomica and put a few drops

in their drinking water. I did so and now I am able to raise most every chick that is able to kick out of the shell. Then too, at hatching time, I wring out a woolen cloth as hot as the hands can stand and wring it dry, having removed all the live chicks and in one hour you will be surprised to see the number of chicks that will come out. I do not put the woolen cloth on until the last day till they seem to be all done hatching.

Then again the incubator question confronted me and the one I purchased did not seem to be right so being a tinsmith by trade I set about to make one. I built two before I made a success of it and now I have a machine of my own make that I would not be afraid to set alongside of any machine that I ever heard of for looks, durability and hatching qualities. I have made a good many for my neighbors and all are giving excellent satisfaction. My machine is of the hot water type and has perfect ventilation. This is my fifth year at the business. I am now breeding Single Comb Brown Leghorns and Mammoth Toulouse geese and expect to add a pen or two of Pekin ducks, White Runner and Muscovy ducks.

Wisconsin.

C. A. Pierce.

ducing a large number of eggs, you will always have a good trade and the breed will prosper. So here's hoping that the new year brings you to yourself. Faith is the keynote to every treasure of earth as well as heaven. Nineteen fourteen offers you another chance. Seize it.

S. H. Long.

Illinois.



Unexcelled for egg producing qualities. Promotes health, vigor and ability to assimilate food. Stimulates the egg organism and increases the percentage of hatchable fertile eggs. While pure grains, beef scrap, grit, etc., are essential, MACK'S POWDER keeps their egg machines at full capacity. Contains no adulterations or irritating drugs—is all powder. Sold only by parcel post so that you get it in its purity and strength and save the middleman's profit. Package 50c post paid. One month's supply for 100 hens. 2c stamps accepted.

MACK'S POULTRY POWDER COMPANY.
514 Holmes St., Pittsburg, Pa.

SAVE YOUR Incubator Chicks

We have a guaranteed remedy for White Diarrhoea or howel trouble and if you will send us the names of 5 or 10 of your friends who use incubators we will send you free enough of our remedy to raise 50 to 75 chicks, also our book, The History of White Diarrhoea and how it can be cured in 24 hours. Will save you \$100 this season.

Baby Chick Remedy Co.

Box 10, MARSHALL, MO.

NO MOPING NOW.

"I'M LAYING"



Disease Paralyzes the crop (totally or partially). Why pour medicines into a "paralyzed crop," there to lie dormant, while disease destroys?

GET OCULUM AND INJECT it, and Cholera, Rump, W. Diarrhea, Black-head and Leg Weakness will "get out and stay out."

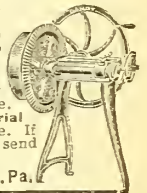
You have opened a gold mine for the chicken man." J. S. Hendry, Louisville, Ky.

Dealers, 50c. and \$1. If skeptical (doubtless you are), dime (postage), brings either size. Send bal., if O. K. Agents needed. Literature free. Your move next.

H. I. CO. Box 8 Salem, Va.

\$5 NO MONEY IN ADVANCE

The "Dandy" is the easiest operated, best built, fastest cutting green bone cutter made. Sold on 15 days' free trial with a broad guarantee. If it suits keep it, if not, send it back. Free catalog.



Stratton Mfg. Co., Box 43, Erie, Pa.

ROUP

Catarrh, Canker and other contagious diseases of poultry can be controlled and cured.

Protects Your Flock Destroys Disease Germs
The powerful germicide—not a poison—clean, colorless. Ten times as powerful as carbolic acid but safe to use. Kills the roup germ. Send 10c for large sample and free book "How to Cure Poultry Diseases."
General Purification Co., 630 Pioneer Bldg., Madison, Wis.

ENGLAND LEADS IN NATIONAL EGG LAYING CONTEST.

Ten English White Leghorns Average Nearly 43 Eggs Each for the Months of December and January. —S. C. Reds from Missouri Win Second Place for the Month—Some Valuable Lessons and Examples Shown as a Result of This Month's Record.

The pen which won the prize and made the best record in the contest two years ago did not begin to lay until about this time. They then went to work in earnest and won out over many pens which had gotten a good lead over them. This same breeder has a pen in this contest and they have started to lay again just about as they did in the first contest. These, or some other pen which is just now beginning to lay with a vengeance, may win out again.

The English pen of S. C. White Leghorns has gotten a lead of 104 eggs over its nearest competitor, and it looks as if they mean to set a lively pace for others to follow. They won the silver cup for January by laying 221 eggs. They have averaged 43 eggs per hen for December and January. Most all of the other foreign pens have been out of condition and suffered greatly because of the change of climate.

The total eggs for January was 10,520 and this makes the grand total 17,312. The average for the first two months is 16.63 eggs per hen. S. C. Reds, from Sedalia, Mo., won second place for the month with a record of 205 eggs.

One thing is certain, White Wyandottes have proven themselves to be consistent layers. Each year for three years, they have been among the leaders. The worst objection we have found with them is that their eggs run low in fertility and their eggs are not of a uniform size and color. This condition is due, however, more to carelessness on the part of the breeder than it is to a fault in the variety. We have some strains of White Wyandottes which lay a large egg of uniform size and color, and which are up to the average in fertility, but White Wyandotte breeders, as a rule, have not give as much attention to the selection of eggs for hatching as they should. Orpingtons have also been among the leaders each winter. They seem to be good winter layers, but they lose out in summer during the broody season. If the Orpington breeders wish to build up a good strain of layers, they had better eliminate the hens from their flocks which are continually broody. That is, if you have two hens of equal quality and one lays a few eggs and becomes broody, and lays a few more eggs and becomes broody again, and the second hen does not show such a tendency to broodiness I would prefer the eggs from the second hen for hatching purposes rather than from the first. I would also much prefer to breed from a male from the second hen than from the first.

Rhode Island Reds look as if they were going to do much better this year than in any previous year. The pen of S. C. Buff Leghorns which are among the leaders are full sisters. Three years ago the pen from which they were bred averaged about 100 eggs. By careful selection and breeding for three years they were bred up until the mother of these pullets and the entire pen from which she came averaged nearly 200 eggs per hen last year.

How can such results be obtained? How can Tom Barron and other noted experts in England and America, breed up strains of fowls of different varieties which will for three years in succession outstrip their competitors at the Storrs Contest, the North American, and at the Missouri National Contest where they are submitted to the trap nest test and all are put on an equal footing as far as housing, feed, care and management are concerned? How can the Australian and New Zealand breeders make such marvelous records year after year? These are the things which every breeder of poultry ought to consider. It is a noticeable fact that pens from the same breeders in each contest maintain about the same average egg production, whether the pen is in Storrs, Philadelphia or Mountain Grove and all these methods of housing and feeding are entirely different. The breeding back of the birds makes them maintain about the same rate of production, no matter where they are being tried out. This holds true with both good and bad pens. When I mentioned strain and breeding and selection as the foundation of a flock of high egg producers in my reports two years ago, some "authorities" made light of such "nonsense." They claimed that you could take most any old fowl and by giving it the right feed and care, you could get equally as good results as the breeders who were leading in the egg laying contests. That is, they said there was nothing to strain and that breeding was not the secret of egg production. Of course, we know that without the proper feed and care a hen will not lay eggs no matter what strain it is from or how good her breeding may be. But when a breeder can make a consistent record in laying contests year after year and lead all competitors, we will have to admit that he has a superior laying strain. If Mr. A. has a pen of Barred Plymouth Rocks which leads all other Plymouth Rocks year after year, and Mr. B. has a pen of Barred Plymouth Rocks which is at the foot each year for three years, we will have to admit that Mr. A. has a laying strain and Mr. B. has a strain that are not good egg producers.

What can we do to improve our flocks and build up an egg laying strain? The hatching season is on and I would advise you to bear these things in mind:

1. It must be remembered that a chick with a strong constitution is better equipped for fighting diseases than a weak chicken with all the medicines and condiments known to the

medical science. Then breed for constitutional vigor.

2. Many disease germs are transmitted from parent to offspring as all diseased birds, or birds which even have been diseased, should be removed from the flock. This past month we had a striking example of high vitality and low vitality. Two pens were housed in the same house, drank from the same pen, ate the same kinds of food and slept under the same roof. One pen went all to pieces and every one of them was sent to the hospital. The pen on the opposite side withstood the severest weather, kept in splendid health, and is one among the very highest pens in egg production.

3. Breed only from a male which has been hatched from an egg laid by a high laying hen.

4. Select your best laying hens to mate with the above male.

5. Don't breed from early maturing pullets.

6. Don't breed from hens which are continually going broody.

7. Breed from your hens and pullets which lay in November, December and January.

'Tis true the hen which has been laying through the winter will go to sitting first, but by this time the loafing hen has begun laying so the good hen is set on the poor hen's eggs which practice has a tendency to produce a flock of loafers.

The best record made thus far by representatives from the different countries was as follows:

Eggs—
W. Leg. made best Eng. record.....427
Buff Orp. made best U. S. record...286
W. Leg. made best N. Zea. record...205
W. Leg. made best B. C. record...226
W. Leg. made best N. Zea. record...205
W. Leg. made best Van. Is. record...199
W. Wyan. made best Ontar. record...196
W. Leg. made best Aus. record.....158
W. Leg. made best S. Afr. record...127

Most of the foreign birds have suffered greatly because of the change in climate and the long shipments. They were all from two to six weeks enroute, and many of them will never recover from the effects of the trip and the change of climate. Some few have died as a result and most all of the foreign birds have shown signs of being out of condition. One English pen has been the exception and that pen is in the lead. We may be able to get a few good individual records from the Australian, New Zealand and South African pens, but those pens as a whole will never do justice to themselves. The New Zealand breeders only sent from six to eight birds for each pen as that is the number used in the contests in that country. On account of the long time it takes to pass mail back and forth from each country, they did not get a copy of the rules governing the contest before the time they were obliged to make their shipments. Most all of their birds were also very young and will not mature for nearly two months yet. The Australian and New Zealand birds had also just passed through a winter in those countries and were sent here just in time to pass through another

winter. Being so young and passing through portions of two winters in succession and reaching a climate quite different from their own, it is enough to put them out of condition, and it is doubtful if we can get any good records from them. We certainly appreciate the confidence which has been expressed in us by the shipment of valuable birds from all parts of the country and all parts of the world, and it is needless to say that we will do the very best we can be every pen entered, whether it be from Missouri, America or from the opposite side of the globe. Conditions often arise which we cannot control, and upset our plans and blast our hopes, but our one desire is to be fair to all contestants and get the very best records we possibly can.

National Egg Laying Contest.

The 600 hens in this section of the contest have made a most excellent record for January. They laid 7,312 eggs, or an average of 12.19 eggs each. If this section of the contest will continue as they have started there will be some record breakers among them.

The ten highest pens in this contest are as follows:

Pen.	Eggs.
0 S. C. W. Leg., England	427
36 Buff Orp., Texas	323
18 W. Wyandottes, Penn.	222
24 W. Wyandottes, Eng.	294
1 S. C. Buff Leg., Missouri	286
5 Anconas, Missouri	285
34 W. Orpingtons, Ohio	282
47 S. C. Reds, Missouri	281
39 S. C. Reds, Missouri	279
4 S. C. Buff Leghorns, Mich.	274
2 Anconas, Missouri	274

White Wyandotte hen No. 181 from Pennsylvania, has laid 53 eggs and leads all hens in the contest. Buff Plymouth hen No. 524 from Missouri is second with 52 eggs.

National S. C. White Leghorn Contest.

The 280 hens in this section of contest laid 2023 eggs in January, or an average of 7.26 eggs each. The average was cut down because of the four immature pens from New Zealand. For some reason nearly every pen of White Leghorns went into a molt this month, and many of the hens were as naked as they ever are in the fall months when molting. The last part of the month they laid better than at any previous time, so we expect to see the Leghorns climb from this date on.

The best ten pen records thus far are as follows:

Pen.	Eggs.
79 Pennsylvania	303
65 Missouri	230
70 Missouri	227
64 British Columbia	226
61 Nebraska	209
77 Vancouver Island	199
69 Kentucky	192
70 Missouri	192
71 Missouri	178
67 Missouri	170

Hen 702 from Missouri has made the highest individual record with 44 eggs to her credit and hen 653 from Missouri is second with 43 eggs.

National Utility Contest.

The hens in this experiment are in much better condition now than they were one month ago, and we will be

disappointed if they do not make good records from this time on. The 160 hens in this test laid 1175 eggs for January or an average of 7.34 eggs each.

The ten highest pen records are as follows;

Pen.	Eggs.
92 S. C. Reds, Penn.	274
86 Barred Ply. Rocks, Mich.	200
95 S. C. Reds, New Hamp.	167
99 W. Wyandottes, Ark.	145
85 B. Ply. Rocks, Texas	127
88 W. Orpingtons, Kentucky	120
94 S. C. Reds, Ohio	101
90 White Orpingtons, Mo.	101
93 S. C. Reds, New York	93
80 White Orpingtons, Mo.	88

The two highest individual records were made by S. C. Red hens 926 and 927, laying 43 and 41 eggs respectively.

State Poultry Experiment Station,
T. E. Quisenberry, Director.
Mountain Grove, Mo.

DON'T SUBSCRIBE

To any poultry papers, farm papers, magazines or publications of any character until you get our special rates. We have reduced rates on practically all the magazines and periodicals, and can quote you better prices than you can obtain elsewhere. Address, Poultry Keeper Publishing Co., Quincy, Ill.

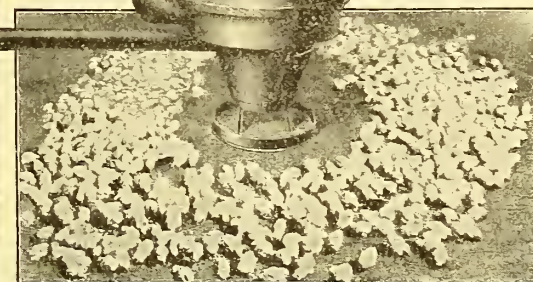
Stop

cent of the labor; 75 per cent of the operating expense; reduce the mortality from 20 to 50 per cent and increase the vigor and size of your matured fowls. No sickly, stunted cockerels or pullets will be found in flocks raised the Duplex way.

Duplex Brooder Stoves

heat and ventilate your brooder house perfectly. No need to mutilate your building with holes in the ceiling and side walls for ventilation. The Duplex will give you better results without. Don't try to heat all outside by having a hole in your roof. A Duplex will save you all that heat. The Duplex is the latest improved stove on the market, is made of the best material by skilled mechanics, yet sells for less than the others. Why pay more? It is the only stove on the market which incorporates a ventilating feature. This feature alone will save you from ten to twenty per cent of your fuel bill. Our free book tells all about these splendid labor, money and chick saving brooder stoves. Write for it.

Free Book Tells How To Save Your Hatch - Get It!



Duplex Colony Brooder Co.,
Rockford, Ill.

Gentlemen: I received the brooder stove promptly and am well pleased with it. You might be interested to know that I used three stoves of another make last season, which did not prove entirely satisfactory, but they convinced me that colony brooding was the only way to raise chicks.

The improvements your stove incorporates interested me so I ordered one of them, and I am satisfied that the Duplex will not only prove more reliable but will save me much on the cost of fuel.

Your system of ventilation is perfect, as it keeps the temperature on the floor of the room right without a draught, to say nothing about doing away with the almost impossible task of putting in a ceiling ventilator which will keep out the snow and rain.

Your regulator is certainly a marvel of simplicity and accuracy, and does not leak as the others did. I expect soon to install several more of your stoves, for I am convinced that you have hit on the proper thing in a Brooder Stove. Yours very truly,

(Signed) Polo Leghorn Yards,
Polo, Ill., Feb. 5, 1914. C. E. Trump, Prop.

That should go a long way toward convincing you. Mr. Trump is a busy man, but he will verify the above statement if you will write him inclosing a 2c stamp.

The time is getting short. Write for our booklet. We will gladly send you a copy free. Stoves will be shipped on the day your order is received, no delay. We pay the freight.

Every Chick Saved Is a Dollar in Your Pocket

"Colony Brooding" is the name of a booklet which fully explains the method of feeding and caring for chicks in colonies. We will send it to you for 50c and give you a coupon worth fifty cents on your first stove purchase. The book sent free with each stove.

Our free catalogue tells all about Duplex Brooder Stoves and the many advantages of Colony Brooding. Send for your copy. It's free for the asking. A postal will bring it by return mail.

Brooder House Plans For 10c in stamps we will send you plans for a Duplex Brooder House. These will enable you to build a new house or remodel your present house without the loss of time. Remember our catalogue is free for the asking.

Duplex Colony Brooder Co., Box 494, Rockford, Ill.

HAWKS.

It will soon be chicken time and with it comes hawk time. In the February Poultry Keeper there were several articles in regard to hawks that reminded me of the experiment I tried last year and found effective.

If you are ever fortunate enough to kill a hawk, tie that hawk by the legs and let it hang from a tree or something in the chicken yard and you will hear your neighbors shooing the hawks away that you may have had.

Let the hawk hang till it is dried up or torn to pieces by winds and rain. I was told this by an old time darkey, and after that by others who said that they had always heard it was an effective remedy. These old time dark-

les know all the old time signs and rarely miss it.

I had always been troubled by hawks and they became so tame as to come right up to the house. So last year our black man shot one of the hawks and I strung it up to a tree

in full view out in the orchard and I can't remember now that I lost a single chicken by them the whole season through and yet all my chickens have free range. I saw many hawks soaring over my head.

Tennessee. Mrs. M. E. H.

Too Late to Classify.

LIGHT FAWN AND WHITE INDIAN
Runner duck eggs. Harshbarger blue ribbon strain, \$1.25 per 13. Mrs. E. A. Thomas, Mt. Sterling, Ohio. 3-1

WHITE AND BUFF FAVEROLLES.
Large Partridge Wyandottes (English strain). Massive imported White Orpingtons. Eggs and stock. C. E. Elliott, Zion City, Ill. 3-1

MAMMOTH TOULOUSE GEES. Eggs 25c each. Booking orders now. Mrs. E. A. Thomas, Mt. Sterling, Ohio. 3-1

PARCEL POST PREPAID. Black Langshan eggs, \$1.50 sitting. Golden Gate Farm, Lafayette, Ind. 3-4

FAIR PRICE YARDS. Can spare few more extra fine pullets and cockerels from standard bred S. C. Buff Orpingtons (Owens). Eggs \$3 and \$5 per 15. Also baby chicks. Graceie Black, Orpington specialist, 1929 Whitney Ave., Niagara Falls, N. Y. 3-1

ROSE COMB BROWN LEGHORNS. Heavy winter laying strain. None better. Eggs \$3.50, 100; \$1 sitting. Baby chicks, \$12. A few good cockerels, \$1 each. Mrs. S. J. Belding, Northboro, Iowa. 3-4

The Biggest Poultry-Profit Year Why?

I advise all my friends to get ready now to take advantage of the greatest demand for Poultry in many years and at the highest prices. There's a big shortage in pork and beef. Poultry raisers must make up the meat deficiency. The sooner you start the longer and bigger your harvest; the bigger your money roll at the end of the season. You can't depend upon the hen to produce your chicks—she's too slow; too bothersome; too unreliable.

The Sure Hatch Incubator
Is the Ever-Ready—Ever-Dependable Chick Producer
It is strongly built of California Redwood, triple-walled, water-heated, self-regulated, economical. Guaranteed for 5 yrs. Yet my direct-to-you factory price IS LESS than you're asked to pay for many poorly built machines. Poultry picks up what would otherwise go to waste on the place. It is a "pick up" for you, too. No experience is necessary with my machine. It's so simple and absolutely self-regulating from start to finish. I guarantee my machine to maintain proper hatching conditions in a room where water freezes; and to hatch every egg that has the germ of life in it. I'm so sure that my machine will do all I claim for it that I'll send it to you on SIXTY days' trial and pay the freight. You can try it at my risk. If not satisfied send it back and get your money.

You Need My Uncle Sam Poultry Book
It's worth \$10.00 to anyone in the Poultry business. A big book of facts on Successful Poultry Raising from U. S. Government Experts. The only book that gives you all the vast fund of absolutely reliable, official information on Poultry and its proper care. It will start you right and make you big profits the first year. I will send it to you free with a Sure Hatch machine. Write for my Big Free Illustrated Catalog which tells all about the Sure Hatch Incubators and Brooders.

FRANK HAMMOND, Pres. & Mgr.
SURE HATCH INCUBATOR COMPANY
Box 2, Fremont, Nebr.

GUARANTEED FOR 5 YEARS

MONEY BACK GUARANTEE **FREIGHT PAID**

Indian Runner Ducks

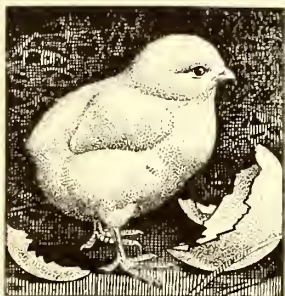
"GOOD AS GROW." ENGLISH PENCILLED and PURE WHITE. We have superb carriage and type. EGGS AND BABY DUCKS ONLY. My guarantee of satisfaction protects your money.

S. H. LONG

Box P. K.

Elwood, Illinois.

Day-Old Chicks of Quality



THAT WILL
Live, Thrive, Grow AND Win for You

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| S. C. Rhode Island Reds. | S. C. Black Minorcas. |
| R. C. Rhode Island Reds. | White Plymouth Rocks. |
| S. C. Buff Orpingtons. | Barred Plymouth Rocks. |
| S. C. Black Orpingtons. | Buff Plymouth Rocks. |
| S. C. White Orpingtons. | S. C. White Leghorns. |
| White Wyandottes. | S. C. Brown Leghorns. |

Eggs for Hatching in any Quantity. Sent Prepaid



Shipments guaranteed to reach destination safely. All dead chicks replaced. Book your order now. Our equipment includes the highest priced machines on the market, backed by our twenty years' experience in hatching and breeding enables us to furnish you chicks that are well hatched, vigorous, strong and healthy. Hundreds of satisfied customers. Our aim is to furnish you the best chicks, not the cheapest in price. Poorly hatched chicks always prove expensive items. Start right by sending for our chicklet catalogue today.

Our Show Record Includes Chicago, New York and Indianapolis Winnings.

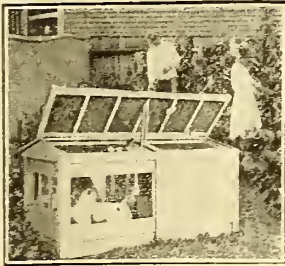
Many first prizes have been won by our birds at these National Shows in the past. Our breeders are placed in condition for producing strong, healthy, fertile eggs by December 1, consequently for the present we will not exhibit, but can furnish you Baby Chicks that will grow into winners for you. Our chicks are well hatched and we can quote you extremely low prices on them. Be sure and get our catalogue. Sent free upon request.

Goshen Poultry Farms.

Route 3.

Goshen, Indiana

A \$ Spent NOW May Save You Many



Dear Sir:— Vancouver, B. C., Canada.
We have been trying your System for the past year, and although we only started with six hens and bought all our hatching eggs, we have come out decidedly on the right side at the end of the year, and hope to do very much better next year.

Yours truly,
MRS. W. F. SCOTT.

Dear Sir:— Mt. Hope, N. Y.
I consider the Philo System wonderful in producing results, our chickens being exactly twice the size of those raised by careful neighbor in coops with runs, and the quality of meat is not to be compared.

Very truly yours,
MRS. M. B. MINGAY.

Dear Sir:— Evansville, Ind.
A couple of years ago I adopted the system and can say that it is surely all you claim for it. The chickens grow nicely and the pullets lay early and steady through the winter.

Yours truly,
EDGAR L. FENTON.

Dear Sir:— Odenton, Md.
We find that through following your system that we can get eggs while our neighbors are not getting any. We have only eleven pullets but are getting from six to nine eggs per day, while our neighbors have large flocks and no eggs, and are coming to us every day for ours.

Very truly yours,
MRS. A. HEATH.

Dear Sir:— Nashville, Tenn.
I have had your system now for one year and I question if there is anything better for the progressive poultryman. Last February I put 30 day-old chicks in a fireless brooder and had no trouble in raising them.

Yours truly,
PAUL R. ULRICH.

Dear Sir:— Denver, Colo.
I have been using your system for the past nine months and am well pleased with it. I now have five Economy coops and one colony coop. Am raising Orpingtons with success.

Yours very truly,
J. M. HUCKE.

Dear Sir:— Marion, Ala.
My birds under your System are weighing two pounds at two months and three pounds at three months. I never could get them up to that when they ran at large, and besides they are as white as puffs of snow. I am highly pleased with my efforts in the use of your system and will never use anything else.

Very truly yours,
CHAS. B. CARTER.

Five New Philo System Bulletins

- No. 1. The New Philo Utility Coop.
Reduces labor to the minimum, and has advantages for the poultryman who wishes to keep 50 hens or more. Working drawings and specifications are included.
- No. 2. Care and Feeding to Produce Market Eggs at Lowest Cost.
Detailed instructions for preparation of food. Exact quantities to use, when and how to feed, showing how eggs were produced, at 7c a dozen.
- No. 3. The Shortest Road to a Successful Poultry Business.
Tells the best way to make a start in the poultry business; how to buy stock that will increase in value; the most common mistake, and how to avoid it; how many fowls to keep; the profits to be expected from the utility poultry business.
- No. 4. The Philo System Breeding Chart.
This plan is the outgrowth of years of investigation and practice by E. W. Philo.
- No. 5. The Greatest Profit from Farm Poultry.
A new plan of farm poultry keeping that reduces the expense of installing and operating from 25 to 50 per cent.

Are you getting the most from your poultry?

Read these letters from other poultry keepers, telling how they have profited from the new System of poultry keeping.

In the past five years thousands of such letters have been received, and

Here is the Reason:

The Philo System is unlike all other ways of keeping poultry, and in many respects is just the reverse, accomplishing things in poultry work that have always been considered impossible, and getting unheard-of results that are hard to believe without seeing.

The new System covers all branches of the work necessary for success from selecting the breeders to marketing the product. It tells how to get eggs that will hatch, how to hatch nearly every egg, and how to raise nearly all the chicks hatched. It gives complete plans in detail how to make everything necessary to run the business, and at less than half the cost required to handle the poultry business in any other manner.

TWO-POUND BROILERS IN EIGHT WEEKS are raised in a space of less than a foot to the broiler, and the broilers are the very best quality, bringing here three cents a pound above the highest market price.

OUR SIX-MONTHS-OLD PULLETS are laying at the rate of twenty-four eggs each per month in a space of two square feet for each bird. No green cut bone of any description is fed, and the food used is inexpensive as compared with the food others are using.

DON'T LET THE CHICKS DIE IN THE SHELL. One of the secrets of success is to save all the chickens that are fully developed at hatching time, whether they can crack the shell or not. It is a simple trick, and believed to be the secret of the ancient Egyptians and Chinese, which enabled them to sell the chicks at ten cents a dozen.

CHICKEN FEED AT 15 CENTS A BUSHEL. Our book tells how to make the best green food with but little trouble, and have a good supply any day in the year, winter or summer. It is just as impossible to get a large egg yield without green food as it is to keep a cow without hay or fodder.

OUR NEW BROODER SAVES TWO CENTS ON EACH CHICKEN. No lamp required. No danger of chilling, overheating, or burning up the chickens as with brooders using lamps or any kind of fire. They also keep all the lice off the chickens automatically, or kill any that may be on them when placed in the brooder. Our book gives full plans, and the right to make and use them. One can easily be made in an hour at a cost of twenty-five to fifty cents.

Our book, "The Philo System of Progressive Poultry Keeping," gives full particulars regarding these wonderful discoveries with simple, easy-to-understand directions that are right to the point. Instructions are given for building the colony coops, and other appliances of the system. For some of these we have U. S. Letters Patent, and patents are pending for others, but purchasers of the book are given the right to make and use these appliances. This system is especially adapted to the beginner, requiring a very small initial outlay, and admitting of increase as rapidly as the poultry keeper learns the work. It is the small unit plan that expands as readily as the "sectional hockcase." Each season since 1907, thousands of Philo System poultry plants have been established, and are wonderfully successful. Whether you intend to make poultry keeping a business, a recreation, or to provide an addition to the present income, this system will solve your problems. In less than six years, eighteen editions have been printed, nearly half a million copies.

This system will be demonstrated to you, or to anyone, at the Elmira plant of the Philo National Poultry Institute, where over 500 chickens are raised on less than a half acre of land.

THE POULTRY REVIEW

Monthly. A progressive poultry magazine, edited by E. W. Philo, with able assistants. Devoted to the most practical and economical methods of keeping poultry for profit, especially in small flocks or units on city or town lots. The Poultry Review is printed on a poultry farm where the editors have every opportunity to keep in close touch with actual poultry work under all conditions. It is edited for the practical poultryman; no theoretical articles are published, but many theories are carefully tried out in our own yards, and results published in The Review.

A FREE APPROVAL OFFER

You run no risk in finding out for yourself what this book will do for you. Send no money. Simply write a postal saying, "I accept your approval offer," and we will send the book, and one copy of The Poultry Review on approval. After reading the book you can send us \$1.00, and we will enter your subscription to Poultry Review one full year—twelve issues—and give the book as a premium, or you can return the book in ten days and no charge will be made.

If you prefer to save us bookkeeping expense, send \$1.00 for the book and Review one year, and we will include the set of five Philo System Bulletins. Satisfaction guaranteed or your money back. SEND YOUR ORDER NOW.

E. R. PHILO, Publisher, 900 North Ave., Elmira, N. Y.

POULTRY KEEPER

ISSUED THE FIRST OF EACH MONTH
A JOURNAL FOR EVERYONE INTERESTED IN MAKING POULTRY PAY.
(Incorporated) QUINCY, ILLINOIS.

Subscription Price: Fifty Cents a year; Single Copies, 5c.

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All subscriptions invariably discontinued at expiration. Subscribers will confer a favor by reporting to us any irregularities in receiving the Poultry Keeper.

Advertising rates made known on application.

Poultry Keeper readers are cordially invited to express their opinions on any subject of poultry that will be of interest to our readers, give helpful talks to the inexperienced and ask questions in any department.

S. C. PIGGOTT, Editor.

Associate Editor, Dr. N. W. SANBORN.

VOL. XXX

MARCH, 1914

No. 12

Before the end of this month nearly every poultry keeper will have eggs in process of hatching. Many of our readers had chicks out last month but most of them wait until March days before setting the hen or filling the machine. Chicks hatched before the end of March get the protection of the brooder while the weather is still cold, yet become of proper age to get the grass range in April and May. To have the hatches of the American breeds come off before the 10th of April, and the smaller breeds before the 10th of May, is to get chicks at the best average time for good results.

If you have time to run trapnests only one month in the year, let that month be March. Try the mating of your best male to ten females, put in four trapnests and set the eggs of each hen apart from the others. Do this; save eggs till you have six or more from a hen, mark each egg with the number of the leg band of the layer, set the eggs of two hens under a single sitting, two days before time of hatching take the eggs of one of the hens away from those of the other, give the eggs you remove to another sitter. When the hatch is off you should toe mark the chicks so that in the fall you can know just the hen that produced the chick. We cannot tell you now what you will gain from all this work but you will get facts of value to you in future breeding, facts in regard to maturity and egg ability, etc. Try this out on a few of the best looking birds through this month and next.

The utility side of poultry is getting more attention than it did. The egg laying contests have helped this to a marked extent. Even the big Boston show, in January, had a utility department in which birds were judged by their market properties. Shape of body, color of skin and shanks, vigor of birds as indicated by color of comb and wattles as well as their activity, were what decided the judge in his work. To the surprise of all of us this utility part of the show was

thronged by people all through the days of the week. In making matings, think of utility.

Many a man lost his feeding beets in the freeze of January. It troubled some of them to get a substitute. Green living, vegetable food is a help to egg production. It is a welcome addition to an otherwise dry ration. Something had to be found for the purpose. Good results are had from the use of sprouted oats, while other folks began the use of dry, beet pulp. This pulp is what is left from sugar beets after the "sweet" has been taken out. The pulp is then dried, so as to preserve it, and sold largely for feeding to cows. Poultrymen have found out that it is also good for laying and breeding stock. At the Connecticut Egg Laying Contest it was used all through the first and second years, being supplanted this year by the use of mangel beets. Beet pulp will take up six times its size of water and should be fed after soaking for a few hours. We have known breeders to mix the dry pulp in the dry mash, seeing that water enough was given in the fountains to supply the needed water. It will take just as much water in the crop as if soaked outside the hen.

A new breeder of Buff Wyandottes writing us, asks if he has got to maintain two breeding pens in order to produce both exhibition males and females. Of course he is referring to producing color rather than size and shape. We have, no doubt, in our mind that it would be easier to get them this way than any other, but we advise against it. It is the bane of any variety to have to maintain two lines of blood to get stock that will win in a single variety. Buff Wyandotte breeders, as a rule, for eighteen years, have followed out their ideals through the single mating. Buff color has ranged all the way from straw to red in shade, according to the like or dislike of the judges. Today the big shows, from Chicago to Boston are placing the ribbons on birds of a medium shade of

buff. The males may be a little stronger in color than the females, but they must have the "golden" shade of the Standard. Mate up this spring, females that are slightly darker than the best show birds to males that are slightly lighter than show requirements, for getting both sexes.

Facts are coming to light in regard to poor results in artificial hatching. At the Connecticut and other State Experiment stations, good work is being put into the learning of many things that work for the good and evil in poultry keeping. As we read the various reports sent out, much of the losses from "dead chicks in the shell" is due to bad air in machine and cellar. Ventilation and moisture have less to do with this than foul air. One Canadian station reported that the keeping of an open oil tank in the cellar reduced the hatches seventeen per cent. Escape of lamp fumes into the egg chamber reduces the hatch. It all indicates that ventilation of cellar is needed, the mechanical construction of the machine must be right, and that mold germs cannot be left in room or incubator. Dirty eggs hinder good hatches, even though the eggs be washed before sitting. Dry, clean nests help good hatches. Fresh eggs are better than stale ones, those under two weeks being preferred.

The egg-for-hatching season has opened earlier than last year. More sales of breeding stock were made this winter than we have known in four previous ones. There are so many new people taking up poultry this year that the boom is felt by all of us. The high price of food stuff has turned the attention of many to the producing of their own table eggs and dressed poultry. Fanciers have their stock reduced lower than for many years, large numbers of egg orders are booked for late spring delivery and some that we know are sold into April. It is always well to book your egg order before you need the eggs that you may be sure of their being sent when you want them. The man who waits till ready to set gets left too often for his comfort. We know one man who ordered one hundred eggs last spring, ordered an incubator the same mail, the eggs arrived in seven days—the machine in twenty-one days. Did he get a good hatch? Far from it. He had to learn his incubator, the eggs did not improve with age and he was a beginner. He well learned his lesson that time.

How many of your friends or neighbors are now taking Poultry Keeper? Doubtless there are some who are not, but who would subscribe if their attention were called to the matter. We are carrying a number of special offers which may be taken advantage of. One of them is that we will renew your own subscription free for one year if sent in with two other subscriptions. A very little effort on your part will thus enable you to get your paper free of charge.

OPERATING THE INCUBATOR AND SAVING EGGS FOR HATCHING.

In order to get the best results in hatching either in the natural or artificial way, the breeding stock must be healthy and vigorous, properly fed and housed and given all the exercise possible. Eggs from fowls that have had roup, or have been closely inbred, and lacking vitality produce weak chicks that are hard to raise, if indeed they hatch at all. Keep your nest boxes clean and free from vermin.

To do this, every few weeks mix a tablespoonful of some good stock dip or cresol disinfectant in a gallon of air slacked lime. Sprinkle a handful in the bottom of each nest and on this lay the nesting material.

Always handle eggs with clean hands. An egg that is soiled, or one that has been washed should not be used for hatching. A large suit case laid on its side is a good place to keep eggs for hatching. Put a layer of soft material at bottom and on this a layer of eggs and a cloth until case is full. Keep the lid closed and this will prevent evaporation of the eggs. No eggs should be kept longer than ten days, and the sooner they are set after being laid the better they will hatch and the stronger will be the chicks. Keep the eggs in a cool room while saving them. A temperature of 55 degrees is about right. It is not at all necessary to turn eggs while saving them for hatching. In fact the more an egg is handled the less likely it is to produce a good chick.

Operating the Incubator.

If you are a beginner, do not place eggs in your machine until you become familiar with the working of the regulator, lamp, etc., and run the machine empty for a day or two to get it warmed up. Some incubators can be warmed up in a few hours, while it takes a day or two for others. If the machine has double walls and is well packed, it will take longer to get it warmed than one with single walls, but after once warmed, it will take less oil to keep it that way and will maintain a more even temperature. Have the machine to stand at 101 degrees with thermometer lying on sheet of paper in bottom of egg tray for a day and a night and when it does this you can know the regulator is right. Place the eggs in the machine in the morning, then you will have the entire day to see that the machine stands at the proper temperature when the eggs get warmed up. As there is danger at this time of the machine becoming overheated. Remember there is much more danger in overheating the eggs than in letting them get too cool. Especially is this true at the beginning of the hatch.

Turning the Eggs

36 to 48 hours after placing eggs in machine commence turning them twice a day, morning and night. After the first week or ten days they can be turned oftener with good results. It is not necessary to turn the eggs over as a great many suppose: simply roll them around and change their position

in the tray. Stop turning on the 18th day.

Cooling the Eggs.

During the first week of incubation the eggs will get all the airing they need while being turned. After this commence to cool them a few minutes each morning increasing the time as the hatch progresses until by the 18th day they can be cooled 20 to 30 minutes according to the temperature of the room.

Testing the Eggs.

Test the eggs on the seventh day. White shelled eggs can be tested out on the fourth or fifth day but unless you are experienced do not test before the seventh day when it will be easy to distinguish the clear or infertile eggs from those containing growing embryos. The eggs can also be tested about the fifteenth day, but I think the less an egg is handled in this way the better the results are likely to be.

Ventilation.

After a number of years of very close observation, I am convinced that the main cause of fully developed chicks dead in the shell at hatching time is insufficient ventilation, or in other words, a lack of oxygen and an over-supply of carbonic acid gas or carbon dioxide. After the twelfth day commence to give more ventilation each day until hatching time. With increased ventilation in the egg chamber, the evaporation will also be increased and to offset this moisture in some form must be supplied. With the

diffusive type, hot air machines I supply moisture to the fresh air machines of the heaters, and in the other types by a moisture pan under the egg tray. At hatching time leave chicks on tray unless hatch is cleaned up unless they are too crowded.

When hatch is over take out tray and put chicks in nursery and let them remain there until they are dry and fluffed up. While they are in the nursery of the machine see that they have plenty of ventilation and if opening the ventilators is not sufficient let the door partly down, as it is very necessary that they should have plenty of air and at the same time keep the temperature up to about 100 degrees in the nursery. If they spread out evenly and are quiet you may know the temperature is right. If they part they are too warm and when they huddle they are too cold.

W. L. Teames.

Are you going to subscribe for any papers or magazines soon? We can furnish any list you want and will divide the same, sending to as many different addresses as there are different papers, if desired. This gives you an opportunity to get your own papers in connection with as many others as you wish. If you are in the market for more than one paper adopt the modern method and order all through one source and save money. It is worth while to look into this matter. Let us have your list and we will quote you promptly.

"The Rayo Is Especially Recommended to Beginners Because of Its Simplicity, Absolute Reliability and Perfect Results"

This Incubator Hatches!

Boosts Profits—Slashes Expense!

Reader, now that you've decided to buy an incubator, are you going to choose one on **promise or performance?**

Results are what count. The number of chicks hatched, the amount of oil used, the freedom from care and attention, and the assurance that the incubator will perform season after season, the same as the first time it was used.

Standing beside several types of machines, the "Rayo" has shown its superiority time and again. In one instance averaging 16 chicks more to a hatch with one-fifth the quantity of oil. This superiority of the



160-egg size. One price—our factory price—to all.

RAYO Incubator

isn't just a matter of luck. The superiority is built into the machine and there isn't an old-style, lamp-on-the-side machine that will ever equal it. Besides saving dollar after dollar on oil and 15 to 20 chicks each hatch, the Rayo puts an end to all the drudgery of old-style machines.

The "Rayo" requires only one filling to a hatch. Eggs and thermometer can be seen through double glass top, which raises for airing, cleaning and turning eggs. Lamp under egg chamber gives perfect radiation. Double water thermostat acts on flame—produces exact heat needed—none thrown away. Automatic ventilator. Turn eggs semi-automatically without touching trays. Clean lamp without removing chimney or tank. Oil tank holds five quarts, a month's supply. Strong redwood case, covered with steel, enameled like mahogany, making it fireproof and handsome.

The Rayo's claims are based on actual facts. Hundreds of experienced poultrymen will have no other machine. Beginners sure of success. Low, direct, freight prepaid prices bring it within reach of all.

Money-Making Book, "Turning Eggs Into Chickens Into Dollars"—FREE

to everyone sending their name and address. This book contains special articles by expert poultrymen which, if followed, will bring the reader greater profits. The reason why we send this book FREE is because it also tells all about Rayo Incubators and Breeders. Write for Book No. 16 today and we'll send you Rayo special low price and combination offers. Address

First and Only Patent Hatching Chart in the World—FREE

To every person who asks for our free Money-Making Book, we will send, absolutely free, a sample of the Rayo Patent Hatching Chart. It tells what to do day by day during the hatch. We also present to you with each Rayo Incubator you purchase a \$1.50 Hygrometer. The hygrometer and hatching chart would cost you \$2.50 if you had to buy them. Remember, we include these with each incubator without extra charge. No other firm does this.

RAYO INCUBATOR COMPANY
1011 S. 13th St., Omaha, Nebr.

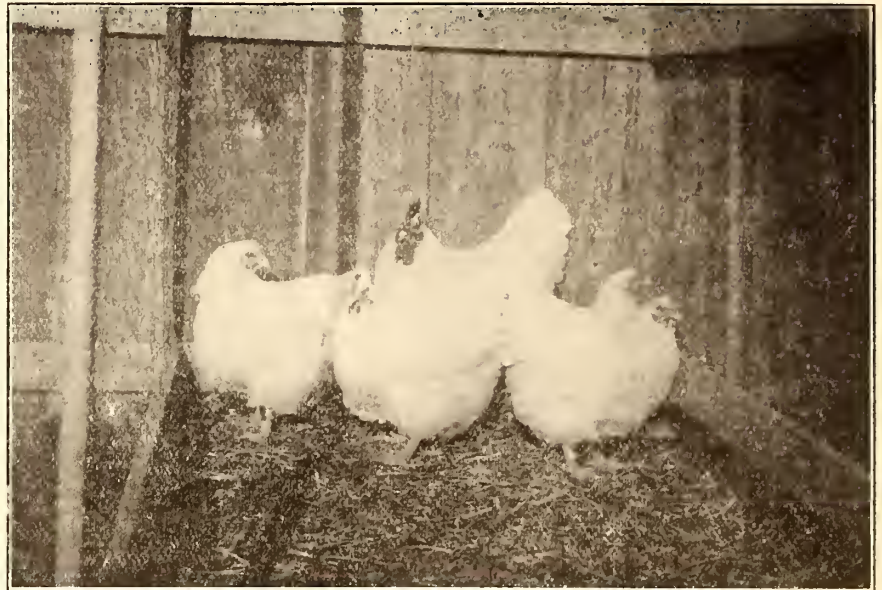
A FANCIER'S EXPERIENCE IN BREEDING ORPINGTONS

In order to give you a history of my Orpingtons, I am compelled to go back a few years when I assisted my father who was in the mercantile business for thirty-five years. Owing to my father's age and my lungs being affected he sold out to his brother and has invested in five farms, ranging from fifty-five up to five hundred acres. I decided, per doctor's advice, to live out in the fresh air and do light work, and being a "chicken crank" I thought that would be ideal employment, give me exercise and keep my mind busy. So right here is where I got in with the "Orpington game," having had experience with chickens while at father's as my mother was a fancier and bought a number of the new breeds, one new variety every year or two, and at last bought the Buff Orpingtons which she liked so well she gave them a few extra years of grace, and I took care of them before leaving for work in the stores.

While engaged in the mercantile business I was often called upon to make buying trips to St. Louis, and there I incidentally met my helpmate who is with me now in raising Orpingtons. We located on one of the farms in the spring of 1909 and began breeding Leghorns, Light Brahmas, Barred Rocks, etc., but I was not satisfied as I wanted something extra fancy, so that the second year we started in on the

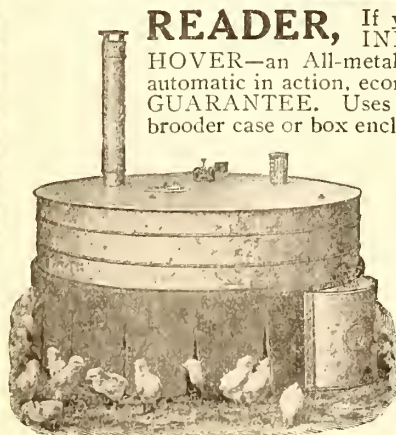
Single Comb White Orpingtons. We purchased one hundred eggs of extra quality, also three sittings of twenty dollar eggs from another fancier and a trio of birds. This was our start.

The quality was good and the hatches were good and the little fellows grey like weeds, and oh! how the Orpingtons do hustle and grow and range, as I have seen them range more than a



Pen of superior White Orpingtons bred by J. C. Beare, Fort Gage, Illinois. Mr. Beare reports that he refused to price this cockerel; also that he refused \$100 for his first prize winning hen at Carbondale, Illinois Poultry show. Birds bred by Mr. Beare are rapidly coming to the front, with the best birds of these breeds.

FOR INDOOR BROODING



Cyphers Portable Hover

Set it down Anywhere Indoors and you will have a Safe and Comfortable Place for the Little Chicks. "Movable" at a Moment's Notice without even turning down the Lamp Flame. Weighs 35 Pounds in use. Price, Complete, Safely Boxed, \$8.50 free on cars at all our Places of Business, except Oakland and London. Oakland F. O. B. price, \$9.50. Entirely Safe to order a sample from this advertisement. Weighs 40 lbs., by express.

READER, If you are looking for a low-cost, convenient and practical way to brood little chicks **INDOORS**, you will not make a mistake if you buy and use the **CYPHERS PORTABLE HOVER**—an All-metal, Self-regulating, Self-ventilating, **COMPLETE BROODING DEVICE** that is automatic in action, economical to operate and that with proper care will last many years. **ALL THIS WE GUARANTEE.** Uses the floor of the room for the floor of the brooding space and therefore does not need a brooder case or box enclosure. Chicks are on level of room floor all the time and do not have steps or inclines to run up and down. Can be operated in **ANY ROOM** or place indoors where it is safe to raise chicks or ducklings. Please read the recent sample reports here-with and send without delay for our **FREE 1914 "When, Where and How"** blanket circular, as described below.

REPORTS FROM CUSTOMERS

Hutchinson, Kans., July 13, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—

We believe that no other brooding device comes as near reaching the "acme of perfection" as does your Portable Hover. We know **whereof we speak**—because we have used others.

We wish to say to all poultry growers that they need not fear to use Cyphers Portable Hovers **at any time of the year.** At all seasons we have found them reliable. The temperature is easily maintained, even in very changeable weather. Often when our section was visited by blizzard conditions we would worry about our little chicks, **but in every case** found them "snug and warm" and unharmed.

Experience has convinced us of the superiority of the Cyphers Portable Hover and in future we shall use them exclusively. They are large and roomy, are **automatic in ventilation** and produce strong, healthy chicks.

O. H. GUY & SON, Per O. H. GUY.
Breeders of Rose Comb Brown Leghorns.

Hillhurst Farm, Poultry Department,
Orchard Park, N. Y., June 27, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

No doubt you remember our **purchasing one dozen** of your Portable Brooding Hovers last spring. The brooding season now being over,

you will be interested to know that they **have given entire satisfaction**, in fact we found them to be the **best and most practical Hover** we ever used and we **have used a number of different makes.** The Portable Hover is **convenient, easy to care for**, economical in operation and supplies an abundance of heat.

We put about 75 chicks under each Hover. We have put more than this under a Hover with good results, but think 75 is better. The Cyphers Portable Hover has the same **easy and reliable regulator** that has always distinguished the Cyphers Adaptable Hover, and for anyone needing a **self-ventilating, practically automatic Portable Hover** we know of nothing that equals the Cyphers.

HILLHURST FARM,
John B. Casterline, Mgr.

BIG FREE CIRCULAR: Send today—NOW, before you forget it, for our 1914 illustrated free circular (four pages, 11 by 18 inches) that explains **FULLY** "when, where and how to use" this type of brooding Hover "for best results." Gives detailed reports from these same customers and **NUMEROUS OTHERS** who own and are using Cyphers Self-regulating, Self-ventilating Portable Hovers, with **UNIFORM SUCCESS.** Write to Home Offices, Buffalo, N. Y., or to our branch store nearest you—see opposite page. Be sure to send all orders to our place of business nearest you, thus saving valuable time, also money on freight or express charges.

quarter of a mile from the dwellings out in the cornfields after the bugs, worms, etc.

We were so well pleased with White Orpington results the first year that the next year we penned some Buffs, which was my "dowry" from home, also bought several quality hens and a fine Buff cock. We thought we were "going some" on Orpingtons, and couldn't pass up the Blacks, so we took them in too, and today without regret, we have prize winning Whites, Buffs and Blacks of which any poultry fancier could well be proud.

Right here I wish to say that I raise all of my feed and do mixed farming. I am building up quite a herd of Jerseys and also keep Poland China hogs and some fine stable horses, so this in connection with the Orpingtons has kept me hustling as well as the hired hands. But the poultry business has grown so rapidly that it is with pleasure I shall give it my undivided attention this year.

Just a word in connection with showing: We have never taken time to fit any of our birds for showing until the last season, but we were urged to do so by admirers of our Orpingtons, so we made two of the largest shows in Southern Illinois, and it is with pride we can state we won our share of the coveted blues. (See winnings elsewhere in this issue). Will relate at some other time my experiences of my first

show, a real funny story where the joke is on "who?"

We are using four incubators, the Prairie State, Johnson's, Sure Hatch and Cyphers which makes a capacity of about one thousand eggs. We have one brooder house which accomodates fifteen hundred chicks, with Simplex Brooder Stove installed; also several small brooders. Our buildings consist of one large house, 14x34 ft., one 16x16 ft., two 9x9 ft., and three 6x6 ft., some of the larger buildings being subdivided making fifteen buildings in all. Our pens are extra large and I have each one sowed to wheat and rye. They are so constructed that I take a two-horse drill and in the spring after the grass is tough, I re-seed and that gives the birds plenty of exercise which is very essential to their health. We give the birds good attention and are rewarded with lots of fertile eggs.

Every fancier, of course, admires his own breed most, and he would be foolish to try to succeed with any other than the best in his own opinion, but I am more thoroughly convinced every year that the Orpingtons are the best for me. They are a very popular fowl owing to the fact that they possess so many admirable qualities. They rapidly attain great weight and size, which with their large breast makes them ideal brooders and table fowls. They are hardy and gentle, and easily kept in yards, but are only too glad to help make their living on range. They are fine layers of large eggs, and lay es-

pecially well in winter when eggs are high. Two years ago when we had an exceptionally cold winter one of my pens containing twenty-two Orpingtons averaged from fourteen to twenty-two eggs per day during the month of January. As for beauty—it is hard for me to decide which is the most beautiful, a pen of the Buffs, White or Blacks; but of one thing I am sure, they are all aristocrats of the poultry family when on exhibition at the shows.

I cannot pass this article along without saying that I have a trio of young fanciers, five, three and two years old, who will be as bad as their daddy, as the oldest boy talks chicken, and then some more chicken, and they can all eat their share of these pink legged fellows. A word of thanks to those who peruse this article, and if you are in our vicinity call and see us. You will be welcome,


J. C. Beare.

Prop Progressive Orpington Farm, Fort Gage, Ill.

100% Hatches

You can come mighty close to this mark and have strong, healthy chicks.

Send 10c for Large Sample



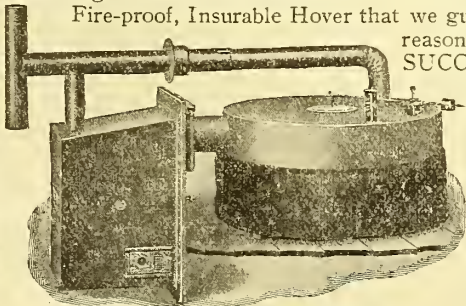
Ask for Free Poultry Book

the powerful germicide, used as a spray for incubators and brooders, cuts down your chick losses. Not a poison—clean, colorless. A money maker for poultry. Keeps your flock free of disease.

General Purification Co., 630 Pioneer Bldg., Madison, Wis.

FOR OUTDOOR BROODING

JUST AS SOON As the ground is dry each spring it PAYS BEST to get the little chicks out upon the fresh earth, or into grass runs—and this calls for colony coops EQUIPPED with safe and trustworthy brooding hovers, or for OUTDOOR BROODERS, either factory-built or home-made. You can easily make your own outdoor brooder, Reader, by securing at some nearby store a piano box, an organ case or a large goods box and attaching thereto a CYPHERS ADAPTABLE BROODING HOVER—a Self-regulating, Self-ventilating, All-metal, Fire-proof, Insurable Hover that we guarantee to be safe from fire, to be practical in use and to last a lifetime with reasonable care. There are TENS OF THOUSANDS of these Standard Hovers in SUCCESSFUL USE in all parts of the civilized world. Please send TODAY for our latest 1914 FREE blanket circular (four pages, 11 by 18 inches in size) entitled, "When, Where and How To Use Cyphers Adaptable Brooding Hovers to Best Advantage"—mailed free, postage paid, to any address on request.



Cyphers Adaptable Hover

Fire-proof, Wind-proof, Insurable, Self-regulating and Automatic in Ventilation. Best Device in World's Markets for Use in Home-made Brooder Cases, Colony Coops, Roosting Coops and Portable Houses. Price, Complete, Safely Boxed for Shipment, \$8.50 free on board cars at all our Places of Business, except Oakland and London. Oakland F. O. B. Price, \$9.50. Entirely safe to order sample from this advertisement. Send order to place of business nearest you, thus saving time and most of freight or express charges.

REPORTS FROM CUSTOMERS

Wayne, Neb., June 28, 1913.
Cyphers Incubator Co., Buffalo, N. Y.—

After using your Automatic Adaptable Hover, and thoroughly testing it, I find they are just as represented in your catalogue. Have installed them in goods boxes and home-made brooder cases—these cases being similar to your Style B Outdoor Colony Brooder. I place fifty chicks under each hover and they are left with the hover until six weeks old. I strongly advise the use of these Adaptable Hovers to fellow poultrymen. On account of their superior construction they will last for years. In my opinion this is the best device on the market for brooding chicks successfully outdoors.

LEROY OWEN.

Tappan, N. Y., June 25, 1913.

Cyphers Incubator Co., Buffalo, N. Y.—

Early this past spring we purchased two of your Self-regulating Adaptable Hovers and think them as near perfect as can be made. We expect to get at least three more for next spring. Our losses of chicks entrusted to these hovers are small indeed, and the chicks grow fine. Our chicks under the Adaptable Hovers were never crowded, overheated or chilled in the slightest degree. We had no trouble in keeping the heat at the degree wanted, as the automatic regulating device took care of it in fine style. I fed my chicks by the Cyphers Company "deep-litter method," and they certainly did fine this year.

CHAS. E. AHRENS.

CYPHERS INCUBATOR CO., Dept. 726 Factory and Home Offices, Buffalo, N. Y.

BRANCH STORES AND WAREHOUSES	NEW YORK, N. Y. 41 Barclay St.	BOSTON, MASS. 12-14 Canal St.	CHICAGO, ILL. 329-331 Plymouth Court	KANSAS CITY, MO. 317-319 Southwest Boulevard	OAKLAND, CAL. 2127 Broadway	LONDON, ENGLAND 121-123 Finsbury Pavement
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Local Agents Wanted. No Capital Required. Write to Nearest Branch House.



S. C. White Leghorn Day Old Chicks

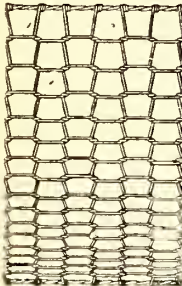
CAREFULLY hatched from pure strain, heavy-laying, vigorous stock. The kind of chicks that thrive and grow to healthy maturity. Everyone inspected—carefully packed.

Safe Arrival Guaranteed

to any point in America. Hatched on Michigan's largest poultry farm with the best of equipment and management. Beginning March 1st we will ship 5000 chicks per week. Avoid disappointment by looking your orders now. Costs nothing until the chicks are to be shipped. Ask for now, beautiful and instructive Poultry Book—FREE.

Michigan Poultry Farm
605 Willow Street Lansing, Michigan

POULTRY FENCE




22 1/2 cts. a rod
48 inches high. Has 4 1/2 inch mesh and graduated spacing of line wires from 1 1/2 at bottom to 3 1/2 inches at top. Fewer posts and no base board or top rail required.

STRETCHES UP LIKE A FARM FENCE.

27 3/4 c. Combined Poultry and Stock Fence made of heavier wire and having 6-inch mesh. From Factory Direct to Consumer. 100 styles and heights of Poultry, Farm and Lawn Fence. Catalog FREE. Box 229 **KITSELMAN BROS. Muncie, Ind.**

SHOEMAKER'S BOOK ON POULTRY AND ALMANAC FOR 1914.




There is nothing in the world like it. It contains over 200 large pages, handsomely illustrated. A number of most beautiful Colored Plates of Fowls, true to life. It tells all about all kinds of Thoroughbred Fowls, with life-like illustrations, and prices of same. It tells how to raise poultry successfully and how to treat all diseases common among them. It gives working plans and illustrations of convenient Poultry Houses. It tells all about

Incubators and Brooders

It gives full instructions for operating all kinds of incubators. This chapter is marvelously complete and worth dollars to anyone using an incubator. It gives descriptions and prices of incubators, brooders and all kinds of Poultry Supplies. In fact, it is an encyclopedia of chickendom, and will be mailed to anyone on receipt of only 15 cents. Your money returned if not pleased.

C. C. Shoemaker, Box 928 Freeport, Ill.



The Globe Incubator. Best in the World.

\$60 PER HEN PER YEAR

SEND POST CARD TODAY for free 56 page hook free, "The Why and How of the Miller System." Test our idea far enough to form an opinion. Show our guarantee to your lawyer. Miller System Company, 52 7th, Binghamton, N. Y.

CONGDON'S Barred Rocks

BRED FOR Utility and Beauty

500 Cocks, Cockerels, Hens and Pullets for sale at reasonable prices, quality considered. Write your wants.

INCUBATOR EGGS—\$5 per 100; \$45 per 1,000.

Our farm consists of 145 acres of land all within the corporate limits of the village of Waterman and valued at \$200.00 per acre.

\$3,000 invested in Barred Rocks and buildings. Booklet free.

W. A. CONGDON,
Box 14, Waterman, Illinois.

FOR THE FRUIT GROWER.

The Fruit Grower and Farmer of St. Joseph, Missouri, has changed over to a twice-a-month publication. The west is the section of the country that has made the rapid strides in fruit growing and the Fruit Grower & Farmer is the one paper in closest touch with this section. The former price of the Fruit Grower and Farmer was one dollar per year and this price will not be changed under the new arrangement, giving twice the number of papers each year. Readers of the Poultry Keeper cannot make a mistake in subscribing for the Fruit Grower and Farmer to keep them posted on all phases of the fruit industry. Orders sent to us for Poultry Keeper and Fruit Grower and Farmer for one year, will be entered at a special clubbing price of \$1.25 for the two papers. This offer is good on renewals or new subscriptions. By ordering now the most interesting issues of the whole year will soon be at hand as the coming issues are the big issues in each of these fields.

PROFIT IN CAPONS.

The wise farmer, looking to profit sees more weight in the steer than the bull. Poultrymen are finding that it pays well to raise capons instead of cockerels. What to do with the cockerels has been a problem as they are hard to fatten. On the market the capons always find a quicker sale and at nearly double prices than ordinary chickens. A very instructive book on raising capons has just been published by George P. Pilling & Son. It shows now farmers and poultrymen can easily make a big increase in the revenue of the poultry yard by eaponizing. There are instructive chapters on feeding and dressing capons. Readers of Poultry Keeper can obtain a copy of this interesting book by sending a 2c stamp for postage to Poultry Keeper Publishing Co., Quincy, Ill. A full set of eapon tools is sold for \$2.50. A set with full directions including book, on receipt of price, sent, charges prepaid. Or, on receipt of \$2.75 we will send the capon tools prepaid and a year's subscription to Poultry Keeper. Address, Poultry Keeper Publishing Co., Quincy, Illinois.

THE MODERN CULTIVATOR.

How it has made increased production at decreased cost possible.

Transportation in the last hundred years has witnessed no more decided advance in its methods than has agriculture beheld in the progress of its cultivating implements.

Farm life has proven that it possesses its full quota of brains, and is fully as capable of supplying the means for its own advancement as any other avenue of industry possesses for taking care of its own progressive needs.

If one barks back to the days when stirring the ground with a stick was

a fore-runner of the present day Planet Jr two-row pivot-wheel riding cultivator, plow, furrower and ridger combined, he will observe the contrast and realize what the modern cultivator means in world-advancement.

This splendid farm machine, the result of a practical farmer's ingenuity, completes the entivation of two rows of corn, potatoes and similar crops at one passage. It means that even the previous efficient cultivators which lessened labor amazingly are outclassed by this wonderful machine which cuts even their work in half. Moreover, such an implement works wonders in rows of irregular width, and in cheek-rows it is a surprise to everyone.

While this Planet Jr implement is the highest type of cultivator for extensive farming, there are cultivators of different kinds for every cultivating need down to even the smallest garden patch.

Planet Jr one-horse cultivators for such crops as corn, potatoes, cotton (and probably the widest known cultivators in the world) have reached a high state of perfection, being adjustable in width by means of a lever expander to accommodate the rows, and adjustable in depth for shallow or deep tillage, according to the crop, and equipped with leaf-lifters which automatically take care of vine crops and prevent their injury.

Then there are the hand cultivators that actually do the work of three to six men using hand hoes. Some of these machines are made as a combined hoe, cultivator and plow—a single implement, containing all the necessary tools for planting and cultivating the average garden.

Among the most notable of hand cultivators are the latest models just brought out this season, known as Planet Jrs Nos. 28 and 30.

The No. 29 is a combined hill and drill seeder, wheel hoe, cultivator rake and plow with all-steel frame and handles. As a seeder it is the most accurate ever produced and makes an increased saving in seed and labor.

The No. 30 is a single wheel hoe with attachments for plowing, cultivating, raking and marking out. It also has an all-steel frame and handles, and is the highest development of the popular single wheel hoe.

These and similar tools are so light, labor saving and easily handled that women are using them for spare-time cultivation in their family gardens.

Sixty farm and garden tools of these modern types covering the whole range of cultivating needs, are illustrated and described in a valuable 72-page book compiled by S. L. Allen & Co., Box 1106-C, Philadelphia, which they will send free on request to any one interested in the progress of cultivation.

It clearly demonstrates that these modern cultivating implements have taken the drudge out of farm drudgery and enabled agriculture to come into its own through lightened labor, saved time and increased profits

MAKING THE HENS COMFORTABLE

At this writing, January 12th, the thermometer stands at zero. We are on a mountain top and still our hens and pullets are shelling out the eggs steadily. With eggs at \$.45 per dozen in our local market we cannot supply the demand. Of course we see that our birds have the best of care and feed.

In the morning I scatter oats and cracked corn in the litter and dig up the dirt and as a rule mix a few coal ashes in it for them to dust in. At noon I feed a crumbly mash, warm, of equal parts of hay seed, wheat bran, ground oats, corn meal and I use 25 lbs of beef scrap to 150 lbs. of the feed. Once through the day they get all they will clean up of sprouted oats and equal parts of cracked corn and wheat about half past four. Lots of work of course, but how they lay! And what a pleasure to gather the eggs! However, I only spend two and one half hours to care for seventeen coops. Of course I keep shell and charcoal before them all of the time and never have a sick bird. Plenty of clean straw to scratch in and warm water on cold days seem to be about right to keep the egg basket full.

Now is the time to pick out your breeders, if you are breeding for eggs. The hen that lays the large well-formed egg and lays it regularly is the one you want to breed from. If it is possible get a small incubator and take off a hatch from the hens (not pullets) and if you care for the little fellows properly you will have a fine lot of cockerels from winter layers, from which you can select your male or males for next years breeding pens.

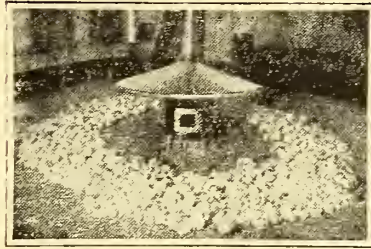
Now as to how to care for these early chicks. In the first place do not let them get chilled. Next, after they are 36 hours old give a little crushed shell. Next, two hard boiled eggs mashed finely and mixed with a pint of dry bread crumbs and one onion, which has been run through the food chopper, a little of this at a time until they are five days old, then you can give them a little chick feed and a little oat meal each day for variety with nice clean water with the chill taken off, a few drops of spirits of camphor, say four drops to a pint of water, will help prevent colds.

Let them scratch for the chick feed in soft earth or barn chaff, and you will be heard to exclaim, "Wonderful, wonderful, I never knew little chicks would grow so in the winter." I've been there myself. Of course do not let them get chilled and crowd. On very cold nights bring the brooder box in the kitchen. You will rest easily and will not be dreaming of a lot of frozen chicks.

On some nice clear day get at the brooder coop and make ready for those baby chicks you expect to raise when spring comes 'round. There is nothing like being ready to receive the little fellows and make them comfortable

Mrs. Chas. F. Goldsmith.
New York.

Petaluma Brooder Stove



The Modern Way of Brooding. Fresh Air and Economy combined. Raises more and better chicks. Saves 90 per cent of the labor. No chilling, crowding or overheating. Automatic Control. Free Catalog.

Petaluma Brooder Stove Works

Pox P. K. Dayton, Ohio and Hayward, Cal

Don't Wait Another Day

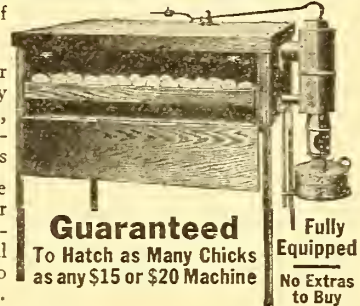
Start a Reliance Working for You This Week

By special arrangement with the publishers of
POULTRY KEEPER.

we are granted permission to print our Order Blank in this advertisement so that everybody can get one of our famous Incubators, Brooders, Sprouters without a day's delay or unnecessary correspondence. For instance, send us

\$5⁷⁵

enclosed with order and we ship you immediately our 150-Egg Reliance Incubator, backed by our Special Guarantee. No waits, no trouble or letter writing.



Guaranteed
To Hatch as Many Chicks
as any \$15 or \$20 Machine

Fully Equipped
No Extras to Buy

1914 Reliance Incubator

Nothing like this has ever been offered before. We are the first manufacturers to print an order blank in a publication and bind ourselves, in the order, to make good our claims or refund money as per our guarantee. Read our Four Big Bargains. Take your choice of No 1, 2, 3 or 4. See how much you can save. And, remember, when you get a Reliance, you get an incubator that lives up to the manufacturers' guarantee. It practically runs itself; it requires very little oil for a big hatch and it hatches every hatchable egg put on the egg tray.

With the Reliance even beginners can get 100 per cent hatches by merely following simple directions sent with each machine.

The Reliance is guaranteed to make chicken-raising pay big profits. No losses, no repair bills, no extras to buy, no waste of oil. Better order yours—incubator and brooder—right now from this ad.

The 1914 Reliance is made of best lumber. Side walls and top are made of three thicknesses—cold can't get in, heat can't get out. Equipped with best regulator, thermometer, egg-tester, lamp, egg trays. Beautiful finish, handsome steel legs.

Directions and Money-Making Literature Sent Free

on postal request or with order. Safe delivery guaranteed. Machines come fully equipped—NO EXTRAS TO BUY. Machines come ready for use—NOT KNOCKED DOWN. Order filled same day received. Order direct from ad and start an early hatch, but if you want particulars first, write and we'll send more proof of Reliance superiority.

RELiance INCUBATOR CO.
Manufacturers of Incubators, Brooders, Grain Sprouters
Dept. E Freeport, Ill.

Here's Your Order Blank. Use It.



4 Big Bargains

- Bargain No. 1**
70-Egg Incubator **Guaranteed \$3.90**
- Bargain No. 2**
150-Egg Incubator **Guaranteed \$5.75**
- Bargain No. 3**
70-Egg Incubator - **\$3.90**
70-Chick Brooder - **3.00**
Total - **\$6.90**
- Both for Only \$6.50**
- Bargain No. 4**
150-Egg Incubator **\$5.75**
150-Chick Brooder **3.00**
Total - **\$8.75**
- Both for Only \$8.25**

Big Bargains in Reliance Grain Sprouters

Biggest money-maker for poultrymen since the invention of the modern incubator. Order direct from ad on guarantee of satisfaction or money back. Safe delivery guaranteed. Sprouter comes to you ready for use. Order today.

- Prices of Sprouters**
- No. 1. For 25 to 40 hens, - - \$5.00
 - No. 2. For 75 to 100 hens, - - 7.00
 - No. 3. For 150 to 200 hens, - - 8.50
 - No. 4. For 200 to 350 hens, - - 11.50

SPECIAL ORDER BLANK

RELiance INCUBATOR CO., DEPT E FREEPORT, ILL.

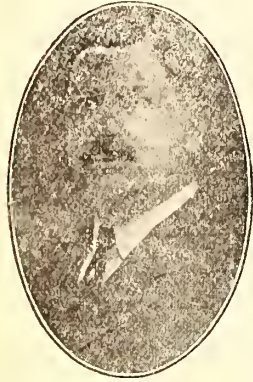
Gentlemen: Please find enclosed \$_____ for which please ship by _____ the article as checked below.

- | | | |
|---|---|---|
| <input type="checkbox"/> 1 70-Egg Incubator (Guaranteed) \$3.90 | <input type="checkbox"/> 2 150-Egg Incubator (Guaranteed) \$5.75 | <input type="checkbox"/> No. _____ Grain Sprouter |
| <input type="checkbox"/> 3 70-Egg Incubator and 70-Chick Brooder (Combination Price) \$6.50 | <input type="checkbox"/> 4 150-Egg Incubator and 150-Chick Brooder (Combination Price) \$8.25 | |

Name _____
Town _____ Shipping Station _____ State _____

It is a condition of this order that the Incubator, Brooder or Sprouter I buy of you, give me perfect satisfaction and live up to your claims or you'll make good by replacement or refund the full purchase price.

BUY A NEW BUFFALO INCUBATOR OR BROODER



Made by the BUFFALO INCUBATOR CO.
CHAS. A. CYPHERS, President.
**An Incubator of Standard Quality at
 Half the Standard Price**

If you want to know how and why we do it, get our circular. There is a reason.

HATCHES BETTER THAN OTHERS, LARGE OR SMALL.

February 24th, 1913.

Dear Sir:—Owing to the unsatisfactory working of my employers —Incubator, I was obliged to borrow one of your Buffalo Incubators from a neighbor here, Mr. L. Robey, and I am pleased to tell you that it enabled me to hatch out 100 per cent of my first hatch, 88 per cent of my second, and nine-elevenths of my third hatch. Mr. G. H. Dowse, my employer, now has ten of your large machines.

J. S. HICKEY, Wrentham, Mass.

November 19th, 1913.

Dear Sir:—I have used the Buffalo in competition with other standard makes, and have found it so satisfactory that I am sending you my order for three more No. 3 Incubators. Please rush through at once.

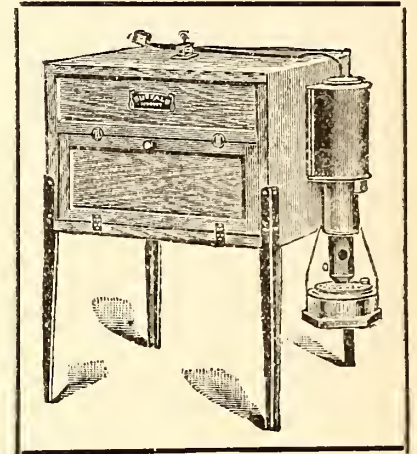
G. T. FORSYTH, Rutherford, Calif.

January 18th, 1913.

Dear Sir:—I have been testing one of your No. 3 Incubators the past two seasons alongside of four other makes. It has given excellent satisfaction. I expect to add five or six new machines next month.

L. G. COOLIDGE, Bolton, Mass.

He did and so will you if you try a Buffalo. One agent in Australia ordered 1,000 Buffalo Incubators this year—his third season.



THE BUFFALO HANDY HOVERS.

The Buffalo Handy Hovers are just what their name implies.

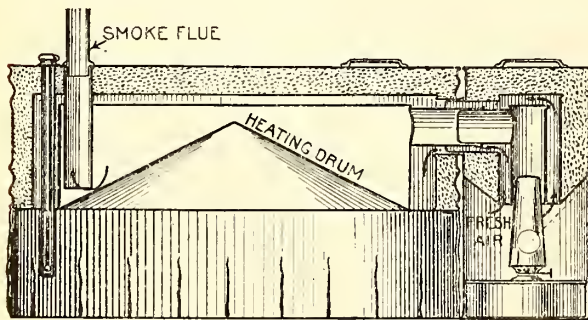
The Buffalo "Handy" is a floor level hover. You can set it any old place.

Sanitary—All galvanized Iron.

Heats Easily—Walls are heavily packed with good insulating material.

Uses but little oil—Flame burns with a white light, which indicates complete combustion.

Hottest at Outer Circle—Heat is brought lowest at that point.



Buffalo Handy Hover 100 Chick Capacity.

Perfectly Ventilated—Heater is double with fresh air flue. •

Handy—Just pick it up and set it aside to clean the floor.

Lamp flame can be seen without stooping. Lamp compartment or heater is attached to hover with "rolled edge slip joint," and is quickly detached for tending lamp.

Has all the good points of others with thick walls and complete combustion added. Others are thinly insulated and are hard to heat. Other lamps burn a yellow flame and waste oil. The Buffalo Handy Hover will heat 10 degrees hotter with the same oil consumption; and in a room too cold to use any other hover.

Send postal for fuller description.

Buffalo Incubator Co.

467 DEWITT STREET

Chas. A. Cyphers, Pres.

BUFFALO, N. Y.

Successful Lessons in Poultry Raising FREE

SEND me your name now before you spend a cent for any incubator or brooder—before accepting anyone's proposition. I want to tell you how I give a regular \$25.00 simple, practical course of advice in printed form—facts based on my 25 years' poultry experience with my incubators. These *Free Poultry Lessons* include personal attention and advice that no other maker can give. Also lessons before you start—when you start—while you are hatching—how to make the biggest hatches and raise biggest broods—how to get biggest prices and sell for spot cash.

Successful Incubators
LIFE PRODUCERS

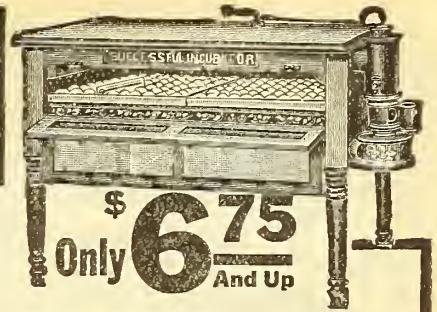
Successful Brooders
LIFE PRESERVERS

give most chicks—raise more chicks—every time, in any climate, anywhere, for longest term of years.

J. S. GILCREST, President, **DES MOINES INCUBATOR CO.**

Send your name at once for my FREE book and low price proposition.

Successful Grain Sprouter keeps your chicks laying all winter—when egg prices are up. Furnishes green food in coldest weather. Ask about my high grade poultry—stock and eggs of all leading varieties—land and water fowls. Write me personally for free catalog and other literature.



NOTE—Our famous little booklet "Proper Care and Feeding of Chicks, Ducks and Turkeys"—Worth its weight in gold—sent for 10 cents. But our BIG Catalog is FREE. Write for it.

Ask about our thoroughbred poultry and eggs for hatching at lowest prices
47 Second St., Des Moines, Iowa

HATCHING AND BROODING IN THE ROCKIES.

Now is the time to think of our hatching and brooding problems for the coming season

In this locality, at an altitude of 6000 feet, right under the main range of the Rockies, these problems are quite different from those in the east. I have hatched chickens in Pennsylvania, both with hens and with incubators and had good success both ways and never supplied any moisture to the eggs, but in this altitude I have found by experience that better results are obtained, both in the natural and artificial modes of incubation when moisture is supplied liberally.

Here we have no cellars and run our machines in the house, the air is always light and dry, the rainfall being very low and so in the absence of moisture in the atmosphere, a good hatch cannot be obtained unless moisture is supplied.

Poultry Keeper readers who live in high dry altitudes and who have had unsatisfactory hatches should try supplying plenty of moisture and I am sure results will be better for them.

The brooding problem does not worry us so much at the hatching, though it is necessary to use heated brooders, for fireless ones would be too cold for the young chicks, as in the spring the weather is very changeable and the mercury might drop to zero any night.

The chicks to mature early enough to make winter layers here, must be hatched early and pushed along every minute towards maturity for the cold weather begins in October and unless we get them laying before this, there will be few eggs gathered before February or March, and such is usually the case, for most ranchers keep the heaviest breeds, and as February is one of the coldest months, sometimes going as low as 25 degrees below zero, it is needless to say that sitters are few, and incubators are very scarce. The consequence is chicks are hatched in April and May, left to shift for themselves and cold weather comes on before they make much growth and then they don't lay until spring.

But this is principally a cattle raising country and the poor lowly hen

does not get much attention.

I think we have the advantage of our eastern brother in the price of feeds for our poultry. At threshing time oats sell for 1c per lb., barley and wheat at 1 1-4c. Of course there is no corn and to ship it in would be prohibitive so our hens never get corn and they lay just as well without it.

Bran and shorts we get for 1c per lb., and all the vegetables range in price from 50c to \$1.25 per cwt. As stated before this is a cattle country so it is unnecessary to buy meat scraps. Then too, there are plenty of rabbits which when hung up in the coops the biddies enjoy very much.

Eggs range in price from 30c to 60c per dozen, and I have seen them as high as \$1.00 per dozen, but this price is rare.

One peculiar thing about the country is that all our coldest winds come from the south and the warm winds from the north, the theory being that the north winds come from the coast.

While I do not think on this account it would be a good idea to face the poultry houses north, yet they can be built facing south east and avoid much of the cold winds. While the people in the east have been suffering with the cold and blizzards, we west of the Rockies have had the finest winter one could possibly wish for, very little snow and only a few cold days in consequence of which the hens have kept up their laying all winter.

W. J. Crehan.

Idaho.

ADVERTISED IN FIRST YEAR'S ISSUES OF POULTRY KEEPER.

Editor Poultry Keeper:

Enclosed find copy for classified adv. under Polish and check for \$3 to pay for same as per your offer of Jan. 14, 1914. You no doubt, are not aware that I am one of the oldest advertisers in your paper, if not the oldest. I began back in 1886, I think the paper was printed in Chicago, Ill., and edited by Jacobs. I have one of the first volume, December 1884, with a cut of my Polish on the first page.

Chas. A. Seely.

Afton, N. Y.

Double Your Egg Yield!



Mr. Poultryman: You want more eggs from your hens. We want to help you. That's the reason we are publishing "The Golden Egg" —to help you.

This Book Free to You

This book is brimful of information of vital importance to poultrymen.

Feed your hens right—you'll average 200 eggs a year. "The Golden Egg" tells exactly what and how to feed them. Fresh cut bone, prepared in a Humphrey Bone Cutter, makes bone, muscle, feathers and eggs. Feed your hens *The Humphrey Way*. Thousands of farmers have tried it out. They've found it means big profits for them.

Just put your name on a post card and request us to send "The Golden Egg." Then you've taken the first step on the road to doubling your egg profits. Write to-day.

THE HUMPHREY
GREEN BONE and VEGETABLE CUTTER
will save half your feed bills and double egg yield. Guaranteed to cut more bone, in less time, with less labor, than any other. Send for Special Trial Offer and handsome catalogue.
HUMPHREY,
Class St. Factory, Joliet, Ill.

POULTRY FENCE
60 INCHES HIGH 25¢ A ROD
Has 4 1/2 inch mesh and line wires are graduated from 1 1/2 inches at the bottom to 4 1/4 inches at the top.
60 inch Poultry and Stock Fence, 31c.
Same style fence as in cut but is made from heavier wire and has six inch mesh. Write for free Catalog.
COILED SPRING FENCE CO.
Box 222 Winchester, Indiana.

WE PAY FREIGHT

Write Postal For BROWN'S Bargain Book Of FENCES

Let us prove big saving to you on highest quality Poultry and Garden Fencing ever made. Genuine Basic Open Hearth Wire. Heavily Double Galvanized by the Brown Special Process, and held together by a tie that can't slip. Brown's Fence doesn't rust or break—it doesn't sag or bag. It is always neat and trim. And our prices are even lower than others ask for cheap, flimsy netting. Get our book and see for yourself.

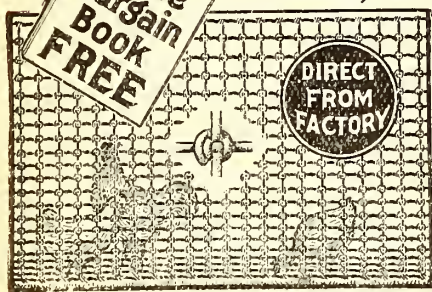
Sample Free Also

Test it any way you like. Brown's Poultry Fence has top wires No. 9½ gauge—intermediate wires in same big proportion. Bottom wires spaced only one inch apart—absolutely chicken tight—rabbit proof. Only one-half the posts needed—no top or bottom railing necessary. Why pay more for other fence that can't compare with Brown quality?

Save Big Money By Writing Postal NOW!

You'll be glad you wrote. You'll be surprised at Brown's High Quality and low prices. We sell only direct from factory. Freight prepaid anywhere, satisfaction absolute—guaranteed. Don't buy a rod of any kind of fence till you read Brown's book. Write postal NOW.

The Brown Fence & Wire Co. Dept. 57 Cleveland, Ohio



Go South Sir

Purchase a Southern Farm

and Prosper

Look at the map of the United States. See how close to the big Eastern markets—by modern rapid transportation—are the states south of the Ohio and east of the Mississippi Rivers. Then consider the climate—mild winters, pleasant summers, ample rainfall. The soil—suitable to all crops—corn, cotton, alfalfa, wheat, oats, potatoes, tobacco, fruits and garden truck. Then the price—

GOOD LAND AT \$15 AND UP AN ACRE

according to the improvements and location. Remember there are no cold winters—stock can graze on green pastures the year round, making production costs low. Expensive barns are unnecessary. Large local demand for farm products at profitable prices. Industrial opportunities everywhere. The Panama Canal will greatly benefit the South. Investigate this section of good roads, schools, churches and healthful climate where living is pleasant and profitable. Booklets on the States of Virginia, North and South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee and Kentucky. In which are you interested? Our magazine "The Southern Field" sent on request.

M. V. RICHARDS, Land and Industrial Art., Room 81 SOUTHERN RAILWAY Washington, D. C.

POULTRY AND FRUIT A COMBINATION THAT WORKS FOR EACH OTHER'S BETTERMENT.

By Ira Watson, Fredonia, N. Y.

I AM always glad of the opportunity to say a good word for the laying hen. The American eagle is called a noble bird, but Queen Biddy ought to be stamped on the American dollar, for the hen by her steady laying, brings the jingle of more gold and silver in the pockets of the poultry keeper and farmer than all the gold mines in the land and she does a great deal of the digging herself. It is a fact, according to statistics, that all of the gold and silver mined in all the world hardly more than equals the annual production of eggs alone, and does not come within a measurable distance of the value of the poultry and eggs combined. It is wonderful how the poultry industry, has advanced at such a rapid rate that no mathematician can keep up with it. One would be quite apt to think from that vast increase in the amount of eggs and poultry that eggs would go down, but this is not the case, for the price of eggs and poultry has rapidly advanced within the last few years. It is very interesting to the poultry keeper that the market is never overstocked with strictly fresh eggs, nor with the first quality of poultry at prices that pay a good profit. It is no longer a question as to whether there is a profit in poultry. The question is, have you the ability to make a success of it. The man behind the gun—in him depends the success or failure of the fowls are of the bred to lay and are fed on the right system and grown with the combination of fruit, I know of no more profitable line of farming than poultry and fruit. I am often asked what is the best breed of poultry. I do not think there is any one kind that is all to the good. I like the Rhode Island Reds and have been breeding them for years, for eggs not for show, and now have a great strain of layers. I have doubled the eggs in a year, getting two hundred eggs and over per year. One hen, Golden Princess, laid two hundred and ninetyone eggs in a year, but of course, others have preferred some like Rocks, others Leghorns, others Wyandottes and so on and there are good

and poor ones in all the breeds, as shown by the egg laying contest. Lady Showyou laid 281 eggs at the Missouri contest. She, I think, is a White Rock, and Canada has a 282 B. Plymouth Rock. The Connecticut Experiment Station has a S. C. White Egghorn that laid 282 eggs and the Oregon Agricultural College has a 291 White Leghorn hen, and some think that the 300 egg hen is in sight. I think that the great reason that many fail in poultry is that they don't start right. They start with the kind that is bred for show. I know that you can make a grand success by starting with the kind that is bred to lay and feed them well. Have open front hen houses, feed them mixed grain in deep litter; in the morning wheat and oats, give them one feed a day, at noon of dry mash and beets or cabbage. The beets and cabbage at noon in the open front house and deep litter will keep them working, will bring you the winter eggs and will keep your hens strong and healthy.

In December, 1912, I gathered 187 dozen eggs from 150 hens that sold at 45 cents per dozen and others can do just as well if they get the bred to lay kind.

White Diarrhoea.

This is the one thing that has put more out of the poultry business than all other things combined. The mortality caused by this is something dreadful. It has been the general remark that they could hatch the chicks all right, but in from two to eight days they would start to droop their wings and in a few days would die, and not one of us in a hundred knew what it was. Many thought it was the brooder being too hot or cold, but now it has been proven that it is White Diarrhoea, and the best of authorities state that 50 per cent of all chicks hatched have been dying with the disease. One egg breeder stated that he had gathered up and buried enough chicks that had died from the disease to make him a millionaire. Stop this terrible mortality. For six years I have raised 96 per cent of my (Continued on page 486.)

12 FALL BEARING STRAWBERRY PLANTS FREE!

Here's An Offer You Can't Afford to Pass

One of the newest and most successful horticultural discoveries—and one that is creating a world-wide interest—is the wonderful ever-bearing or fall-bearing strawberry. This plant fruits in the fall of the year and all of the second summer—providing fine, large, luscious strawberries all through the season from early spring into late fall. We have made a thorough investigation of these plants and find them to be really more wonderful than they were represented to be. We have arranged for a limited supply to be given away on our special introductory

Half-Price Subscription Offer!

The "Fruit-Grower and Farmer" is the biggest and best farm and fruit magazine. It is published twice a month—32 to 80 illustrated pages filled with the most valuable, most up-to-date articles on fruit growing and farming. Regular subscription price \$1.00 a year.

For a limited time only we will make the following special offer: Send 50c for a trial 5 months' subscription—12 interesting issues—and will send you all charges prepaid 12 "superb" fall-bearing strawberry plants FREE—12 plants that will give you a start toward a big patch of these wonderful new berries. Supply limited. Better send your order at once. Good in U.S. only.

Fruit-Grower and Farmer
Box 4 St. Joseph, Missouri.

It's the Healthy Birds that Boost Poultry Profits — Why Not Have Them?

YOU can now feed your entire poultry yard with a minimum of time and expense. You can raise *more* birds, keep them *healthier* and save money on feed.

Kentuco Poultry Ware makes this possible. It will save your time and give you the best possible insurance of serving the pure feed and water that make big, healthy, profit-making birds.

How you feed poultry is really more important than *what* you feed. The best feed is worthless if it reaches the birds polluted. It's impure feed and water that causes most epidemics in the poultry yard. Nothing affects the poultryman's pocketbook more keenly. You can guard against this with

KENTUCO Poultry Ware

It's the ware that *really* makes poultry profits by protecting bird health and saving feed. Take for example the two-piece fountain shown to the left. This, like all Kentuco Fountains, is galvanized *after* it's made. There is no chance for rust.

Fill the reservoir, invert it, and the chicks are served a plentiful supply of clean water as fast as they consume it. They cannot get into the pan, and they cannot perch on the cone top and pollute it with droppings.

With Kentuco construction, you get top notch quality at no greater price than less worthy stuff.

For another illustration, take the jar fountain which we give away free. There are designs like this on the market, but it's just impossible to invert them without being splashed with water.

You avoid this with the Kentuco Jar Fountain. Send for it and note how the metal cap protects you.

Study the design of the Kentuco Food Hopper illustrated below. Feed cannot clog in this reservoir, neither can the tray become loosened, for the entire back, bottom and front is all one sheet.

There's always feed in the tray, yet the birds cannot waste it.

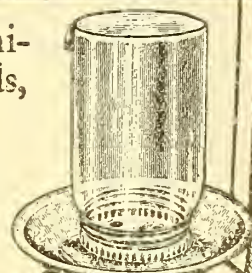
Birds cannot perch on the slanting top and pollute feed in the tray.

It's features like these that win preference for Kentuco Ware. Equip your entire poultry yard with Kentuco Ware. Every piece earns its cost quickly by either protecting health or saving feed.

Write Us at Once

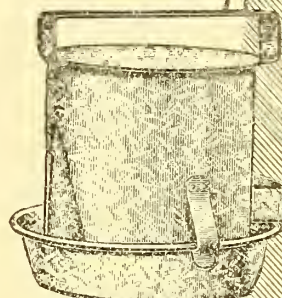
for our big folder that tells the money-making facts about poultry. Ask for Kentuco Poultry Ware from your dealer. If he does not carry it, we will ship you direct. In writing, please mention your county, as well as your city and state. Ask for the free Jar Fountain if you want it.

Kentucky Stamping Company
110 No. 15th St., Louisville, Ky.

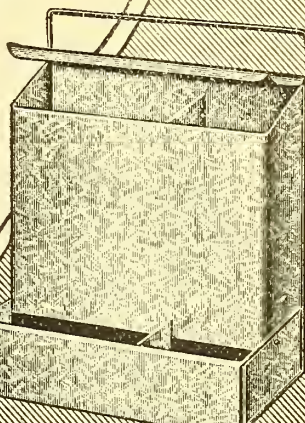


FREE

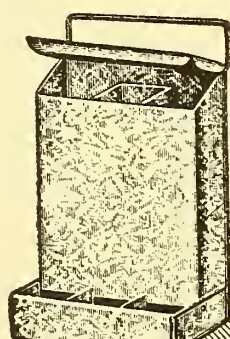
Kentuco Jar Fountain
Simply screw the base onto any Mason jar. It's handy and practical. To introduce Kentuco Ware Construction, we send the base free if you will enclose 10c in stamps to cover postage and packing.



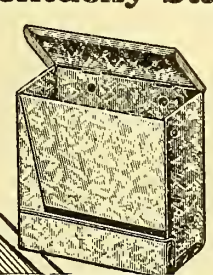
Kentuco Sanitary Wall Fountain
Two pieces—detachable. You can clean the reservoir with a brush.



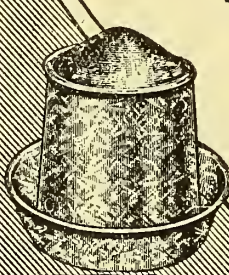
Kentuco Food Hopper
Food cannot clog in reservoir—birds cannot waste food nor pollute feed in tray.



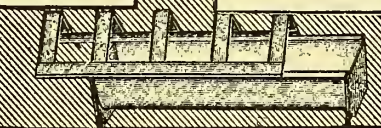
Kentuco Grit Box—Feeds grit, shells and charcoal at the same time.



Kentuco Chick Feeder
The result of 15 experiments, sturdily constructed—chicks cannot waste feed or pollute it.



Kentuco Two-Piece Fountain
Cannot leak or rust.



Kentuco feed and water trough—Rounded bottom keeps feed in center. Top prevents birds wasting feed.

REGAL MATINGS



WHITE WYANDOTTES—For the season of 1914 I have mated up twenty beautiful exhibition matings. They are all headed by my winning males at Boston and New York State Fair and contain all my exhibition females. My birds are the up-to-date kind, the kind that are winning today. Hundreds of my customers were winners in the shows this winter. Regal White Wyandottes have never avoided competition and no strain has made such consistent winnings in the largest shows. But this is not all, for years they have been bred for heavy egg production and stamina and it is conceded by all that no strain has a better record for usefulness. February 1st we have 420 rugged, thrifty chicks practically out of danger, having lost only 10 chicks to date. Our breeders are in curtain front houses and are the picture of health. Upon my show record and the utility quality of my birds, I base my claim that Regal White Wyandottes are the best in the world. My customers will have an opportunity of obtaining eggs from these, the Champion matings of the year. If you are starting, the strain you choose will mean either success or failure for you. Can you make a better choice than the Regal Strain? A few sittings of eggs will not cost you a great deal and will prove a good investment. See what one customer says:

Adams, N. Y., Dec. 5, 1913.

My chicks are coming on fine. I raised to maturity 23 pullets and 16 cockerels from the eggs I bought of you. They are the nicest, most uniform in size of any I ever raised and all absolutely snow white. Have had scant shade in the yards at that.

When I buy Regal stock, I have no trouble in selling the surplus cockerels for more than enough to pay for the eggs bought and cost of raising the lot so my pullets really cost me nothing. The pullets are now laying and I consider them worth at least \$4 each for breeding purposes (being straight Dorcas line stock) so you can see that while I paid a big price for the eggs, I have made several hundred per cent on the investment. Thanking you for prompt service and courteous treatment, I remain, yours very truly,

1913 WINNINGS

BOSTON.

Cocks, 1-6.
Hens, 1-4-5.
Chks., 1- 3- 4.
Pts., 1-3-4.
Pens, 2-3-4.

New York State Fair:

Cocks, 1-2-3-4-5
Hens, 1-2-3-4.
Chks., 1-2-3-4-5.
Pts., 1-2-4-5.
Pens (young)
1-2-3-4-5.
Pens (old)
1-2-3-4-5.

A. L. Rice.

Eggs

Exhibition matings, pen 1 to 20 (as they run) \$5 per 15, \$9 per 30, \$12 per 45, \$24 per 100. Pens 5 to 12 are special matings. Eggs from special matings only are \$10 per 15, \$18 per 30, \$25 per 45, \$50 per 100. **RECORD LAYING PENS (Dorcas Line)**, Pens 21 to 26 are headed from males bred from females with high records. Some of these males also have exhibition records. The females in the six pens are composed of yearlings with trap-nest records from 180 to 224 and pullets of the same breeding. From these pens eggs are \$5 per 15, \$15 per 50, \$27 per 100, \$50 per 200. Utility matings of vigorous surplus stock, \$5 per 50, \$9 per 100, \$17 per 200, \$25 per 300, \$37 per 1000. 500 cocks, hens, cockerels and pullets for sale. **SPECIAL**—50 big, vigorous, stay-white Dorcas cockerels, \$10, \$11, \$20 and \$25 each. Dorcas pullets, \$5, \$8 and \$10 each. Utility cockerels, \$3 and \$5 each. Free—20 page illustrated catalog and mating list. It gives full description of my matings for 1914.

JOHN S. MARTIN

Box 408

PORT DOVER, CANADA

THE CARE OF YOUNG CHICKS.

The best season for hatching chickens is during March and April though some very successful hatchings have been made in January and February. The summer hatchings are as a general thing not very profitable on account of the heat at this season. Also the summer is a great disadvantage to the raising of chickens.

Just as soon as the chickens have been hatched, if hatched under a hen, put them in a nice, clean box with a nest. A little hay or straw is good material. Let it be fresh and clean, too, as there might be lice or mites that would result in death to the little chicks. If the mother hen has anything of the kind on her it would be a good plan to use some kind of good insect powder on her before she hatches her brood. Something that will not prevent the eggs from hatching and then puff the hens feathers, full of the powder after the chicks are first taken off so as to prevent the little chicks from becoming afflicted with them. By doing this much, loss will be prevented as it is during the first three or four weeks of the young fowl's life that so many die.

Give them clean fresh water as soon as removed from the nest to the box and do not give any food for thirty-six hours as they already are provided with food from the substance of the yolk of the egg from which they were hatched and if given any other food before this food which nature has provided for them is digested, it may result in a general derangement of the digestive organs and cause much loss in the flock.

Take the hen and put her on the ground and let her eat a full meal and scratch and dust if she prefers, then put her in the box so she will have no

earth to scratch the chicks all about in and they can have the rest which for the first few hours or day or two they need.

Have a fenced off place near by where the little chicks can pick the green oats, rye or whatever has been sown for this purpose. First give them some cold bread. If soaked in milk it will prove good for them. Some rolled oats, cracked corn and rice are all good. Boiled rice is very much relished. Place their food inside the fenced enclosure where their grain has been sown, put their water there too, so that they can run in and get something whenever they want to. Change their water often, also wash out their drinking vessel.

By giving them a separate place to eat and drink it will prevent their being trampled on and pecked by the old fowls and they need food about five times each day while the older ones can do on less. Their water can be kept clean and they will prove satisfactory in many ways by caring for them in this way. Keep them shut up until the sun dries the dew and warms the morning air, and if the day is rainy, have a place to put them where they can have sufficient room and keep dry. If you keep thoroughbred poultry, you can afford this and if not your mongrels will prove of more value to you with this care than to neglect them.

Mrs. Ada B. Perry.

North Carolina

THE RIGHT FENCE AT THE RIGHT PRICE.

This is a proposition that confronts the farmer each fence building season. You no doubt have a place on your farm for a certain weight fence or some particular height, and in a great

many case you have no trouble in finding just what you desire. It would not be economy for you to buy a greater height or a heavier fence than is needed, when you can get a fence for less money that will exactly meet your requirements. The Coiled Spring Fence Co., Box 222, Winchester, Indiana, manufactures fifty different heights and they are in a position to furnish you most any kind of a fence you may require. The Company sells direct to the farmer at money saving prices and you should write for their catalog. Their ad. appears in this issue.

BROODING IN LARGE FLOCKS.

Readers of the Poultry Keeper who are not fully acquainted with the brooder stove system of brooding chicks in large flocks in rooms heated by crude oil burning stoves are invited to send to the Duplex Colony Brooder Co., Box 494, Rockford, Illinois and get their booklet on the subject. This system originated in California where thousands of flocks are produced each year to furnish the eggs for the tourist trade but room brooding is also equally successful in all sections of the country where chicks are grown extensively. There are many conveniences about room brooding that are well worth your investigation and we hope that the offer of the Duplex Company to send their literature free of charge will bring them many requests from our readers.

Mark your layers with leg bands, especially if you are using trapnests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

Jim Rohan and Winners of Belle City's Eight World's Championship Hatches



Jim Rohan
Pres.



Mr. Geo. W.
Black,
Ind.



Wm. C.
Schott,
Iowa



Mrs. Laura J.
Clark,
Illinois



Mrs. Alta
Hamlyn,
Ind.



Mr. F. E.
Bennett,
Ohio



Mrs. F. H.
Osman,
Ohio



Mrs. M. J.
Clifton,
Oklahoma



"TYCOS" CUP
won by the
Belle City

Write Today for My Free Book "Hatching Facts"—It Means More Money to You

GET the whole story of these Championship hatches with the Belle City. Get the stories of thousands of men and women who are getting 100% perfect hatches. Satisfy yourself. This great book is free. Write for it today. No other incubator made—not even the highest priced—approaches this amazing record of my Belle City. I have the letters of owners to prove it. Many of these letters are printed in this book "Hatching Facts." They tell you how Belle City owners are making the most money in the Poultry business. You certainly want this book. A postal gets it.

When You Buy from Me You Get an Exact Duplicate of the Prize Winning Eight Times World's Champion Belle City

I send you an exact duplicate of the hatching outfit used by Mrs. Alta Hamlyn of Indiana, who joins the Belle City's list of World's Champions with TWO 100% hatches scored by her Belle City Incubator in Successful Farming's 1913 contest. Mrs. Hamlyn says: "I can hatch every fertile egg in my Belle City and regard your honesty the keynote to success." I send you an exact duplicate of the Belle City Hatching Outfit used by William C.

Schott of Iowa, who shares the 1913 honors. His 100% hatch, 140 chicks from 140 eggs, won another World's Championship for the Belle City in Successful Farming's 1913 Contest. Mr. Schott writes: "The Belle City is the best incubator made—has given much more satisfaction than high-priced machines." I send you an exact duplicate of the Belle City Outfit used by each of the other world's champions whose pictures appear above.

The Kind "Uncle Sam" Uses

I send you an exact duplicate of the Belle City machines chosen by the U. S. Government. The Department of the Interior is one of my customers. The department asked for prices on 300-egg sized machines, but ordered my 140-egg Belle City machines, because even "Uncle Sam" wants to have Championship hatches, too.

I send you an exact duplicate of the Belle City Hatching Outfits used by leading agricultural colleges.

I send you an exact duplicate of the Belle City Hatching Outfit that won the gold lined silver "Tyco's" Cup and the Championship for Mrs. Osman.

A Postal Brings You the Big Portfolio, "Hatching Facts"

In addition to the facts about the 90 to 100 per cent hatches, it tells you how the Eight-Times World's Champion Belle City Hatching Outfit is made—illustrates it in actual colors. Shows that it has every thing worth having in and on an incubator, yet it is the lowest priced.

My Eight-Times World's Champion Belle City Incubator has Oakes double disc self-regulator, correct hot water heating system,

copper tank and boiler, safety lamp, double walls and double door and dead air space all over, with roomy nursery and strong egg tray. Of course, the thermometer is right; I use the "Tyco's." I also supply egg tester, Edw. Miller sun hinge burner, funnel, everything you need, including valuable instruction book on operating, hatching and care of chicks. The book tells you all about my world famous 140-Chick Belle City Brooder—the only double-walled, hot water, top heat brooder made, guaranteed to raise largest percentage of chicks every time—a fitting companion to my World's Championship Belle City Incubator.

Ask for My Low Price

I will show you why I can send you my Belle City Hatching Outfit at half or less than half what others cost you! You buy direct from me. You pay no agents' or dealers' profits. I have prepared to build fifty thousand Belle City outfits to supply the demand for this season. This big volume enables me to cut my profit down lower than anybody else can afford to take—and I prepay the freight to all points east of the Rockies and allow it that far to points beyond.

Don't turn this page without either writing to me or else tearing out this advertisement as a reminder. Whether you order or not, you get all my valuable World's Championship "Hatching Facts" absolutely free! But be sure to write to me today. Just say, "Send World's Championship 'Hatching Facts'" Address Jim Rohan, President.

Belle City Incubator Co.

Box 145

Racine, Wis.



Get My
1-2-3 Months'
Home Test Plan
Freight Prepaid



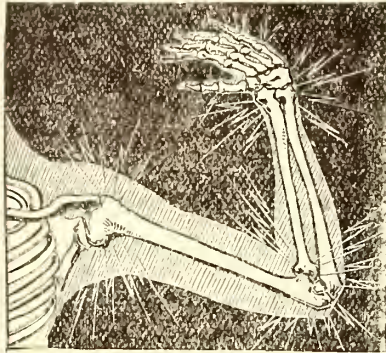
Be sure
to write for this book

Rheumatism

Remarkable Home Cure Given by One Who Had It—He Wants Every Sufferer to Benefit.

Send No Money—Just Your Address.

Years of awful suffering and misery have taught this man, Mark H. Jackson of Syracuse, New York, how terrible an enemy to human happiness rheumatism is, and have given him sympathy with all unfortunates who are within its grasp. He wants every rheumatic victim to know how he was cured. Read what he says:



"I Had Sharp Pains Like Lightning Flashes Shooting Through My Joints."

"In the spring of 1893 I was attacked by Muscular and Inflammatory Rheumatism. I suffered as only those who have it know, for over three years. I tried remedy after remedy, and doctor after doctor, but such relief as I received was only temporary. Finally, I found a remedy that cured me completely, and it has never returned. I have given it to a number who were terribly afflicted and even bedridden with Rheumatism, and it effected a cure in every case.

I want every sufferer from any form of rheumatic trouble to try this marvelous healing power. Don't send a cent; simply mail your name and address and I will send it free to try. After you have used it and it has proven itself to be that long-looked-for means of curing your Rheumatism, you may send the price of it, one dollar, but, understand, I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer when positive relief is thus offered you free? Don't delay. Write today. MARK H. JACKSON, No. 800 Gurney Bldg., Syracuse, N. Y."

Plain truth is, you will have no lousy hens if you paint the inside of your henhouse with **AVENARIUS CARBOLINEUM** (Registered) once a year. It is guaranteed. Write for circulars and testimonials. Carbolineum Wood Preserving Co. Dept. 54, Milwaukee, Wis.

Beware of imitations

Low Steel Wheels
Save Work and Money
Put them on your old running gear or get a complete Low Wheel Handy Wagon.

ELECTRIC →

Steel Wheels and handy wagons save high lifts, prevent rutting fields and roads, are 20 to 50% lighter draft, not affected by heat or cold, spokes and rims never loosen. Write now for illustrated free book. Address **ELECTRIC WHEEL CO.** 45 Elm St., Quincy, Ill.

Get This FREE Book

SHAKESPEARE

5 YEAR SEE THAT "XX" POINTS THE WAY START RIGHT YOU END RIGHT

did not repeat. This is a "hunch." Do not repeat the same mistake each year by trying to hatch the impossible. Know first, then incubate. That is the secret of profit in poultry raising. Magic Egg Tester, only \$2.00 each, and fully guaranteed. No expense to use and lasts a life time. Incubator specialists giving latest and best methods with every Tester. **MAGIC EGG TESTER WORKS, Dept. E Buffalo, N. Y.**

Emergency or telegraph orders to nearest dealer filled at once by parcel post. **PACIFIC COAST:**—Portland Seed Co., Portland, Oregon, Spokane Seed Co., Spokane, Wash. **EASTERN ROCKIES:**—Huttner Poultry Yards, Minneapolis, Minn., Barteldes Seed Co., Denver, Colo., Sturgis Hay and Grain Co., Phoenix, Ariz. **WESTERN STATES:**—M. M. Poultry Supply House, Monroe, Wis., Clark & Keller, Shawnee, Okla., Silker & Wright, Epworth, Iowa. **CENTRAL WEST:**—W. W. Barnard Co., Chicago, Ill., C. H. Hunkel Co., Milwaukee, Wis., Petaluma Incubator Co., Indianapolis, Ind., B. Riley Hawk Co., St. Louis, Mo., W. J. Yopp Seed Co., Pauducah, Ky. **OHIO, W. VIRGINIA AND WESTERN PENN. SYLVANIA:**—Tomlinson-Lamphere Co., Detroit, Mich., J. Wilder Co., Cincinnati, Ohio, Otto Schwill & Co., Memphis, Tenn., I. W. Scott & Co., Pittsburg, Pa., C. F. Braunlich & Co., Wheeling, W. Va. **SOUTH WESTERN:**—Bruce Poultry & Seed Co., New Orleans, La., Hargraves's Seed Store, Galveston, Texas. **SOUTHERN:**—The Lawson Co., Birmingham, Ala., Crenshaw Bros. Seed Store, Tampa, Fla., H. G. Hastings & Co., Atlanta, Ga., McIntosh & Sons, Charleston, S. C. **ATLANTIC COAST:**—Henry F. Michell Co. and Cugley & Mullen Co., Philadelphia, Satherwaite's Seed Store, Trenton, N. J., Southington Grain Co., Southington Conn., International Poultry Supply Co., Springfield, Mass. **CANADA:**—G. A. Cameron, Milestone, Sask., A. J. Morgan Co., London, Ont., N. D. McPherson, Hamilton, Ont., Collins Mfg. Co., Toronto, Ont. Magic Egg Tester Works, Bridgeburg, Ont.

POULTRY AND FRUIT COMBINED.

(Continued from page 482.)

chicks hatched free from this disease. This remedy not only keeps them free from this disease, but they grow much faster and are stronger and healthier and develop into better layers. This is one reason that I get such great layers. You will find my advertisement about this remedy in this paper.

How Many Hens can be Profitably Kept on a General Fruit Farm.

After years of experience in breeding poultry and growing fruit, I am convinced that you are much more apt to succeed with poultry and fruit and that 500 to 1000 hens can profitably be kept on a ten to a thirty acre fruit farm. The hens help the fruit by picking up the worms and grubs and the hens need the shade of the fruit trees in the hot weather of summer.

How much Profit per Hen?

You can figure on at least one dollar per hen, above all expenses and if you have got an egg laying strain, you can make two dollars or more. I have many letters from my old customers from all parts of the country, with reports of from \$2.50 to \$7.38 per hen for the eggs sold at the market price.

The great reason that many fail to make a success in the poultry business is that they do not start right. No man would begin to breed trotting stock by starting with draft horses but would get the very best trotting stock to start with; and no man who wanted to start a dairy for butter would get Hereford or Durham cattle, yet nine men out of ten in starting a commercial flock, will take any old thing or will send to some breeder who will tell him how many blues he has taken. Now the show bird is all right in its place, but the man who wants eggs and dollars should get started with a strain that has been bred to lay. There is just as much difference in the ability of hens to lay eggs as there is in cows to give rich milk or there is in people to acquire wealth. To be sure, not every hen will be a great layer that is hatched from a laying strain, nor will every heifer from a good cow be as good as her dam, but the way to get good ones

is to breed from the good ones; and the American poultry keepers are now looking for the hen that has been bred to lay. It takes years of hard work and experimenting to establish a strain of great layers. After years of experience in breeding and feeding for production of eggs, I am convinced that success not only depends upon natural ability but upon a thorough understanding of the laws of hereditary organism before we can intelligently breed for heavy egg production.

I have contended for years that there was as much in breeding hens as there was in breeding cows for butter and milk, and now nearly all the experiment stations are coming out with the same statement and one of the greatest factors is in having a cock or cockerel from a hen that has been a great layer, to head your flock, and I know my brother fruit growers and farmers realize the sure money to be made from keeping a flock of 500 to 1500 hens, not only the money from the eggs and poultry sold, but from the great value of the fertilizer procured from the hens. I know from practical experience that 1400 pounds of hen manure, 400 pounds of acid phosphate and 200 pounds of muriate of potash is worth more in growing fruit and vegetables than a ton of the best commercial fertilizer. I can double the yield in all kinds of fruit and vegetables with hen fertilizer. The best way to mix the acid phosphate with the hen manure is to keep your phosphate in your hen house and sprinkle one pound on the droppings every morning to every twenty to twenty-five hens and I have sand for floors and I sprinkle a small amount of sand on the droppings boards every time I clean off the boards. The muriate I now broadcast on the land when I use the hen fertilizer. I have grown twenty-five tons of tomatoes per acre with this manure.

This is the time of year to make your plans. Make your hen house sixteen to twenty feet wide and length according to the number of hens you want to keep and have open front. The kind of house I would recommend is open front with two windows in each pen and the openings three feet from window to window. I have light sheeting tacked on frames hinged at top to swing up. This is open on all

good sunny days, when the wind does not blow. If you give your hens good feed in deep litter in this kind of house, you will get winter eggs, when prices are high. I make my own lice powder and to any reader of this paper sending a stamp, I will tell how to make it, also how to make a good roup cure.

Fruit—Health and Wealth in Fruit Growing with Poultry.

Man is learning more each year, that fruits are a wholesome and economical food. The demand for fruit has increased each year and will continue to increase, notwithstanding the fact that this is a great fruit producing country, excelling all other countries but there are thousands of villages all over this land where there is no adequate supply of strawberries, raspberries and all other kinds of fruit. Look into this question and start in to supply your locality with first class fruit and fresh eggs. You can reap a rich reward by supplying your home market or your nearest city. We all should eat more fruit. The acids of fruit tend to clear the system of impurities. Fruit and nuts are the healthiest and most natural food for mankind and just think of the love and pleasure of growing the fruit that brings you wealth, health, happiness and gladness and the sad hearts of those who have so longed and yearned for the fresh fruit.

The Strawberry.

This is one of the first that comes

to ripen in early summer. How many of us are brought to a realization of the value of this fruit not until the season of its fruitfulness is upon us? Then the craving appetite, so long confined to the winter diet. Ah! Then it occurs to us with full force, but through neglect, many of us failed to plant a good sized patch. The strawberry, unlike most other plants, can be grown on any fertile soil that has good drainage, and in any climate, and produce an abundance of fruit, and if there is any one thing that will tempt anyone to spend their money quicker than the big luscious strawberries, permeating the air with the fetching aroma or odor of their ripeness, goodness and flavor, then I do not know what it is.

Preparing the Land.

In preparing the land to set plants, it is better to begin in the fall by plowing and then spread over all the manure you can spare, and remember, there is no other crop you can grow that will pay you for the manure like the strawberry. It seldom occurs to the uninitiated that 200 bushels of strawberries to the acre—field culture when properly grown, is only an average yield and at five cents per quart is \$1.60 per bushel or \$320.00 per acre, and with the hen fertilizer that I have told you about I have grown at the rate of 500 bushels per acre. This hen fertilizer is simply great in growing those big luscious strawberries. Allow this land to lie until

spring, when the land should be fitted with a disk harrow, until it is well pulverized and the manure worked in, then smooth the land with a plank float, or roller, fitting it ready for marking, and bear in mind that to set strawberry plants to make them live and do well, the land must be firm and not lie up too light. Now mark out your land, three and one-half feet and set your plants eighteen to twenty inches apart in a row.

Setting the Plants.

A cloudy day is preferable, but where we are setting acreage, be it cloudy, cool or a scorcher, the work goes on; the plants when set right, will live every time. I use an ordinary spade for making the hole for setting the plants, have a boy to carry the plants in a pail with water in the bottom, place the blade in the mark of the row, put one foot on spade, pushing the blade in ground about six inches, give the handle a move back and forth once or twice then have the boy take a plant and put in hole. Be sure that all the roots are straight down, then press soil hard against the plant. This is very important. The plants should be set even with the surface. I advise comparatively light fertilization at planting time, when after the plants are well started in growth, about the time the runners start, to apply a heavy dressing between the rows to be cultivated in, aid in this way to encourage the

(Continued on page 490.)



M. M. Johnson

No One Ever Spun a Yarn More Interesting than M. M. Johnson's Real Life Story—

“The Ups and Downs of an Inventor”

It's One of the Famous Chapters in the Old Trusty Catalogue

Here is a true story that has been read and re-read in more homes and by more people than many of the most popular books of fiction.

It has entertained and inspired hundreds of thousands of people who turned their efforts toward poultry raising with most gratifying success. You see Johnson on his farm, building his first Old Trusty Incubator. You see its success. Then you see how half a million people send in orders and

you see how they have made and are still making big profits with

The Old Trusty Incubator

It's the real favorite wherever poultry profits are made. It's built just as you would build it for yourself if you had the Johnson training and experience and facilities. If you were to insist upon it, no one could build you a better hatcher. All operating parts are as simple as can be.

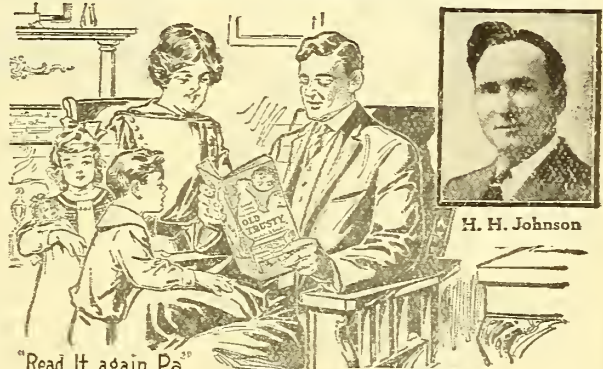
Price Still Less than \$10—

Freight Paid East of Rockies—Only a trifle more delivered to Pacific Coast

20-Year Guarantee Old Trusty Does Its Part or You Can Trade Back

Send a postal today and get this human interest story FREE. You will find it the most pleasant evening's reading ever written on the poultry subject. Then judge for yourself whether you would like to make more poultry profits this year. Write a postal now while you are thinking about it and get the book by return mail. The Johnsons want everyone to read it. It's free.

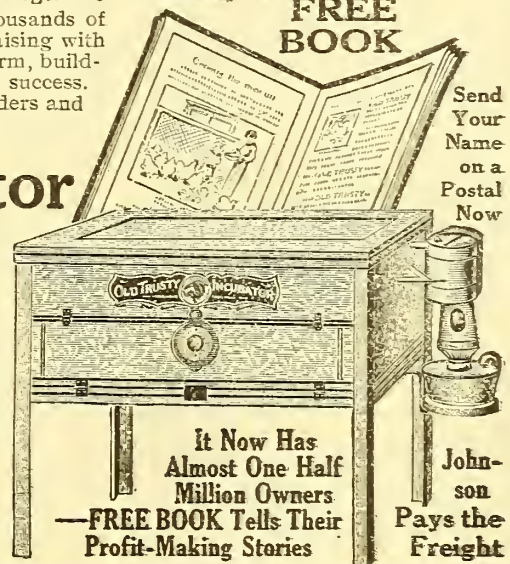
M. M. JOHNSON INCUBATOR CO., Clay Center, Nebr.



H. H. Johnson

“Read It again Pa”

FREE BOOK



Send Your Name on a Postal Now

It Now Has Almost One Half Million Owners —FREE BOOK Tells Their Profit-Making Stories

Johnson Pays the Freight



KRUGER LEGHORNS.

Send for Catalog.

Eggs, chicks, large numbers pedigreed and trap nested, offer merits not to be found in the smaller poultry yard. Kruger Egg & Poultry Producers, Ave. K. Sallis, Miss.

Wolpert's White Rocks

Bred for utility and beauty. My hens averaged 162 eggs each in their pullet year.

EGGS FOR HATCHING.

\$3 per 15; \$5.70 per 30; \$10.20 per 60; \$15 per 100. EDW. L. WOLPERT, 620 Second St., Lancaster, Pennsylvania.



TRAP NESTED. Seventh year, PEDIGREED EXHIBITION S. C. BUFF AND WHITE ORPINGTONS.

Heavy winter layers. Prices reasonable. A few first class, pedigreed exhibition Golden-buff cockerels for sale. Sent on approval.

Catalog free. ALY. C. PETERS, 1043 Taylor, Box P. K., Scranton, Pa.

KILL RATS & MICE
SCIENTIFICALLY
with **Pasteur Laboratories Rat Virus**
NOT A POISON
HARMLESS TO POULTRY, DOMESTIC ANIMALS & MAN
PASTEUR LABORATORIES OF AMERICA
NEW YORK 366 W. 11 ST. CHICAGO 443 S. DEARBORN ST.
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WHITEWASHING
and disinfecting with the new
"Kant-Klog" Sprayer
gives twice the results with same labor and fluid. Also for spraying trees, vines, vegetables, etc. Agents Wanted. Booklet free.
Rochester Spray Pump Co.,
202 Broadway, Rochester, N. Y.

Smith Sealed. Prices postpaid
—12, 30c, 25, 50c;
60, \$1.00; 100
\$1.50; 500,
\$5.50; 1000, \$12.50.
LEG BANDS
Leader Adjustable. Prices postpaid 12, 15c;
25, 25c; 50, 40c;
100, 65c; 250, \$1.50;
500, \$2.75; 1000, \$5.25.
SAMPLES FREE
Write postal or order now Satisfaction guaranteed. Address THE RYES-DAVIS CO., Inc., Dept. 532 Battle Creek, Michigan

PERFECTION SANITARY CIRCULAR METAL BROOD COOP
made entirely of galvanized iron which will last a life time. They are properly ventilated, and are Rat, Mink, Weasel and Skunk proof. Just the coop you are looking for. Write for circular. A special introductory price. **Perfection Metal Brood Coop Co., Box 56E Warsaw, It.**

Don't Feed Green Food!

Do away with the bother by using Succulenta Tablets

They are better and cheaper and more relished by all fowl. Simply dissolve one tablet in one quart drinking water for fowl. Sample can (100 large tablets) by mail 40c. (Can of 250 large tablets by mail \$1.00.)

YOUR MONEY BACK IF NOT SATISFIED. Drop Postal for particulars. **The Succulenta Co., P. O. Box 405-11, Newark, N. J.**

R. I. RED PULLETS AVERAGED 184 EGGS PER YEAR.

Editor Poultry Keeper:

I find the Poultry Keeper the best paper I can get and like to read the letters from others. I keep pure bred Rhode Island Reds. I had 40 pullets in 1913 and they laid 7369 eggs in twelve months November to November. I would like to know if there are others who have as good records. I feed scratch feed night and morning and have dry mash before them all the time. The mash consists of one part wheat bran, one half part corn meal, one-fourth part ground oats, one-fourth part animal meal and some charcoal. This will make hens lay. I have sixty pullets now and am getting good results.

D. W. Brown.

Massachusetts.

GOOD DECEMBER RECORD.

Editor, Poultry Keeper:

My 74 S. C. Reds laid 1219 eggs during the month of December. They were divided into pens and one pen of 14 pullets laid 313 eggs.

1219 eggs, 10 1/2 dozen @ 58c \$58.87
Cost of grain 11.47

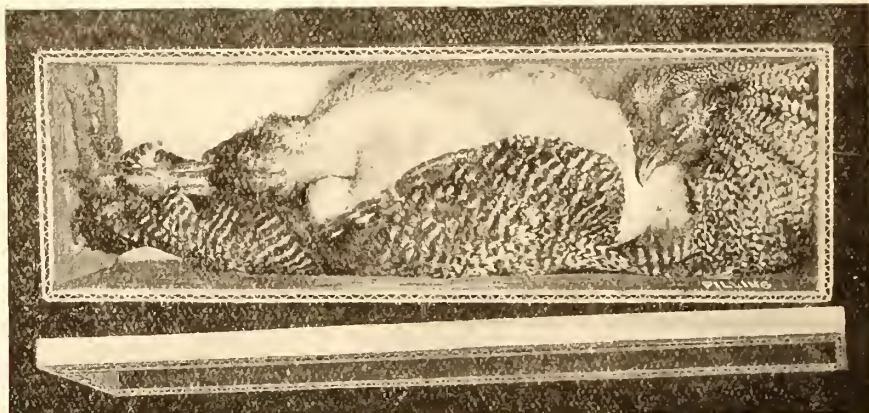
Net Profit \$47.40
313 eggs, 26 dozen @ 58c \$15.08
Cost of grain 2.17

Net profit, 14 pullets 12.91

I think this is a very good record as most every one's hens were not laying much. Next year I intend to build another house and keep more layers.

F. Burley Moore.

Massachusetts



PRODUCING "SOFT ROASTERS" WITH CAPONS.

Plain poultry keeping affords one a living but the big profits are secured by special work—the production of by-products we might call it. On the average poultry farm each year's output of cockerels is usually sold at a loss. This can be avoided if you will prepare your males to meet special market requirements.

Producing soft roasters will make your cull cockerels more profitable than the females. Such roasters bring the highest possible prices when produced through caponizing. This operation yields the largest possible bird. The South Shore section of Massachusetts is noted for its large numbers of tender juicy roasters, and the high market prices received for them.

Having decided to raise soft roasters, select the best cockerels for the breeding pens. This can be done when they are three or four months old. Caponize all other cockerels and feed them two or three months longer. By this time they will weigh eight pounds and be in prime market condition. Cracked corn, beef scraps and water should be kept constantly before them. Feed them some green food in the shape of cabbage, sprouted oats or green rye. Capons will reach the desired weight in a few weeks without other forcing than the above simple diet.

Soft roasters are in demand all the

year round but bring the best prices in the early summer. We advise those of our readers who have been selling their cull males for low market prices to caponize and fatten them hereafter. It will mean greater profits to you from marketing them as soft roasters.

The new 20-pound limit for parcels lately put in operation by the Post Office Department has greatly increased the opportunities for shipping capons and dressed poultry direct to the consumer at a small cost for transportation. You can now work up a private high class family trade and ship one or more capons direct to each customer once a week—or as often as wished—and feel assured of prompt and safe delivery.

Caponizing not only increases the size and weight of the male at killing time, but the capon's flesh is more tender, juicy and finer flavored than the ordinary fowls. This is the reason caponized soft roasters bring more per pound.

The operation of caponizing is quite simple when you have a good set of modern instruments such as G. P. Pilling & Son Co. of Philadelphia, manufacture. This concern has a little booklet which describes the operation thoroughly. It also gives a lot of valuable information on the care and feeding of capons. They will be glad to send it free to any poultry raiser.



J. F. SIEMS,
Inventor and Patentee

foreign countries
the end of the hatching process.

Natural Hen Incubator ^{200-Egg Size} Costs Only **\$3.00**

Don't Throw Your Money Away: Other Incubators Cost 4 Times this Price

Over 600,000 Sold—Many are pushing the old-style hot boxes aside with their dangers and unsatisfactory hatches. With the **Natural Hen Incubator** there are no more smoking lamps and death dealing fumes, no overheating, no sudden cooling, no expense for oil, no sleepless nights, no more spoiled hatches. People are learning to know that the **Natural Hen Incubator** way is the right way. There is no way to beat nature. Imitations only result in failures and costly mistakes.

The **Natural Hen Incubator** is unlike any other incubator. With it you not only hatch more and better chicks, but they will be stronger and more vigorous and develop more rapidly and make better fowls. The Government is behind it. It is fully protected by patents in the U. S. and in

Notice the Words of Praise

J. L. Beach, Morgantown, W. Va., writes: "Your Natural Hen Incubator is a most useful invention. I am recommending it to everyone that is interested in chickens. It fills every claim you make for it."

Captain G. S. White, Vinita, Okla., writes: "This is the best thing in the chicken line ever offered." Another: "The Natural Hen Incubator is the surest and best of all incubators."

If you want the incubator that will hatch the most and best chicks, the **Natural Hen Incubator** is the incubator for you. No freight to pay. Agents wanted. Send today for **FREE** Catalog with *Special Introductory Offer* and make success sure.

NATURAL HEN INCUBATOR COMPANY, 1349 Constance Street, Dept. 1, LOS ANGELES, CAL.

J. D. Haley, Cottonwood, Texas, writes: "The Natural Hen Incubator is simplicity itself and the greatest help to nature ever conceived by man."

Professor C. L. Willoughby, University of Florida, writes: "It is useful, safe and economical." Another: "Out of 160 eggs I hatched 150 chicks. It is the grandest thing I ever saw."

REASONS FOR SOME POOR HATCHES.

I wish to say a word or two in your valuable journal about keeping hens in laying condition, and selling eggs for hatching.

To illustrate, a customer of mine S. C. W. Leghorn eggs from my 216 egg strain last spring, and he cannot get his pullets to lay this winter. I went to his place and such a sight I have never seen. This customer of mine is a sensible fellow, but if he had gone to some one else instead of to me with his complaint he could have done me all kinds of damage.

What I found when entering his coop was this; a coop 12x15, pitch roof, end facing south, all open front and lots of cracks on all sides; a few sticks nailed up in one corner for roosts about 6 inches apart, ground floor level with outside surface, 2 boxes sitting on the floor for nests, droppings 6 or 8 inches deep on the floor under the perches, and our weather here in Flint right now is below zero, not much snow, but ice all around, and his hens are running out all the time at will.

A big stew kettle of bran and cooked potatoes stood in the middle of the floor for all to eat from, also the floor was entirely bare of litter of any kind. He says he has got just one egg and that was on Christmas day.

They were hatched in May and mine were hatched the 1st, 4th and 6th of July and my 63 hens and pullets have laid exactly 875 eggs for the 25 days of this month (Jan.) That is because my chickens are kept in ideal condition. I give 6 square feet to each hen, with best clover hay for litter, open front coop, good ventilated roost closet, kept perfectly clean, warm water three times a day, good clean grain, the best money can buy.

It certainly proves conclusively that if bred to lay strains of S. C. White Leghorns are given a fair chance they

will pay for themselves many times over I have one pen of selected pullets from which I am trying to get one that will beat "Lady Showyou." That pen of 11 started to lay at five days less than five months old and today gave me 10 eggs. They usually lay 6 and 8 a day.

Now a word about selling eggs for hatching.

Last spring I sold a man 120 eggs, Buff Orpingtons. He put the eggs in a Robt. Essex 120 egg incubator and set the incubator in the kitchen against the kitchen stove and then expected the chicks to hatch. He had 7 infertile or clear eggs in the 120 which he tested on the 6th day. Chicks died in the shell from that time on to the 25th day, judging from the looks of them after the eggs were broken. His claim was that I fed too much oyster shell, making the shell too hard for the chicks to break the shell. I promptly told him of my own success of 83 chicks from 120 eggs, also of another man getting 65 chicks from 12 dozen eggs gathered in zero weather, and the male bird had been in the pen just exactly six days. However I deliberately gave him 5 dozen White Leghorn eggs, (he thought that the white shells would hatch better) and he got just 7. My opinion about shipping eggs for hatching to strangers off at a distance is that in order to get a square deal, is for the breeder to stamp his eggs, and all eggs that do not hatch to have them shipped back, and the breeder to take his oath before the proper official that the eggs were infertile. If the egg contains a chick he is not to blame if it does not hatch. He has no control over the hatching. However the fowls laying the eggs should have plenty of exercise and green stuff.

C. M. Dutcher.

Michigan.

Chamberlain's Setting Hen

\$5.75

Incubator and Brooder

Freight Paid East Rocky Mountains

Holds 26 Eggs

A Complete Incubator

Easy to Operate

You can always get fresh eggs enough to fill it.

The Baby Incubator

\$5.75

Incubator and Brooder

Equals Two Hens.

Always Ready to Set

Never leaves her nest. No Lice. No broken eggs.



Chamberlain's Perfect Chick Feed

TRADE MARK



Has no Equal. No Corn. No Bowel Trouble. The Only Original Dry Chick Feed and the World's Standard.

"Lady Showyou," winner of the National Egg Laying Contest at Mountain Grove, Mo., with a record of 82 eggs in 82 days, and 281 in a year and recently sold for \$800, was raised on Chamberlain's Perfect Chick Feed.

We have agents all over the U. S., but if our agent is not near you we will deliver 100 lb. sack freight paid to your railroad station for \$3

W. F. Chamberlain Feed & Incubator Co.
107-109 Olive St. Desk 13 St. Louis, Mo.

IMPROVED ALUMINUM CHAMPION LEG BAND.

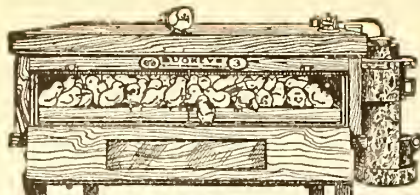
Oldest and Most Popular Band on the Market. Made in one Piece, Adjustable to Fit Any Fowl.



The band always stays securely where it is fastened, is held by a double lock, hence it is impossible for it to slip off. To fasten, bend the broad part of the band on your finger to conform to shape of fowl's leg. Put small end through loop until it fits loosely on the leg; turn the end back, then bend the two lugs over the loose end as shown in cut. Cut off surplus with scissors. Size of Plymouth Rocks and other breeds. Not made in pigeon sizes. Prices, postpaid; 12 for 15c; 25 for 20c; 50 for 35c; 100 for 60c. Guaranteed satisfactory.



Address all orders to **POULTRY KEEPER PUBLISHING CO.** Quincy, Illinois.



Anybody Can Hatch Chickens With a **BUCKEYE**

That statement means exactly what it says. It makes no difference what kind of incubator you have used before, nor whether you have ever used any at all. When you buy a "BUCKEYE," you get absolutely the best there is in incubators. It will give you successful hatches every time. We are so sure about it that every machine we sell, no matter what the size or price, is absolutely

GUARANTEED

By your dealer and by us
To Hatch Every Hatchable Egg

Neither your dealer nor we would make such a sweeping guarantee if we did not know that the "BUCKEYE" will do all we claim. Made in five sizes—60-egg to 350-egg capacity. Over 325,000 in successful operation.

We want you to see the "BUCKEYE" before you buy. Let us send you the name of our nearest dealer where you can see the machine in operation. We will also send you our catalog, which tells why more than 1,000 dealers prefer to sell the "BUCKEYE." We are glad to answer any questions—we want to hear from you. Write us today.

THE BUCKEYE INCUBATOR CO.,
507 Euclid Ave., SPRINGFIELD, OHIO.

Made in 5 sizes and Sold
As Low As \$10.00

50 Best Paying Varieties

Pure-bred Chickens, Ducks, Geese and Turkeys, Hardy, Northern raised, highest quality. Fowls, Eggs and Incubators AT LOWEST PRICES. Large poultry book of valuable information 4c. Poultry Headquarters.

W. A. WEBER, Box 942 Mankato, Minn.



Save Those Baby Chicks

90 per cent of all chick losses are caused by the "babies" being either starved or overfed. No matter how many or how few chicks you may own, there is but way that they can be fed properly—and that is with a

Simplicity Kant-Klog Poultry Feeder

It feeds any chick food, is rat and sparrow proof—and it "can not clog." Always working; nothing to get out of order. Feed your chicks right—get a Simplicity Kant-Klog Poultry Feeder, price \$1.25.

You Can't Improve on Nature

nor have we tried. With the Simplex Perfection Feather Brooder you simply "follow nature." It has no artificial heat—just real "natural feathers" hovering the chicks in the same way as the hen—only better. There is no fire, no leg weakness, no smothering, no chilling, no overheating, no gases or fumes, no bowel trouble, no crowding, no fuel to buy or lamps to replace. Perfect in every way. 50-Chick Size \$5. 100-Chick Size \$7.50.

Send for catalog. Sold under a positive guarantee of money refunded if not satisfactory. **Simplex Supply House, Pontiac Bldg., Chicago**



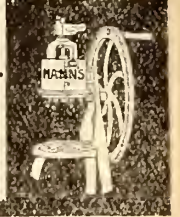
Make Hens Lay

READ THE BOOK THAT TELLS HOW

Tells you how to **make hens lay**. Gives you in a nutshell the whole matter of right feeding. Read it if you want to know the **real value** of fresh, raw bone, which contains four times the egg-making ingredients that grain has. You **must** feed raw, green bone to promote **growth, development and laying**. It doubles your profits in number of eggs, fertility, strong chicks, large fowls. It is easily and quickly prepared with

MANN'S Latest Model Bone Cutter

It cuts all green bone with all adhering meat and gristle; wastes nothing and never **clogs**. Automatically adjusts cutting to your strength. Anyone can turn it. We'll send you one on **10 Days' Free Trial, No money down**. If not satisfactory, return at our expense. Send for book today. **F. W. MANN CO. Box 57 Milford, Mass.**



POULTRY AND FRUIT COMBINED.

(Continued from page 487.)

growth of the strong runners and strong crowns for the next season's fruiting, for the stronger the crowns, the larger the berries will be.

If you want a cherry, plum, peach or apple orchard, you can grow your strawberries, black or red raspberries, currants or gooseberries, in between the trees. Plant the cherry or plum trees 21 feet each way, with one row of small fruit in the row and two in between and the first year you can plant one row of strawberries, beets or potatoes between larger fruit. Now the more hens you keep, the more manure you will have and the bigger your berries, and the bigger your berries the bigger the price and the bigger your bank account will grow. There is many a small five, ten and twenty acre hen and fruit farm that is making more clear dollars in a year than the big farms are making and with less than one-half the capital; then my dear brother and sister, start this day with the hen that is bred to lay and with the great big berries, see how it will pay; and live a big, happy life each day.

THE HONEST QUEEN INCUBATOR.

In these days of cheap construction it is a gratifying experience to find an incubator built as honestly as the Queen Incubator is built. It is a regrettable fact that many incubators dry apart and fall to pieces after short periods of service. But this cannot be charged against the Queen Incubator. The materials used in the Queen are those best adapted to incubator use. The wood is thoroughly seasoned, the workmanship is of the best, the completed machine is honest. Proof of the substantial character of the Queen is seen in the fact that the manufacturer expects every Queen he turns out of his factory to last 25 years. It is well to look for lasting qualities when you buy an incubator. You hope to be in the poultry business not only for a year or two, but you want to succeed so well that you will follow it for many years, and you want your machine to last. In the Queen you get not only an honestly built, substantial incubator, but one that has the true hatching genius. The Queen's record is well known—honesty big hatches, livable chicks, long life.

Mr. P. M. Wickstrum, the manufacturer of the Queen, claims for it 28 points of excellence, and there is always a good substantial basis for any claim Mr. Wickstrum makes. Catalog and particulars can be had by writing the Manufacturer at Box 2, Lincoln, Neb.

FEEDING AND CARING FOR CHICKS.

I have been trying to raise chicks for several years. I have good luck sometimes and sometimes I don't. The last few years I have been feeding little chicks dry bran and find it very good for them. I think it best to keep keep it before them at all times. I like to raise them with hens the best. I don't think they are nearly so much trouble. I don't have to be bothered filling lamps and seeing if the thermometer is at its right place, although some folks think they never could be bothered with hens as they are sometimes covered with lice and mites.

Have any of the readers ever tried using moth balls or sulphur under sitting hens? I think this is as good as any lice killer you can buy. Sulphur is good for baby chicks if they are kept in out of the dew and rains.

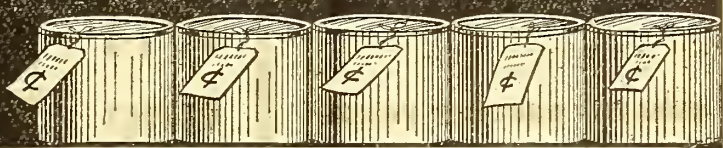
Della E. Jordan.

Illinois.

John R. Wall, 719 W. Marietta St., Decatur, Ill, specialty breeder of Cornish Indian Games, captured the following prizes on his entries at the recent Decatur show: 1st cock; 1st, 2nd, 3rd and 4th cockerel; 4th cock; 1st, 2nd, 3rd and 4th hen; 1st, 2nd, 3rd and 4th pullet; 1st and 2nd pen. Also special cup for best pen in show and special cup for championship male bird of show.

W. A. Congdon, Waterman, Illinois, has a 140-acre farm on which he raises Barred Rocks exclusively. He can furnish quality stock or eggs from either cockerel or pullet matings those who want exhibition stock and is also in position to quote especially low prices on utility eggs for incubator hatching. Mr. Congdon is one of the old advertisers whose adv. has appeared in Poultry Keeper for many years past and having had these years of experience in noting his reliability, we can safely refer any buyer to him, with the assurance that all orders will be honestly filled.

This or This?



With X-Ray Incubator only One gallon for entire hatch.

With other incubators Five gallons required for hatch.

Let X-Ray Incubator Save You 4 Gallons of Oil on Every Hatch

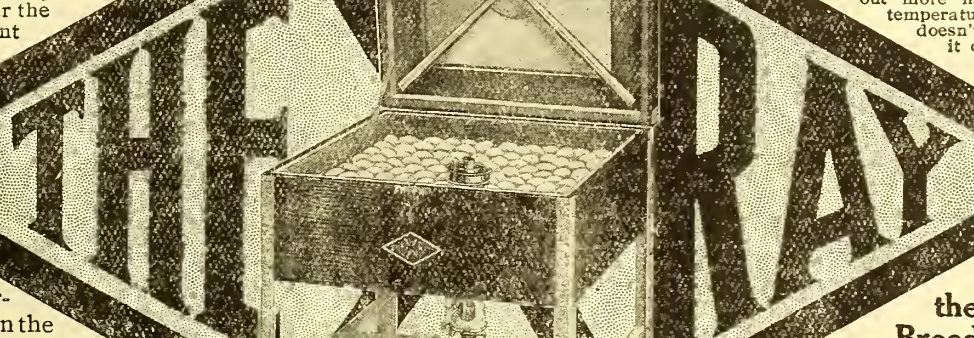
The X-Ray actually makes this saving for you. Saves you 75c to \$1.25 on every hatch—four to six dollars a season on oil.

It is the only incubator in the world that can do it. Why? Because the lamp is **underneath**—squarely underneath the egg chamber—where it ought to be. The lamp produces just the heat needed at all times—and all the heat is **used**. Used **properly**—evenly distributed—in the X-Ray and no other.

That's why it saves—saves you money—**insures** you far the largest per cent of your hatch.

There's no cold side. There's no overheated corner—just the right hatching temperature in every nook. It saves you oil. It saves you eggs—and that's not all. It saves you a world of work and worry. You fill the big 4 to 8 quart oil tank **just once**—at the beginning of the hatch. You don't have to bother with filling again. No more filling jobs until the hatch comes off. Think of that.

And that's not all. You don't have to bother with the burner either. The X-Ray is the machine with the automatic trip at the burner. It works **itself**—cuts down the flame if heat exceeds the need—lets out more flame if the temperature drops. It doesn't think, but it does better. It never "forgets."

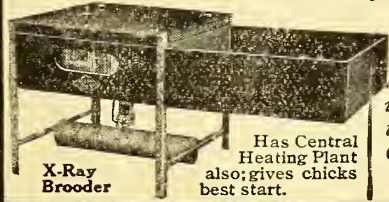


There's a vast difference between the X-Ray—the scientific incubator and the old fashioned kind. 750,000 incubator users now know why the X-Ray is 100 per cent efficient on so many hatches—why a lot of old-time work is now unnecessary.

The X-Ray is the simplest, yet practically every feature is a special feature. Go over it, notice the two double glass panels in the top. You can look at the eggs any time without raising the lid or letting in cold air. Ventilate or turn eggs simply by raising lid.

It takes just 15 minutes to raise X-Ray to hatching temperature. 4 to 8 hours for others.

Our new factory at Des Moines is the largest exclusive incubator factory in the world, the most modernly equipped. Come and see it if you can.



X-Ray Brooder Has Central Heating Plant also; gives chicks best start.

And the X-Ray Brooder Just as Much Ahead

The lamp is beneath—same as in X-Ray incubator. It makes the difference between saving chicks and losing them. And that means poultry profits.

Fill Out the Coupon—**Get Incubator Book No. 12 FREE**

Fill out the coupon below. Do it today. Get our big Incubator Book. We'll guarantee that it is the most interesting work on incubators you ever read. Shipped direct from factory. No agents employed. Send order direct to me. We pay the freight.

X-Ray Incubator Co., Des Moines, Ia.

Send Me Your X-Ray Book No. 12 .

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Poultry Keeper Pub. Co.

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In my own hands and in the hands of customers this year at the LARGEST SHOWS ever held at NEW YORK and BOSTON.

1914
Matings
In

BUFF ORPINGTONS
WHITE ORPINGTONS
WHITE PLYMOUTH ROCKS
WHITE WYANDOTTES and
S. C. RHODE ISLAND REDS

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BEST
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EGGS from BEST MATINGS in the WORLD, \$10.00 for 15; \$30.00 for 50; \$50.00 for 100.

BABY CHICKS from THESE MATINGS, \$1.50 each in lots of 20 or more at one time.

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SEND FOR MY NEW ILLUSTRATED CATALOGUE and MATING LIST and BOOK YOUR ORDER NOW.

Grand breeding birds mated to produce show or utility stock at absolutely fair prices. State your exact requirements, and if possible what you wish to invest.

I WANT YOUR ORDER and REMEMBER, your ABSOLUTE, ULTIMATE SATISFACTION means my PERMANENT SUCCESS.

MAURICE F. DELANO

127 William Street,
MAURICE F. DELANO, Proprietor.

Vineyard Haven, Mass.
FRANK H. DAVEY, Superintendent.

FIRST QUARTERLY REPORT FROM TWO AMERICAN EGG LAYING CONTESTS.

The subjoined table shows the first quarterly report of the Connecticut Egg Laying Contest, held at Storrs, Conn., under the supervision of Storrs Agricultural Experiment Station, and the North American International Egg Laying Contest held at Thorndale, Pa., under the supervision of Professor Kilpatrick, of Pennsylvania State College; Professor Elford, Poultry Husbandman, of the Dominion of Canada;

Professor F. H. Stoneburn, Dr. Nathan Sanborn and F. V. L. Turner. In each contest all the birds are trap-nested, fed the same ration and attended by expert poultrymen.

In the Connecticut contest there are eighty-two pens of ten birds each while the North American has one hundred pens of five to a pen. Connecticut total, with 820 birds, shows 9200 eggs or an average of 11.2 eggs per bird. In both contests the highest pen record has been made by White Wyandottes, with White Leghorns second.

The North American International Contest. Storrs College Sontest.

Breed.	The North American		Storrs College			
	No. Birds.	Tot. Av.	No. Birds.	Tot. Av.		
Barred Plymouth Rocks.....	20	364	18.2	40	431	10.7
White Plymouth Rocks.....	30	382	12.7	70	378	5.4
Buff Plymouth Rocks.....	5	185	37.	20	152	7.6
Partridge Plymouth Rocks.....	5	117	23.4	.....	.....	.....
Columbian Plymouth Rocks.....	5	103	20.6	.....	.....	.....
Silver Wyandottes.....	5	105	21.	.....	.....	.....
White Wyandottes.....	45	1227	27.2	50	1447	28.9
Buff Wyandottes.....	5	0	0	40	278	6.9
Columbian Wyandottes.....	5	151	30.2	10	89	8.9
Single Comb Rhode Island Reds.....	50	930	18.6	130	1506	14.5
Rose Comb Rhode Island Reds.....	15	291	19.4	20	342	17.1
Light Brahmas.....	5	0	0	.....	.....	.....
Single Comb Brown Leghorns.....	5	140	28.	.....	.....	.....
Single Comb White Leghorns.....	215	4507	20.9	330	3886	11.7
Rose Comb White Leghorns.....	5	14	2.8	.....	.....	.....
Single Comb Buff Leghorns.....	5	39	7.8	10	81	8.1
Single Comb Red Pyle Leghorns.....	5	165	33.	.....	.....	.....
Anconas.....	15	382	25.4	.....	.....	.....
Silver Campines.....	5	17	3.4	10	.....	.....
Blue Andalusians.....	.....	.....	.....	10	10	1.
Single Comb Buff Orpingtons.....	20	401	20.	10	38	3.8
Single Comb White Orpingtons.....	25	209	8.4	10	45	4.5
Silver Spangled Hamburgs.....	5	40	8.	.....	.....	.....
White Laced Red Cornish.....	.....	.....	.....	10	.....	.....
Hens.....	.....	.....	.....	50	517	10.3
	00	9769		820	9200	

DUCKS.

As the poultry journals seem to have an over supply of chicken literature and say but little about ducks. I am taking the liberty of writing a few lines on ducks as I find them; as to breeds, their value and kinds.

Pekins, being my choice, having spent seventeen years continuously breeding them, rank first in my estimation as broilers, commanding at least 3c per lb. in market than any other breed. Ours that were ready June 1st sold for over \$1.30 each return check to us in Chicago market.

I believe that they truly deserve first rank as they mature early; weighing from 4 to 5 lbs. in 8 weeks, dress off nicely, have plump bodies and without exception make the most tempting appearance to purchasers. Runners have too long a body to command good prices. It is doubtful if there ever will be a duck that will displace the Pekin ducks in that capacity. Once again they will make the shipping weight in much less time than chickens with very little mortality.

Runners are becoming a favorite with me for egg production. They eat but little more than chickens, will lay more regularly, not being influenced so much by weather conditions except very hot weather and not then when they have shade and water to get into, and the extra feed is more than made up for in the fact that they are easily penned and less subject to diseases. I have not lost a duck in three months and have about 200.

As to kinds of runners while Whites lay the prettiest egg of any duck, they as yet don't quite come up to the Fawns in laying capacity for me. This probably can be accounted for by their being comparatively a new breed while Fawns and Penciled have been bred for years for laying. I now have a little pen of 5 Fawns that seldom missed laying three eggs a day through January.

It is not my intention in any way to run chickens down as egg producers as many people are not properly situated to handle ducks and my R. C. Brown Leghorns still prove very profitable and in no way interfere with my duck business and their eggs when I have any to spare for market command about 3c a dozen better price in New York than the breeds which lay brown eggs. Am saying but little on care and feeding of ducks as am giving a free booklet to all who send 1c stamp for postage, as you may see by the classified ads in this journal.

Oscar Wells

Farina, Ill.

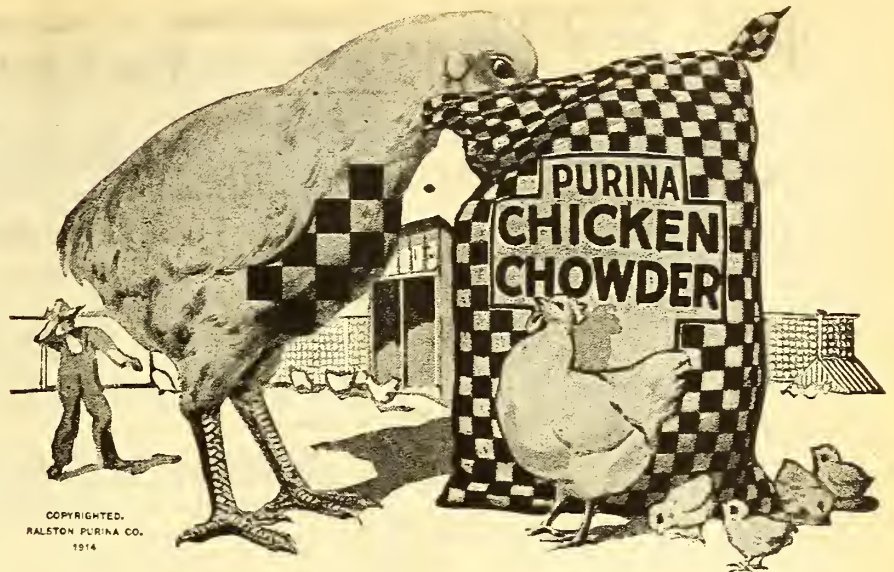
TOO VALUABLE TO LOSE.

Editor, Poultry Keeper:

Will you kindly send me another copy of this month's issue of Poultry Keeper, as the one you mailed me was burned with other papers by mistake, and I would like to have a set at the end of the year, as they are a source of information not surpassed by any poultry magazine of today.

New York.

James Golden.



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RALESTON PURINA CO.
1914

Chicken Chowder makes Chesty Chix.

It makes them grow twice as fast. This means large profits, heavy egg production and vigorous chicks that withstand disease. You can't afford to be without this *growing feed* now, any more than you could afford to be without it last winter when you proved that "if Chicken Chowder won't make your hens lay they must be roosters." Feed Chicken Chowder in addition to Purina Chick Feed and double your profits. For sale by leading dealers. Order from your dealer today.

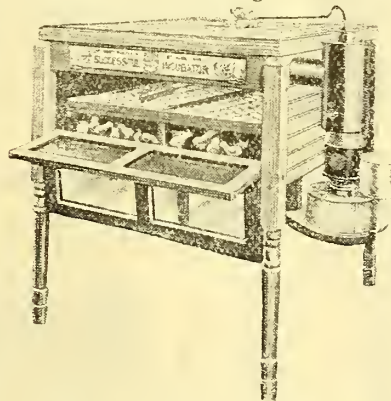
Checkerboard Poultry Book FREE!

For your dealer's name we will send you this 48-page Poultry Book, containing plans of houses, breeding and feeding charts, space for daily egg records, cures of diseases, care of baby chicks, etc. It also contains information about Col. Purina's half price galvanized iron Chick Drinking Fountain (2 for 25c) and more details about his Automatic Chicken Chowder Feeder (50c). Write today.

Col. Purina, Purina Mills, 803 Gratiot Street, St. Louis, Mo.

TWENTY YEARS' TEMPTATION.

Ever since I started in the incubator business, and that was twenty years ago, I made up my mind to produce an incubator which I could recommend in the highest possible terms, describe in the most forceful way, without saying too much and which I could guarantee conscientiously and yet not over-state things.



Almost every year, for 20 years, I have been advised by well meaning people to make an incubator with thinner walls, with less durable tanks and lamps, lower in the egg chamber, or in fact, something that could be produced cheaper, so I would be able to meet competition better.

I have refused persistently to do this, because I was convinced I was right in maintaining the substantial high class construction of my machines and that sooner or later the poultry raisers of this country would realize it would be to their advantage to pay a little more money and get something that will give them satisfaction for many years.

This season, more than ever before, have I realized that this course, which I pursue, has been the right one. I have received more testimonial letters and more follow up orders from my old customers, than ever before. The fact of the matter is, 40 per cent of my business so far this season has been obtained from our old customers or their friends, to whom my machines have been recommended.

I am sure that the cheapest advertising I can get, is through my well pleased customers. I therefore assure the readers of this paper that it will always be my endeavor, not to try how cheaply I can construct my machines, but how well I can make them, in order to give the best satisfaction.

If you haven't my 128 page catalog by this time I shall be pleased to send it to you on request, by addressing J. S. Gilerest, Des Moines Incubator Co., 47 Second St., Des Moines, Iowa.

THINGS TO REMEMBER IN HATCHING AND BEARING CHICKS.

The time is near to think about chicks for early pullets to lay and cockerels and pullets for early shows. First of all, have your breeders all of good, healthy stock and well up to the standard requirements. Oull as closely as you can, and you will get more birds not fit for the show room than you will fit for the show room. Mate all pens, remembering all the females that are weak in any particular point, must have males exceptionally strong in that point to produce the right points in the young.

Pens should be mated at least one month before starting to set eggs. I usually use twelve females to one male.

Feed a variety of grains at night, all they will eat. Mornings and noons feed sparingly. Feed all grain in deep litter and make them work for all they get. Keep plenty of fresh water by them all the time, also bran and dry mash in hoppers always by them, feeding some kind of green food every day, such as cabbage, mangel beets, apples and vegetables of all kinds during the early winter and later sprouted oats and you will have no trouble with infertile eggs. All chicks will be strong, healthy and free from any bowel trouble or diseases.

I start hatching about February 1st, and brood all chicks in brooders. The first ten days I keep chicks in a room where I keep a little heat. In cold weather I keep them in about a month, then they go in the brooder house where there is no heat at all. My chicks are kept on board floors which I cover deeply with sand and put hay chaff on top making a good deep litter for them to scratch in, mixing a little air slack lime in the litter and I never have leg weakness as some claim they do by keeping chicks on board floors.

I do not feed until chicks are forty-eight hours old or over; then only a little at a time and often. The first feed consists of hard boiled egg, one part to three parts toasted bread run through a food chopper. Mix well and give them with plenty of fresh water, charcoal and grit. I think the fine Hen-E-Ta is excellent for baby chicks. I also give them milk to drink when it is to be had. After two weeks I feed Spratt's chicks feed and chick meal, which for me seems to be the best for baby chicks. They seem to grow and keep healthy on it. I feed all the chick feed in the litter. They soon learn to scratch for it and are as happy as can be. I keep wheat bran in boxes or hoppers where they can eat all they want from the first. For green stuff I feed lettuce cut fine when I can get it. Sprouted oats tops cut up fine is also good. I never have any sick or droopy chicks. I don't think they ever mature to be any good unless they are good, healthy and rugged to start with. I try to keep them growing from the first. The pullets are ready for early fall laying when eggs are anywhere from fifty to eighty cents a dozen. I breed S. C. R. 1. Reds only and think they can't be



My Three Party Offer— An Astonishing Money Saver

Let Me Mail It to You at Once

Your name and the name of two of your friends will bring you the most surprising incubator offer I have ever been able to make. I want every poultry keeper to know of the big profits possible with the Ideal Incubator. That's why I've planned this great offer. This year I am going to sell three hatchers where I formerly sold one. On three machines delivered freight paid to your station, I'll make an offer that is simply astonishing. Send me your name quick for the details of my plan.

Miller's Ideal Incubator

Made by the Man Who Knows—26 Years at It

If you can induce two more people anywhere to buy hatchers, here's an opportunity too good to miss. But if you only want to send me the names of possible buyers, send them in at once and I'll make a combination offer that will save money all around.

I Give an Unconditional Guarantee And Include All Extras

You get the "Ideal" all ready to start the hatch. I give you the best heating system—best regulator—handiest egg-tester, egg trays, thermometer and holder, etc. There are no extras to buy. And I prove with thousands of users that the "Ideal" is the top notch profit maker for the poultry keeper.

My Great Book **FREE** "Poultry for Profit"

Tells how the "Ideal" made poultry keepers successful—gives you suggestions and offers on good poultry houses—poultry supplies, etc., at low prices. Write for it—also get my three party money saving offer. Address

J. W. Miller Co.
Box 19
Rockford, Ill.



120 Egg Size

**Self Regulating
Self Ventilating
Perfect Heating
System**

Easy to Operate—Requires least oil and attention.

Best Safety Lamp and Burner

Ship Day Old Chicks in This Safe Box

We ship thousands of baby chicks each season from Tywacana Farms to all parts of the country in the strong but light and compact

Wright Box

THE RIGHT BOX

The most satisfactory box for shipping chicks. It has adjustable ventilating regulator which meets varying weather conditions more satisfactorily than any other device. Chicks do not trample, smother or get chilled. Made of double, reinforced corrugated cardboard—it is

Strong—Simple—Safe—Sanitary

The New Wright Egg Box is the strongest and lightest package for shipping hatching eggs or fresh table eggs. Easy to pack—each egg has absolute protection—cannot shake or jar.

Both chick and egg boxes are shipped to you flat and are easily set up and packed for shipment to your customers.

Write today for Free Booklet describing The Wright Boxes for shipping chicks and eggs.

TYWACANA FARMS POULTRY CO.
A. E. Wright, Supt. Box 57 Farmingdale, Long Island, N.Y.



\$2.50 Brooder \$2.50

A Brooder
That Will Take
Care of
50 Chicks.



This Brooder Has Stood the Test. It is Made Entirely of Metal. Can be put in any box or coop in 10 minutes. A Perfect Hot Water System. It has a warm flannel to lay on the chick's backs. Easy to heat. Easy to take care of—a child can take care of it; weighs 11 pounds by parcel post. Get our book describing our 125 egg incubator for \$6.98 and 53 different articles we make. Your name on a postal card will get it. It will be valuable to you.

WENDELL INCUBATOR CO., 60 Main St., Holly, Michigan, U. S. A.

beaten for all around fowls. They are hardy, good layers, good eating, good mothers, in fact, good anywhere you want a fowl to be good.

I have never had any roup, chicken pox or any of the diseases so much to be feared in the poultry business. I think I owe my success to keeping my pens clean and free from lice. I clean all dropping boards every morning, sprinkling air slacked lime on them and cleaning out all soiled litter often. Occasionally I give to all breeders Dr. Norwood's Condition Powders. Once a week I put a little permanganate of potash in their drinking water to prevent colds. I use all open front houses with curtains to close in severe cold weather and never have any frozen combs. I always fight the lice and mites and grease the little chicks every two weeks until they are pretty well feathered and keep all brooders clean, cleaning each day.

I think it is better to fight them at the start than to wait until they get well filled with the pests. Chicks cannot grow when their life and blood are sucked out by these pests, and what is more disgusting to see than a drove of sickly chicks, some hardly able to walk? I have seen them but am glad to say have never had any of my own and trust I never will while I am in the business.

Mrs. E. L. Albert.

Connecticut.

BROODING AND RAISING CHICKS BY ARTIFICIAL MEANS.

By the time this is in print the incubators will be going and the next important thing will be the care of the baby chicks. I am going to say right at the start that I do not expect all of you to agree with me, as some of you are in love with cold brooders. Let me say right here, I have no use for a cold brooder in this climate or any other cheap brooder, as I have tried them out to my own satisfaction, losing a big per cent with White Diarrhoea. Those that I did raise were not as vigorous as they should have been.

Last year I bought a new make also two colony house brooders of the same make with hover and scratching room in connection. The first cost is a little high but I think that in the long run they were the best and cheapest things I ever invested in. There was snow on the ground when the first hatch came off. I put one of the colony brooders out in the open yard and started it going.

After leaving the chicks in the nursery of the incubator 24 hours, I took them (70 in number) and put them in the brooder. I kept them shut in the hover part 24 hours and then opened the small door and let them in the scratching part, giving them their first feed. I kept those 70 chicks in the brooder (they were White Leg-

horns) until they were well feathered and then put them in a colony house 6x8 ft. and let them have free range. I sorted the cockerels out when they weighed 1 1/2 lbs. and sold them for broilers. There were 30 cockerels and 40 pullets. I did not lose a chick after putting them in the brooder. The pullets are laying eggs for me now.

As to feeding the chicks I have no set rule. I start them on bread-crumbs, oat meal, chick feed, etc., I boil the infertile eggs and feed to them. After they get older, I fed wheat, cracked corn, also kept wheat bran in hoppers or dishes where they can help themselves.


If your chicks cannot get out on a grass run, feed plenty of green feed such as chopped onions, lettuce, etc. I live on a farm and always have plenty of green grass as soon as the snow is off. I use portable yards and move my brooders and yards every few days.

What I want to impress on the beginner's mind is this, get good brooders to start with. They cost more at the start but you will be money ahead in the end. I had such good luck with the colony house brooders last season and am so well pleased with them, that I have purchased two more for next season. To my way of thinking they have the old hen beaten at her own game.

E. B. McKercher.

Michigan.

Planet Jr.



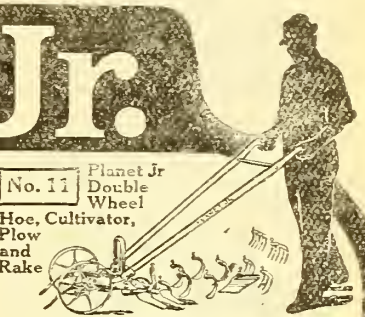
No. 16 Planet Jr Single Wheel Hoe, Cultivator, Rake and Plow

The highest type of Single Wheel Hoe made. It is light, handy, and adapted to almost every garden use. Has leaf guard for close work, and a durable steel frame. Light enough for a woman to use.

The up-to-the-minute time and labor savers in field and garden. Planet Jr implements are the product of more than 40 years' experience of a practical farmer and manufacturer. Get them for scientific work and big results. \$2 to \$100.

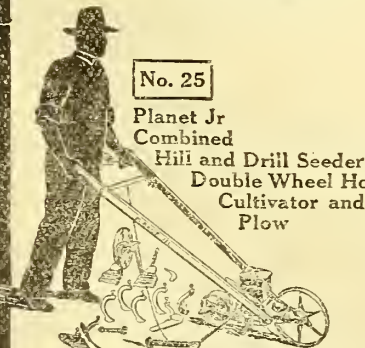
FREE Our new 72-page illustrated catalogue contains valuable advice about tools for each kind of cultivation. Write postal today.

S I ALLEN & CO
Box 1106C Philadelphia



No. 11 Planet Jr Double Wheel Hoe, Cultivator, Plow and Rake

The greatest cultivating tool in the world for the grower of garden crops from drilled seeds. The plow opens furrows for manure, seed, etc., and can be reversed for covering. Crops can be worked both sides at once until 20 inches high. Steel frame. Just the tool for the onion-grower.




No. 25 Planet Jr Combined Hill and Drill Seeder, Double Wheel Hoe, Cultivator and Plow

A capital implement for large-scale gardening especially. It has automatic feed-stopper, seed index, and complete cultivating attachments. The hoes are of a special patented form which run close to row without danger to leaves or roots. Steel frame. Two acres a day can be easily worked with this tool.



No. 8 Planet Jr Horse Hoe and Cultivator

The best-known cultivating implement made. It is so strongly built that it withstands incredible strain, yet it is light and easy to handle. Has new steel wheel which prevents clogging with stones and other trash. Cultivates to any depth and adjusts to any width. Opens and closes furrow, and hoes right up to plants without danger of injuring them.



Fire-Fly Garden Plow

Especially useful to owners of small gardens, and to chicken-raisers for plowing up scratching yards. Its light weight makes it easy for women or children to use also. Enables the owner of a family garden to do all the work in spare minutes.

"WHEN, WHERE AND HOW TO USE"
CYPHERS ADAPTABLE HOVERS
 TO BEST ADVANTAGE. THE ONLY FIREPROOF, LABELED AND INSURABLE
 BROODING HOVER ON THE WORLD'S MARKETS

REPORTS FROM USERS OF
CYPHERS POULTRY FOODS
 RESULTS OBTAINED AND MANY SUGGESTIONS
 PRACTICAL, EVERY-DAY VALUE

1914
MATING AND SALES LIST
 of
Cyphers Company Poultry Farm
 ELMA CENTER, N. Y.

Do "Custom" Hatching

Every Spring Season many Cyphers Company customers make large profits, and SAFE profits, by the ready sale of day-old chicks, and by doing "custom" hatching for friends and neighbors. What others HAVE DONE and are NOW DOING, you also can do, Reader, and our FREE PRINTED MATTER tells you how—tells you all you need to know about this splendid country-wide opportunity and tells it in a MORE HELPFUL MANNER than you can find the same reliable, detailed information anywhere else. To be able to SUCCEED WELL in your poultry work you need—you must have—a safe PLAN, correct RULES, trustworthy ADVICE and the RIGHT TOOLS with which to do the work. Cyphers Incubator Company is in a position to supply you with ALL THESE ESSENTIALS and we ask the privilege of doing so—and of doing it NOW.

—YOU LIKEWISE CAN DO

1,700 Chicks "Mostly for Other People."

P.O. Box 635, San Marcos, Texas, June 29, 1913.

Cyphers Incubator Co., Buffalo, N. Y.

Have just wound up another successful year with Cyphers Incubators. From March 4th until May 1st, I hatched 1,700 chickens, mostly for other people. I am the only person in San Marcos who owns Cyphers Incubators, and my neighbors have come to believe that an egg that cannot be hatched in a Cyphers cannot be hatched at all. As for me, I am confident of this. They not only hatch the most chickens, but the largest and liveliest ones, too.

I set two Cyphers machines right along side by side with a _____ and a _____. Not only are the Cyphers Incubators the easiest to operate, but I get the largest hatches from them and the strongest and most vigorous chicks. My No. 1 Cyphers was bought late in the season, second-hand, and I only set it once, as the hatching season was about over, but got 99 chicks out of 100 fertile eggs and I raised every chick. So far as my knowledge goes, no incubator, other than the Cyphers, hatches such strong, healthy chicks. Those hatched by me in the other machines have died in large numbers during the first week, although they had the same treatment.

MRS. LOUIS ARMSTRONG.

Mrs. Wright Sold Over 30,000 Chicks

So. Easton, Mass., July 14, 1913.

Cyphers Incubator Co., Buffalo, N. Y.

Three years ago I commenced hatching with one 390-egg capacity Standard Cyphers Incubator, and now I have ten (10) of your machines; two of them are of quite old design, having been made about ten years ago. All of the machines are well built and apparently will last indefinitely. Even the oldest machines are practically as good as new in every way.

From my experience I have found that there is no other make of incubators that will produce the same satisfactory results as will the Standard Cyphers. The system of regulating the machines, supplying ventilation and moisture, produces large, vigorous chicks, that live and thrive and develop into fine, large, healthy fowls. This season I have hatched and sold more than 30,000 chicks, and everyone who has received shipments from me has said that the chicks were fine and healthy in every way.

I breed Barred Rocks, Light Brahmas and Rhode Island Reds, and have worked up a large business in supplying day-old chicks from these popular varieties. I can hatch the chickens from these breeds so that they look like chickens a week old, when only one day old and that is why everybody likes them.

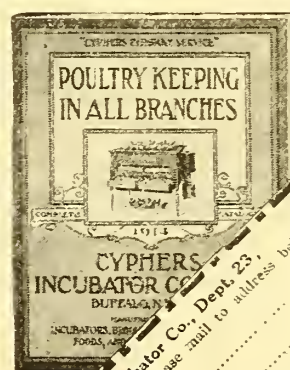
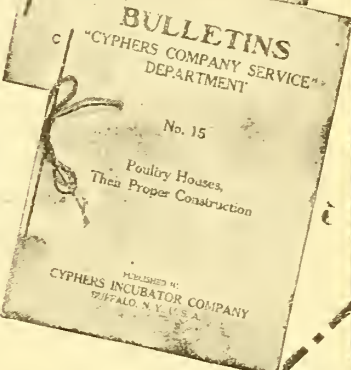
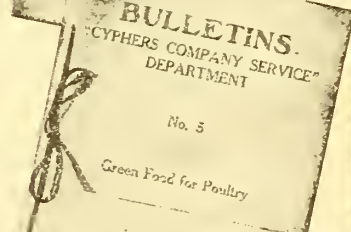
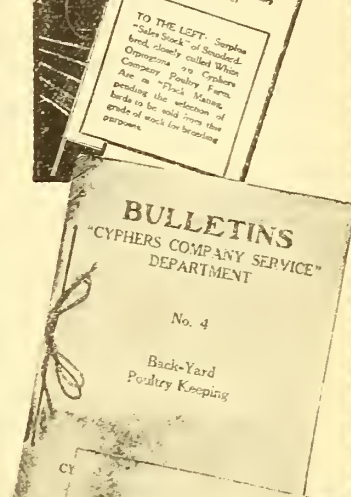
(Mrs.) A. M. WRIGHT.

Free to All Every piece of printed matter shown in this advertisement is FREE FOR THE ASKING (except 10 cts. in stamps for mailing Prize Contest Book) and our word for it, Reader, these booklets, large-sized circulars, sample bulletins and our big, 244-page, 1914 catalogue contain more down-to-the-minute, MONEY-MAKING, LABOR-**SAVING** information and suggestions than you can BUY ANYWHERE for a ten dollar bill. TEST OUR CLAIM by sending today—right NOW, for copies of those you have not yet received. REMEMBER that we have SIX PLACES OF BUSINESS in the United States and therefore can save you valuable time and freight charges. Address your letters and send ALL ORDERS to our place of business nearest you.

Branch Stores and Warehouses:

New York, N. Y., 41 Barclay St.
 Boston, Mass., 12-14 Canal St.
 Chicago, Ill., 329-331 Plymouth Ct.

Kansas City, Mo., 317-319 Southwest Blvd.
 Oakland, Cal., 2127 Broadway
 London, Eng., 121-123 Finsbury Pavement



Also send me 10 copies of free printed matter as follows:
 Name _____
 Address _____
 Also send me 10 copies of 31,000-00 Prize Contest Book for which find enclosed 10¢ in stamps.

Fight Lice Right With Lee's Lice Killer



THE only safe, sure and economical way to rid your poultry house and poultry of all vermin, and with none of the disagreeable work incident to dusting, dipping, greasing, or treating each fowl individually.

It requires from two to three minutes each to dust a hen, besides the always present danger of transmitting at least some of the vermin from the hen's body to yourself.

The "dipping" process is equally laborious, disagreeable and uncertain—time, labor, patience and money wasted absolutely—for even though you may finally destroy all vermin on each of your chickens you have only begun, not really touched the source of origin.

Dipping is inhuman in treating chickens—always fraught with danger—weakens the fowl's system—induces colds, roup and similar ailments. **DON'T DIP.**

Lee's Lice Killer has all the destructive properties in contact as any powder or dip and, besides, the vapor that it gives off, destructive to insect life but absolutely harmless to the fowl, permeates the fluff and feathers, goes into every crack and crevice of the poultry house and finds even the most remote hiding place of all vermin and destroys

them. Lee's Lice Killer without its destructive vapor is superior to any other powder or liquid preparation.

And it is useless to kill the lice on the bodies of your chickens unless you drive the vermin from these other hiding and breeding places. Every crack and crevice, every corner, every nest-box, every board and perch in the poultry house is a breeding place for all kinds of vermin. That's where you find the mites, chiggers, ticks, bedbugs.

Lee's Lice Killer (liquid) does all the work thoroughly; kills all vermin, whether on the body of the fowl or about the poultry-house, at the same time thoroughly disinfecting the houses, floors, runs, and destroying these germs.

Convenient Sizes and Prices—35c, 60c and \$1.00

Lee's Louse Powder Sifter-top Can

It is made with a view to utmost effectiveness on setting hens and little chicks, and where a powder is actually preferred you can find none better than Lee's. It is quite inexpensive, does its work thoroughly, and is prepared in sizes and at prices as follows:

1 1/2 lb. can, 25c 3 lb. can, 50c

The Lee Sprayer

is the only kind you should buy (unless you go into the expensive compressed-air sprayers). It's patented—sprays "straight up"—any other pump of this style is only an imitation at best. Take no chances. Ask for the Lee—and be sure you get it.

Price, 50 Cents

If larger sprayers are desired send for our special sprayer catalog.

Germozone

For Roup, Colds and Other Poultry Diseases—Saves the Chicks

Fully half of the deaths among chicks are due to bowel complaint. Bowel complaint is the result of the chicks being chilled, overheated in brooder, or being fed old, impure or musty feed. Any poultryman can hatch chicks, but the great problem is to raise them. Help the chicks withstand these adverse conditions and you will have little trouble raising them. Germozone will check bowel trouble in twenty-four hours and places the chicks in a natural, healthy condition. It tones the system, aids digestion, puts new life into sickly chicks. For older chickens, there is no better remedy for Roup, Colds, Chickentox and other poultry diseases. No trouble—simply put Germozone in drinking-water twice a week.

Liquid or Tablet—Price 50 Cents

Lee's Egg Maker

—the most successful combination of those food elements necessary to strong, vigorous birds, and to the production of the largest number of eggs.

It furnishes the material necessary to turn the largest amount of food into eggs. Protein—digestible protein—that's it! Meat food in many forms is conveniently obtainable, but little of it is digestible.

Lee's Egg Maker contains more protein in digestible form than other meat foods. Its base is principally granulated blood (deodorized) and with which is combined blood purifying, tonic and palatable qualities that makes it a superior product in every way. There is not one ounce of bran, sand, shell or other cheap and worthless filler in our product. No other poultry food looks like it, smells like it, or resembles it in any way. Lee's Egg Maker is clean, wholesome, thoroughly sterilized, and absolutely free from maggots and other vermin so common to the ordinary commercial brands of meat food. Our guarantee is broad—the risk all ours—while the feeding cost (50 feeds for 1 cent) is so small as to be hardly noticeable.

2 1/2 lbs., 25c 5 1/2 lbs., 50c 15 lbs., \$1.25 25 lbs., \$2.00 100 lbs., \$7.50

GEO. H. LEE COMPANY, 937 Harney St., Omaha, Neb.

Don't Forget

that Lee's goods are made by Lee, a successful poultryman for more than twenty-five years—that every article in the Lee line is in regular use on the Mandy Lee farm, where may be seen at any time from 2,000 to 5,000 of the healthiest, liveliest, prettiest chickens to be found anywhere

—that what has made Lee's stock famous is pretty certain to help yours, and
—that our experience and our knowledge of poultry requirements tells us what is needed, while more than forty patents on file at the United States Patent Office in Washington under our name is pretty conclusive evidence of our ability to make what is needed. **Try the "Lee" way**

Ask for Lee's Poultry Book—Free

Read These Letters

I wish to say, as one of the oldest as well as one of the largest breeders of White Wyandottes in the United States (and my poultry experience dates back eighteen years), that Lee's Lice Killer is one of the best, if not the very best, preparation to rid and keep poultry free from lice. I have used it for more than ten years and so should know all about it. I have never found a better one. I keep it on my plant all the time. Come and see me, and if you get a louse on you in any of my twenty-large houses I will make you a present of the best pair of birds on the place.

CHAS. V. KEELER.

Poultry Judge and World's Famous Breeder of White Wyandottes, Winamac, Ind.

* * *

I have never been able to find any other make of Lice Killer that gave as good results as "Lee's." It surely does the work. U. R. FISHEL, Largest Breeder of White Plymouth Rocks in the United States, Hope, Ind.

* * *

After having used your Lice Killer in our poultry yards for more than ten years, and having compared it and used it with many other brands of Lice Killers, we can truthfully say that it is far superior to any other, and as a result of the tests we have made we use Lee's Lice Killer exclusively. It does all and more than is claimed for it and is perfectly satisfactory.

D. F. PALMER & SONS, Breeders of Barred Plymouth Rocks, Yorkville, Ill.

* * *

Of more than a dozen so-called Lice Killers on the market I would use nothing but Lee's. It is the only real Lice Killer. I am an old breeder of poultry and am known as such around here, and have always found Lee's Lice Killer perfectly satisfactory.

WM. V. SCHLOSSER, Breeder of White Orpingtons, Beloit, Wis.

Germozone Letters

I have used Germozone continually for four years. I attribute to its use the fact that we never have a case of diarrhoea on our place.

MRS. B. B. ROMIG, Woodland, Mo.

* * *

Before I began to use Germozone I used to find two or three dead chickens every once in a while; now when I open a coop I see nothing but healthy chicks. Last spring I only lost three out of 400, and they were weak to start with. I am never without Germozone. You may use this letter if it will help convince others of the value of Germozone.

MRS. W. A. EDDINGTON, Irvington, Ill.

* * *

Have used Germozone with great success; raised 95 per cent of all chicks hatched and give Germozone the credit. Had a hen in dying condition with roup and five days after we began giving her Germozone she laid an egg.

J. H. STEPHENSON, Cornelius, Ore.

Phosto

(REGISTERED)

THE WORLD RENOWNED PHOSPHATIC FOOD.

Invaluable for Strong Fertility and Raising Chicks.

PHOSTO is a scientific invention as wonderful as the incubator and its results more certain. Start now and raise 96 per cent of your chicks and know what success means. Don't have White Diarrhoea and you won't have to cure it; you can't anyway. PHOSTO chicks live in spite of all obstacles and overcome a great deal of the parental weakness.

Give it to your breeders a month before you hatch and you stop all leaks. Your loss in poultry keeping arises from the large number of chicks you spoil in incubation and from dead chicks that simply won't live. Try PHOSTO and that dark cloud disappears.

Remember, you need no bone, beef scraps or packing house refuse. Remember also, PHOSTO is not made from these products, nor oyster shells, nor charcoal, but entirely from MINERAL PHOSPHATES, equivalent to the ASH in ordinary food stuffs. PHOSTO is not a commercial refuse product peddled off as poultry food. It is a scientific invention, perfected after years of patient research, for the one sole purpose of assisting breeders of all animals from the canary bird to the elephant. Whether you breed reptiles or parrots, turkeys or leopards, PHOSTO will show you that it can improve on nature.

DO YOUR CHICKS ACT LIKE THIS?

Ramsey, Idaho.

Dear Sirs:

Check enclosed for 7-lb pkg. of PHOSTO. Please get it to me as soon as possible. With regard to my chicks have had 3 die from causes unknown—2 of the 3 were weaklings. The rest of the 150 are the liveliest and noisiest lot of ferocious chicks I ever saw. Not yet 3 weeks old and have developed wings strong enough to fly to the top of a 3 foot partition. They will eat and eat and eat until they can't swallow another morsel, and an hour after they so stuff themselves they are clamoring again for more food. Respectfully,

Jos. L. Schaeffer.

Prices in \$1 and \$2 tins, prepaid. In ordering please specify for "Poultry". Literature free.

THE PHOSTO COMPANY.

Norwood Park, Box K, CHICAGO.

LAND AND WATER FOWLS, all breeds and varieties. Fine guaranteed stock, reasonable. Special price on show birds. Send for free catalog.

WALTER SEIDEL, Prop. Northwestern Poultry & Fruit Farm, Box K, Eleroy, Ill.

A MILLION HENS USE WELLCOME'S FAMOUS

"Ideal" Trap Nest

SHOWS WHICH HEN LAID THE EGG.
No Watching! No Freight!

PLANS TRAPS, RECORD SHEETS.

Write NOW for prices and proof.

F. O. Wellcome
BOX C, YARMOUTH, MAINE

ROYAL BLUE Barred Rocks

MADE A CLEAN SWEEP AT

CHICAGO, 1913

In a class of 254 Barred Rocks they won 1st and 5th cocks, 1st and 3rd cockerels, 1st pullet, 1st and 2nd pullet bred cocks, 1st and 3rd pullet bred cockerels, 1st cockerel bred pen, 2nd pullet bred pen. Sweepstakes Special for Best Display, specials for champion male, champion female, best colored male and female, best shaped male and female including every special prize offered. **THE ROYAL BLUES** have furnished the winners at New York, Boston and the world's greatest shows for 30 years.

2000 CHOICE BREEDING BIRDS FOR SALE.

EGGS—From the World's Best Matings, 1 sitting, \$10.00, 2 sittings, \$18.00, 3 sittings, \$25.00. 100 eggs, \$50.00. Big illustrated Catalog of the Champions free.

A. C. Hawkins

Lock Box 22

LANCASTER, MASS.

BROODING AND FEEDING.

If you have a good brooder or hover that furnishes plenty of heat, the chicks can be removed from the incubator and transferred to the brooder as soon as they are dry and fluffed up, otherwise they should remain in the nursery of the incubator until they are 48 hours old.

In removing the chicks from incubator to brooder, transfer them in a covered box to prevent chilling. Have the brooder warm and well littered and do not place more than 75 chicks in each hove no matter what size it is. They will usually thrive much better if not more than 50 are placed in a 100 chick size hover.

For the first week a hover temperature of 100 degrees with bulb of thermometer two inches from floor is about right. It is better to have a little too much heat than not enough. Every brooder should be so constructed that the chicks will always have a cool place to go to in case the hover or brooding chamber gets too hot. They will always work away from the heat if they have a chance to.

Do not go too much by the thermometer. Watch the chicks and you can tell by their actions whether they are comfortable or not. Always have enough heat under the hover to drive the chicks to the edge all around and this will give some reserve heat in case of a drop in the temperature on the outside during the night. In the brooding of chicks nothing is so important as furnishing them plenty of heat. I have learned this by experience that has cost me a great deal. In my early experiences with poultry I lost many a fine brood of chicks by using poorly constructed brooders that did not furnish enough heat and ventilation.

Put your brooder in some kind of a house or shed with a southern exposure, and where they will be protected from the wind. Do not place a brooder of any kind out doors unless you want to lose your chicks.

The chicks will not need any food until 36 hours old, but they should

have plenty of clean water and fine grit or sand from the start. For the first ten days feed a mixture of hard boiled eggs chopped up finely, shells and all, and stale bread crumbs, or rolled oats, or both. On the third day in addition to above gradually introduce some finely broken grains (almost any of the commercial chick foods advertised are good) a little at a time in the litter twice a day, or feed in automatic feeders. They can also be given green food after the third day such as lettuce, sprouted oats, raw and boiled potatoes, cabbage, etc.

During the first ten days feed five or six times a day only a little at a time and be careful not to let them overeat. Until a chick is 10 day old, it is a very foolish little bird and will eat more than is good for it if given a chance. After they are 10 days old a variety of broken grains, green food, skim and sour milk, grit, charcoal, etc. can be kept before them at all times.

The brood chamber or hover space should be cleaned daily. Always put a sheet of building paper or old newspaper on the floor of brooder, sprinkle some sand on the paper and on this place the litter (fine cut alfalfa is best) about one inch deep under the hover and four or five inches deep in the exercising room. In cleaning the brooder remove the paper with litter and burn it, by doing this it will be easy to keep your brooders clean and sanitary.

W. L. Teames.

Arkansas.

EMWOOD POULTRY FARMS WINNINGS THIS WINTER.

Battle Creek, State A. P. A. show: 1 cock; 1 hen; 1, 2, 4 cockerel; 2 pullet bred cock; 1, 2, cockerel bred hens; 1 C. B. pullet.

Grand Rapids: 4 cock; 2, 4 hen; 4 pullet; 1 exhibition pen; 5 C. B. hen; 1 pen Pekin ducks; 2 pen Indian Runners.

Above winnings on Barred Rocks. Did not show Reds this winter.

Emwood Poultry Farm, R. R. 13, Grand Rapids, Michigan.

INCUBATORS AND BABY CHICKS.

Keep the incubators going from now on for early chicks. In the first place, to have a success with incubators, secure nice fresh eggs from healthy, vigorous stock and I prefer eggs not over two weeks old as near uniform in size as I can get them and eggs laid by one or two year old hens I find, are the best. Another important thing is caring for the incubator lamps. Nothing but high grade oil should be used. The lamps should be filled and the wick trimmed twice a day, morning and night, to insure a bright, steady blaze and be sure to change your wick during a hatch, it pays.

The first week of incubation I keep the heat as nearly as I can at 102; the second week at 103 and the remainder of the hatch as near 104 as possible. On the 18th day of the hatch I always wring hot water out of a woolen cloth and spread over the eggs and shut the incubator door for five minutes at the least, and then take it out. I find it improves the hatch wonderfully. As soon as the chicks hatch and dry, I remove them from the incubator to baskets or a box, with something nice and warm in the bottom and set on the top of the incubator. Then throw a woolen cloth over the top so it will sag down on their backs to keep them warm. I find from experience I have better success raising my chickens when taken out as soon as hatched than by leaving them in the incubator till

hatch is complete to fall down in the nursery with chances of getting chilled.

When the hatch is completed and the baby chicks are removed to the brooder, I do not feed until they are seventy-two hours old. Their first three feeds are hard boiled eggs crumbled up fine, then baked corn bread with scalded sweet milk, also fresh water before them at all time, and plenty of sand and charcoal. When about three weeks old I began to feed them ground corn and hominy hearts moistened with skimmed sweet milk, just so it will crumble well. Also keep a dry mash before them at all times, and how they do grow. I take great delight in my incubator chickens. They are so tame and thrifty and I think it less work to care for an incubator than to care for a lot of contrary sitting hens.

Indiana. Robert L. Flake.

SPLENDID WINNINGS OF ORPINGTONS.

Poultry Keeper takes pleasure in reporting the following splendid winnings of our advertisers, James C. Bears, Fort Gage Ill., specialty breeder of S. C. Crystal White Orpingtons (Kellerstrass strain) and S. C. Black and Buff Orpingtons (Cook strain).

At the Marissa, Ill, poultry show December last Mr. Beare entered sixteen birds and won seventeen prizes, viz: White Orpingtons, 1st, 2nd, 3rd,

4th hen; 1st, 2nd, 4th cock; 2nd pen. Black Orpingtons, 1st, 2nd, 3rd, 4th hen; 1st, 2nd cock; 1st pen. Buff Orpingtons, 4th cock.

At Carbondale, Ill., January, 1914, the third largest poultry show in the state, Mr. Beare entered twenty-two birds and won fourteen premiums as follows; White Orpingtons, 1st, 5th hen; 5th pullet, 3rd cock, 3rd cockerel, 3rd pen. Buff Orpingtons, 2nd pullet, 3rd cock, 3rd cockerel, 3rd pen. Buff Orpingtons, 5th pullet, 1st cockerel, 5th cock, 5th pen.

Mr. Beare can furnish eggs from his best pens at special prices, and he has left a few exhibition cocks and cockels for sale. For prices of eggs and stock see his ad on page 508. When writing Mr. Beare for catalog please mention Poultry Keeper.

Especial attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days. Order your papers all together, and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent poultry journals; three, \$1.00; four, \$1.40; five, \$1.75; six, \$2.00. Our clubbing list on another page will show what some of the papers are, but remember that we can furnish any of the fifty cent poultry papers at this scale.

Write Your Name on a Post Card Today

For this **Big 112-Page Prairie State**

Catalog

FREE



No matter how many other catalogues you get don't fail to send for your copy of this big free book. You will find it different from any other incubator catalog ever published because it was written by one of the world's foremost experts on incubation and the rearing of chicks—a man who knows from actual experience how to succeed in the poultry business. He tells you how, by watching the hen that stole her nest, he hit upon the idea of the moistened Sand Tray—an exclusive patented feature of Prairie State Machines which insures hatching a larger number of strong, vigorous chicks that live—chicks that live and grow into profit.

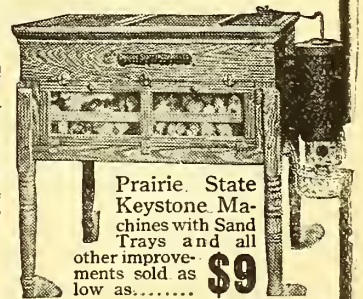
1914 Prairie State Incubators Brooders, Hovers and Colony Houses

are fully described in this big, free book. They are used and endorsed by leading Agricultural Colleges and poultry experts the world over. For 30 years they have maintained the lead and with the new 1914 exclusive features they are simply incomparable. Those who must economize in the matter of price will be particularly interested in the Prairie State Keystone model which embodies all the new improvements with Prairie State quality and yet sells for only \$9.00 and up.

Send for this FREE Book At Once

It contains also about 60 pages of valuable information on poultry raising. Tells How to Feed, Rear and Breed for Best Results; How to Prevent and Cure Diseases, How to Grow Green Winter Feed; How to Build Poultry Houses; How to Preserve Eggs, etc., etc. You will be surprised at the amount of valuable information this big 112 page book contains. A postal will bring you a copy by return mail—free and postpaid. Write

PRAIRIE STATE INCUBATOR CO.
205 Main Street HOMER CITY, PA.



Prairie State Keystone Machines with Sand Trays and all other improvements sold as low as..... **\$9**

SUCCESS THROUGH SELECTION AND GOOD CARE.

Care of the breeding stock and hatching and rearing is the order of the day. To be successful we must have good, healthy stock, well cared for to bred from. Keep them free from lice and other pests. For this I found kerosene cheap and effective. I do not believe in doctoring nor in tonics and use the hatchet on all cases of sickness and feel sure I am ahead by so doing. An ounce of prevention is better than a barrel of cure. Keep them clean, healthy and busy and they need no tonics. This applies to both breeding stock and young chicks. Kill every droopy chick. They are a loss at the best and make the whole flock look bad. Try it on a flock or two and see if you are not better satisfied with your flock.

Another thing, never help a chick out of the shell. If it cannot get out it is not worth the bother and it will save you killing it after 4 to 8 days and you lose the feed it has consumed, saying nothing of the room, and the chances are that it may take more with it.

I have found the Norwich Automatic feeders a success in feeding breeders and especially in cold weather when they are confined all the time. I also use hoppers in raising chicks and feeding the breeding stock. I find they balance their own ration to better advantage than by mixing it up and compelling them to eat or waste the parts they do not want. I use three feeders in a pen; 1 for corn, 1 for wheat and 1 for oats. Some days they run the wheat feeder exclusively and never touch the corn feeder. Other days they work all of them and other days only two and so on. They always go to roost with a full crop and those that don't work don't get much, so you see the hustlers get the feed and they are the ones that shell out the eggs.

I use chick feed exclusively in feeding young chicks and have had the best success with the "Pinkerton" put out by the Queen Incubator Co. After a few days I give them a pan of dry wheat bran and try to keep it before them all the time but you will be surprised how much they will consume. Beef scrap is good after they begin to feather and also for laying stock, also charecoal. But there is char-coal in the chick feed to supply the baby chicks. They say that it takes ground grit, grain, greens and gumption with a few p's such as patience, pluck, permanence, prudence, etc. If you have been having success no matter what your system is, be slow to change. If you think you need a change, that there is something wrong with your system of feeding or housing, get your gumption to working and correct your faults. You are on the ground and conditions are different from someone's else and some systems will work out all right while others would fail. I have no trouble raising 90 per cent of the chicks I hatch and you might or might not succeed with the same plan.

C. W. Cook. South Dakota.

My 1914 Price Sets a New Standard of Incubator Values

Do not buy an incubator anywhere until you have received my 1914 prices on the good old "Reliable" and the facts about incubators which I will gladly place in your hands. You can't afford to take chances this year with costly eggs, in cheaply built machines. Get the facts. For over 32 years I've been building the best incubators experience, knowledge, finest materials and workmanship can produce. Experienced poultrymen know the "Reliable." I have established new standards of value in incubators this year which will give you better hatches and bigger profits—not by making cheaper quality but because I have the largest incubator factory in the world. My values this year will be the sensation of the incubator industry.

Get My 1914 Prices—Get the Facts

Get down to brass-tack facts and this incubator question is as simple, as A-B-C. No incubator in the world offers so much quality for so small a price as the "Reliable." Let me tell you why the "Reliable" is the safest to buy and why it insures you against failure. Don't take a chance this year.

The Reliable Incubator

is made of the best seasoned, beautiful, everlasting Red Wood, with top and bottom tongued and grooved. Has double heating system throughout, thoroughly insulated—accurate regulator—tanks of cold-rolled builder's copper—all metal safety lamp—metal chimney—government standard tested thermometer, and all thoroughly inspected before shipment. Hatches any egg that can be hatched—in any altitude—regardless of weather.

The Reliable Brooder

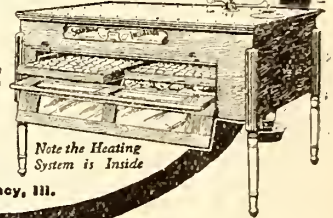
is built on the same thorough principle and is of the same excellence of construction as the Reliable Incubator. Either hot air or hot water heating. Four sizes—50—120—220 or 380 chicks.



Send Today for Prices

J. W. Myers, Pres.,
Reliable Incubator and Brooder Co.
Box A-15, Quincy, Ill.

and my big catalog. A postal card brings all.



Note the Heating System is Inside

Sanborn Business-Bred Layers

I have my farm so well stocked with egg bred Buff Wyandottes that I am going to offer P. K. readers low egg prices from two special flocks. 13 eggs, \$2; 40 eggs, \$5; 100 eggs, \$12. Mention P. K. in ordering.

My three books, ordered with eggs, \$1 additional.
DR. N. W. SANBORN, R. F. D. 24,

HOLDEN, MASS.

Wisconsin Wins In Big Hatching Contests EVERY YEAR

Mrs. J. McMahon, Veederburg, Ind., won in Missouri Valley Farmer Hatching Contest, hatching 125 chicks from 126 eggs.

Mr. C. B. Armitage, Atwater, Ohio, won in the Successful Farming Contest, getting 181 chicks from 181 eggs in two batches.

Mrs. J. W. Mize, Vaughns Mills, Ky., won in the Successful Farming Contest, hatching 208 chicks from 208 eggs in two settings.

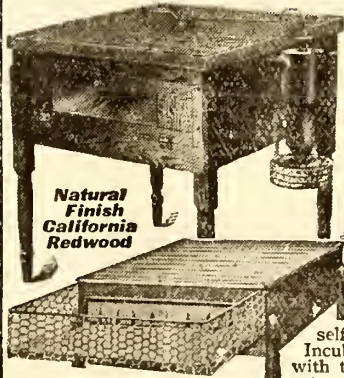
Mrs. F. H. Lewis, Montrose, Pa., in 1913 won in Successful Farming Contest, getting 96 chicks from 96 eggs in one setting.



THOS. J. COLLIER, Manager

I stand ready to prove that Wisconsin Incubators are the best built and the best equipped machines on the market today. You can't get bigger or better hatches even if you pay twice the price. I build the outer walls of my incubators of Genuine California Redwood—costing four times as much as materials some manufacturers use.

130 EGG INCUBATOR Both \$10
CHICK BROODER For \$10
180 Egg Incubator and 180 Chick Brooder Both \$11.50
FREIGHT PREPAID EAST OF THE ROCKIES



Natural Finish California Redwood

Why Take Chances
You can send in your order direct if you wish and save money. Money back if you are not pleased. The publisher of this paper will tell you I do just as I agree. You take no risk. I give 30 days trial and a 10 years guarantee.

Write for FREE catalog and we will send you a sample of the Redwood our Incubators are made of

Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others we will feel sure of your order. Don't buy until you do this—it pays to investigate before you buy. Money back if not satisfied. THOS. J. COLLIER, Manager.
WISCONSIN INCUBATOR CO., Box 78 RACINE, WISCONSIN

A WORD ON HATCHING AND BROODING.

No doubt the poultry loving people of today who are interested in artificial rearing of chicks are anxious to obtain all the information possible on incubating and brooding. Therefore I will strive to give my opinions on the matter as briefly as possible.

The first thing towards a good start is the selection of good machines and right here I may say that this has been the downfall of many an amateur. It would be wise to study the different types of poultry machines before making a selection.

After the equipment is obtained, the next and most essential thing is the selection of fertile eggs. To get fertile eggs the breeding stock must be well housed and fed. A person with good fertile eggs properly incubated and the chicks provided with a good brooder, which can withstand all atmospheric conditions, can raise most of the chicks regardless of anything.

Now for a word on brooding, as I will not go into the details of incubating. When the hatch comes off the task of caring for the chicks, till beyond the dangerous age, begins. But here again I might say, that with proper brooding and care in feeding, you are bound to bring the results that count. Before removing chicks from the incubator, the brooder should be heated to the proper temperature.

When removing chicks to the brooder they should be well covered to avoid chilling them. After the first week the temperature should be dropped 5 degrees lower and then reduce heat gradually as chicks grow. The floor should be littered from the start. Cut clover or chaff are preferable to other litter. I will now go on to the feeding, which is very essential to success.

The first week they may be fed dry bread crumbs moistened with milk or hard boiled eggs chopped finely. Feed this the first few days, then gradually introduce some reliable chick feed. Care should be taken not to change a ration suddenly as it affects chicks. Grit should be mixed with food from the start, also fresh water should be in sight at all times. They should be fed small quantities but often, generally five times a day. Do not overfeed it causes trouble.

The second week's ration should consist of chick food and some very fine cracked grains which should be fed sparingly. Some breeders prefer a mash. Grit and blood meal, also beef scrap take a prominent part in this mash. You can introduce a little green food also, such as lettuce, cabbage or boiled potatoes. Sprouted oats are very good.

Now for the third and last dangerous period. The food at this period should include beef scraps, charcoal grit and bone meal, which should be constantly before them. A small por-

tion of raw cut bone meal now and then would do good. Green food and grain may be added.

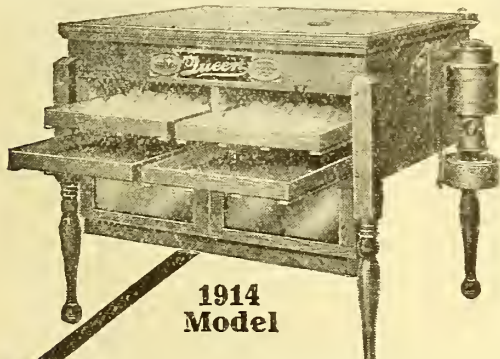
As the chicks enter into the fourth week, chick feeds and such stuff can gradually be decreased. Here again, I say gradually, because a sudden change in rations causes trouble. It would be well to add at this time, oats, cracked corn, barley and wheat in a mixture.

James Golden.

New York.

SPECIAL NOTICE TO NEW READERS OF THE POULTRY KEEPER.

This issue of Poultry Keeper will reach many who are not uow subscribers, and such copies are sent merely as sample copies with the hope that the readers may be interested enough in the practical features of the paper to send us their subscriptions. An invariable rule is to discontinue subscriptions at the expiration of the time for which payment has been made by the subscriber, unless renewal is received, as we do not believe in the common practice of trying to force our paper on unwilling readers. We feel sure that there will be enough in a complete year's issue of Poultry Keeper to many times repay the subscriber for the small price asked for a year's subscription. Look the paper over carefully and let us have your subscription.



1914 Model

Put your good eggs in this dependable machine. You can do what others are doing with the

Queen Incubator

Hatching chicks is a certainty with the Queen—the incubator that runs itself; that runs true; that applies hatching conditions correctly the year around. It is not just a few people who make Queen successes. Everybody succeeds with the Queen who follows our instructions. See above letters. Success means growing into bigger business. A Queen hatches out the money to buy additional machines and make bigger profit. 28 points of excellence make the Automatic Queen distinctive in construction, quality of material and HATCHABILITY. Don't buy any incubator till you read the Queen Poultry Guide and catalog. It is free. It makes everything plain, including the fair selling plan and low price laid down at your railroad station. Start in to investigate now. Send for book today.

QUEEN INCUBATOR COMPANY, Box 2, Lincoln, Neb.

Beats the Neighborhood

I ran the little Queen at sea level when the ice froze one inch thick in a pan under it and got 112 chicks out of 118 eggs. I skinned everything in the neighborhood, and mind you, this is my first experience with incubators.

M. L. PETERMAN, Fraser Mills, Can.

201 Eggs, 200 Chicks

With 232 eggs, 201 after testing, I hatched 200 chicks and one failed to pip the shell. Am sending picture. I must say I am more than pleased with my Queen and would not do without it.

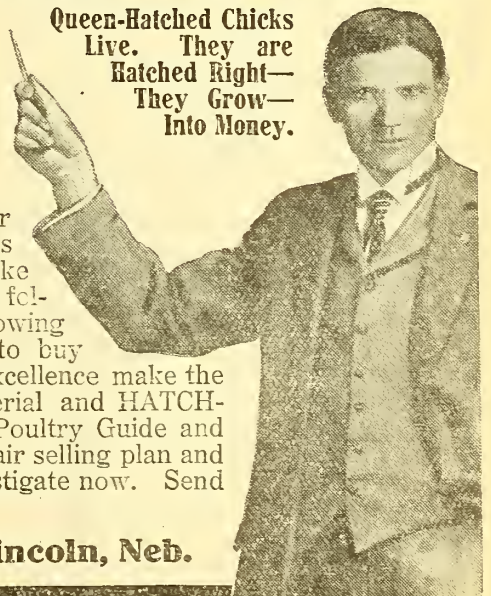
CHAS. J. RAUGH, Jenero, Ohio

Started With One QUEEN—Now Using Forty-four

This QUEEN worked so satisfactorily that in the following spring we ordered six more of the same size (360-egg). When we decided to establish our large hatchery in Philadelphia in 1911, we placed our order with you for 23 more 360-egg QUEENS. This spring (1913) we purchased 10 of the Ranch size QUEENS (560 eggs) and altogether we are now operating thirty-four 360-egg QUEENS and ten 560-egg QUEENS. They turn out a better average per cent hatch and produce stronger chicks than any other make we ever used.

C. TOWNSEND ALLEN, Mgr. Orchard Poultry Farms, Philadelphia, Pa.

Queen-Hatched Chicks Live. They are Hatched Right—They Grow—Into Money.



FEEDING FOR EGGS

Whether you keep 12 or 1000
how you want them to

Lay When Eggs are High

HOW TO FEED WHAT TO FEED

The profits in poultry are in
eggs—profits in eggs are during
the cold months and not during
the summer.

FEED RIGHT
—AND YOUR—
Hens Will Lay

SPECIAL OFFER

For fifty cents (stamps ac-
cepted) we will send copy of
our booklet with Formulas and
Tables for Feeding and a full
year's subscription to the

Poultry Keeper

The most practical and helpful
poultry paper published. Fill
out this coupon and send to us
with 50 cents in stamps.

POULTRY KEEPER PUB. CO.
Quincy, Illinois.

Send booklet on Feeding Poultry
and a year's subscription to Poultry
Keeper.

Name _____

Alpena Poultry Farm

BREEDERS OF

White Orpingtons, Barred Plymouth Rocks, White Wyandottes

Our birds are the equal of the very best in America. Our birds are prize winners and extraordinary layers. With all standard requirements. If you want to buy day-old chicks, or eggs for hatching, from stock that will bring added pleasure to your life, let us fill your order. Day-old chicks from the above strains, 35 cents each, 25 chicks, \$8.50 chicks, \$15. 100 chicks, \$25. Eggs for hatching from same strains, \$2.50 per 15 eggs, \$5 per 50, \$8 per 100. Our prices are low but quality high. Safe arrival and satisfaction guaranteed. We pay express charges on chicks and eggs. Send in your order at once. We will book the same and ship when you request us to do so.

ALPENA POULTRY FARM

Box 320.

ALPENA, MICHIGAN.

REMEDY FOR ROUP.

Editor Poultry Keeper:

I have tried a new remedy for roup. It is a teaspoonful of potassium permanganate to a gallon of water. It is credited to be a cure for roup. I think there are so many remedies that only help. This is a remedy doctors have for people. I wish Doctor Sanborn would write for the Weekly North American instead of the Sunday edition, for some of the people including ourselves never see a Sunday paper, nor do we wish to. Of course there are a few copies of the Sunday Record to come to our town.

Miss Emma J. Richman.

New Jersey.

PRICES WITHIN REASON.

Beginners and those wanting to try artificial hatching this season can get strictly first class machines at lowest prices from the Reliance Incubator Company. Their No. 1 hatcher costs \$3.90 and holds 70 eggs. Their No. 2 hatcher (150 eggs) costs \$5.75. Brooders holding from 70 to 15 chicks may be had for \$3.00 or purchased together with incubators for \$2.50 extra. Those interested are requested to write the Reliance Incubator Co., Dept. E-4, Freeport, Illinois, and get their printed matter showing pictures of the low priced machines.

SAFETY FIRST.

Ship Eggs and Chicks in Strong Compact Boxes

The safe delivery direct to private customers by parcel post of strictly fresh table eggs and eggs for hatching and of day-old chicks by express is a problem every modern poultryman has to solve successfully before he can market these products to his best advantage.

Besides being strong—but light to save transportation charges—the shipping box should be neat and compact. Nothing creates so favorable impression of quality as the way a shipment looks on arrival at its destination.

You know yourself, that no matter how high in quality a consignment of eggs or baby chicks may be if they reach you in a battered, dirty or cheap package, you instinctively feel

that they are not up to your expectations. They do not satisfy—although the very same consignment, in a clean, strong and up-to-date package would please you and make you feel that you had received your money's worth.

Ship your eggs and chicks in the most attractive package you can secure, and other things being equal, you will stand head and shoulders above your competitors. You will get more business and better business; your customers will come back with cash orders—not kicks and claims for damaged goods.



The Wright shipping boxes for table eggs, hatching eggs and day-old chicks have been designed by a practical poultryman, one who has for years been shipping these products, and who has given to the problem the experience and knowledge secured in this manner. Wright boxes are built on principles of strength, convenience and simplicity that make them very successful for their purpose. They combine a high quality of material with the last word in detailed perfection of construction.

Mr. Wright, the inventor, is the superintendent of the Tywaacana Farms Poultry Co., located at Farmingdale, Long Island. They use these boxes exclusively for shipping thousands of eggs and day old chicks each season. Mr. Wright has made some slight changes in the box for shipping eggs but states that the Baby Chick Box has been so satisfactory that no room for improvement can be found.

The Tywaacana Poultry Farms Co. manufacture these boxes and have a very interesting little booklet which they will mail free to any poultry raiser. The Wright Boxes come "knocked down" flat so occupy but very little space until ready to "set up"—which is a simple and quick job—and pack for shipping to your customers.

MOISTURE IN INCUBATORS.

Editor, Poultry Keeper:

I have always had so many chicks die in the shell, many of them pipped. If you can explain just what a Tycos hygrometer will do and how it is to be used, I shall appreciate your help. Should it be kept in during the entire hatch. Does it furnish just enough moisture and no more? I shall need three, as I have three incubators to be used this spring.

Mrs. A. R. Tryon.

Iowa.

The Tycos Hygrometer is not a regulator of moisture but only an indicator of moisture conditions in the incubator, so that conditions may be remedied if found to be wrong. The hygrometer is placed on the egg tray and shows the actual conditions surrounding the eggs. The glass bottle is filled with clean water and wick inserted and wet thoroughly from end to end before being placed in the egg tray. The scale on the hygrometer is graduated to show variations from 40 to 90 per cent. The scale of the hygrometer is arranged to correspond with the incubating point of the thermometer—that is 103 degrees and if the actual temperature in the incubator varies from standard, the corrected humidity is increased or decreased but in order that these corrections may not be overlooked by the operator they are stamped on the scale plate of each instrument. The amount of moisture required during incubation varies from 60 per cent to 45 per cent as follows: 1st week. 60 per cent; 2nd week, 55 per cent; 3rd week 50 per cent; at hatching 45 per cent. The amount of moisture may be regulated by sprinkling the eggs or by sand trays and water pans and increasing or decreasing ventilation. The manufacturer's instructions accompany each instrument so that it is possible for the operator to tell exactly how to use the hygrometers.

E. M. Mengel, Dreherstown, Penn., exhibited his R. C. White Orpingtons at Allentown Lancaster, Reading, Millersburg, Myerstown Pa., and Hagerstown, Md., and won 17 out of 18 possible firsts; five seconds, two thirds and one fourth on 25 entries. Also 34 specials and silver cup.

SEND US NAMES.

We desire to mail copies of Poultry Keeper to people who are interested in the object and purpose for which this Journal is published, namely "Making Poultry Pay," and shall be pleased to receive from our readers the names and postoffice addresses of friends and acquaintances who keep poultry. These copies will be sent free.

We allow a liberal commission to those who solicit subscriptions to Poultry Keeper, and send direct to agents all the sample copies they need. May we hear from YOU?

NEW—NEW—NEW—

SHEER'S Latest Production



FRIEND Poultryman, this incubator gives results. No other incubator you have ever seen has the design and features of this. No other incubator you have ever used has given the high percentage hatches day in and day out this is giving. **Its marvelous price is just \$6, delivered to you.**

More than 11,000 ordered before one line of advertising appeared. One poultryman, after test, ordered 50. One man, inexperienced, cleared \$150 with one little hatcher in 5 months. **Results**—that's the answer. This is the first practical **all metal, fireproof, everlasting machine** ever produced. The first machine of its size with a perfect heating and heat distributing system.

Peerless-60

Round Like a Nest. Eggs heated from above with the patented triple wall heat radiator. All heat is used. Regulation of heat, ventilation and moisture is all automatic. Equipped throughout with the famous Sheer fixtures. Wonderful Sheer Wafer Thermostat Regulator automatically turns lamp flame up and down to meet temperature in egg chamber. Overheating impossible. Uses less oil than any other incubator on earth per dozen eggs. I am ready to prove these facts.

Satisfaction Guaranteed or Money Back
Let me send you one of these machines so you can prove this, upon my absolute guarantee of results or your money back. This is a fair, square offer. It means money in your pocket. Write me today.
H. M. SHEER, 107 Hampshire St., Quincy, Illinois
World's Largest Manufacturers of Incubator Supplies

\$
6
DELIVERED



WINTER EGG MACHINES



FERRIS IMPROVED WHITE LEGHORNS

Are bred for heavy egg production. Trapnested to lay 160 eggs or more a year. Large, healthy, vigorous breeding and exhibition stock to sell at low prices. Hundreds of Cocks and Cockerels at from \$5.00 up. One Thousand Hens and Two Thousand Pullets at \$2.50 and up. All bred directly from our heavy laying and prize winning stock. We ship on approval and insure stock for 30 days. Write today and let us quote prices on the stock you want.

35 FIRST PRIZES AT 10 BIG SHOWS.

We have won three times as many prizes this season as any other White Leghorn breeder. This record of 35 first prizes and 38 second prizes at 10 big shows has never been equaled. Here are the shows:

Iowa State Fair, August, 1913.
Maryland State Fair, September, 1913.
W. Mich State Fair, September, 1913.
W. Virginia State Fair, September, 1913.
Kansas State Fair, September, 1913.
Alabama State Fair, October, 1913.
Georgia State Fair, October, 1913.
Mississippi State Fair, October, 1913.
St. Louis, Mo., November, 1913.
Grand Rapids, Mich., January, 1914.

See catalog for complete list including other shows.

EGGS FOR HATCHING.

Fifteen Exhibition Matings comprising the best of our winners at this winter's shows. See catalog for description and prices.

Bred to Lay Utility Matings. We have over 2,000 selected hens in these matings. Everyone is of fine quality, scoring about 90, large, vigorous and heavy layers. No undersized eggs, all large, white and strongly fertile. Any infertiles replaced free. Prompt shipment guaranteed. March prices, \$2.25 per setting, \$12.00 per 100, \$108.00 per 1,000. April prices, \$2 per setting, \$10 per 100, \$90.00 per 1,000.

DAY OLD CHICKS.

Our incubator capacity is 25,000 eggs and we can furnish 5,000 chicks a week. This means prompt shipment. Chicks from the bred to lay utility matings during March, 25 for \$8, 100 for \$28, 1,000 for \$252. April prices, 25 for \$7, 100 for \$24, 1,000 for \$216. We guarantee safe arrival any where within one thousand miles.

1914 CATALOG IS READY.

Don't buy until you get a copy of this new catalog. Tells how we developed laying and exhibition qualities. Fully describes all grades of stock, eggs and chicks. It is free. Just mail a postal and we will send it by return mail.

George B. Ferris

THE FERRIS LEGHORN FARM.

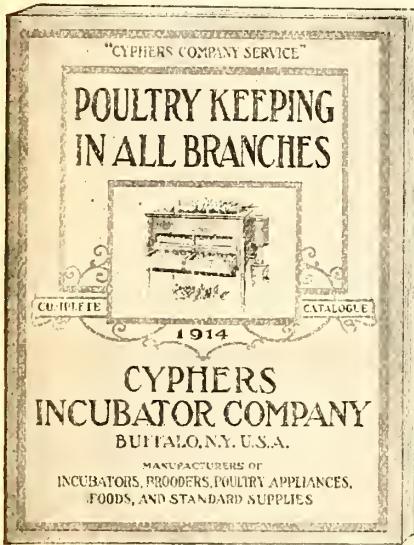
909 Union Avenue

GRAND RAPIDS, MICHIGAN.

CYPHERS INCUBATOR COMPANY'S ANNUAL FREE POULTRY GUIDE NOW BEING MAILED.

Many readers of this journal will be glad to learn that the 1914 Complete Catalogue and Poultryman's Guide, published annually by Cyphers Incubator Company, Buffalo, N. Y., is now being mailed; also that a first edition copy will be mailed free by the Cyphers people, postpaid, to any of our readers who will write for it and mention Poultry Keeper.

The Cyphers Company's 1914 book contains 244 pages, 7 1/4 by 9 3/4 inches in size and each copy weighs nearly one pound. It is splendidly illustrated from cover to cover, including hundreds of pictures of fowls, down-to-date poultry plant views and recent portraits of foremost American and Canadian poultry breeders.



This 344-page book free to our readers.

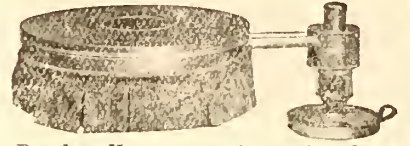
The title of the 1914 Cyphers Company book is "Poultry Keeping in all Branches" and there are eight unusually valuable chapters which fully justify this name. They are as follows:

- I. Best Methods of Back-Yard Poultry Keeping.
- II. Small Poultry Plants and How to Manage.
- III. Profitable Poultry Keeping on Farms.
- IV. Poultry Keeping as a Regular Business.
- V. Advantages of Standard Poultry Breeding.
- VI. Production of Eggs and Poultry for Market.
- VII. Methods of Marketing to Secure Top Prices.
- VIII. Special Branches of the Poultry Industry.

These eight chapters consist of reliable information and practical suggestions on the most popular and profitable methods of poultry and egg production, either a small or large scale. The intention has been to cover all legitimate branches of the poultry business and to give helpful data and reliable advice relating thereto. These

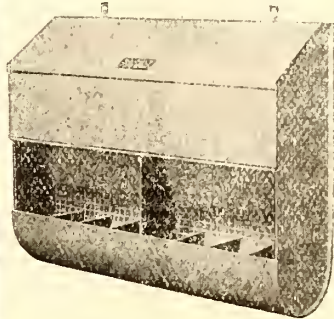
Incubator, Brooder and Poultry Yard SUPPLIES

Our New catalog issued Feb. 15th shows a full line of Incubator and Brooder Supplies, Fixtures and Repairs; and



Brooder Hoppers complete with lamp, hover cloth and curtain, from \$1.80 to \$5.00

The complete Oakes line of Labor Saving Poultry Yard Devices.



It tells you how to save half the time and labor in caring for your fowls, and at the same time get much better results.

O. K. Dry Mash Hoppers, Economy Automatic Feeders, 3-Compartment Hoppers, Grit and shell Boxes, and Chick Feed Hoppers, 50c to \$1.85.

We have a copy of this catalog for you. Send for it today—Catalog No. 22-A.

The Oaks Mfg. Co.

Factory and Home Office, Tipton, Indiana
 Eastern Branch, 61 Cliff St., New York City
 Canadian Warehouse Toronto, Ontario



Sanitary Drinking Fountains, 15c to \$1.75.

Our Big Dollar Offers

SENT TO SAME OR SEPARATE ADDRESSES.

HERE ARE 12 DIFFERENT CLUBS. ANY ONE SENT TO YOUR ADDRESS FOR \$1.00.

Poultry Keeper . . . \$.50	Poultry Keeper . . . \$.50	Poultry Keeper . . . \$.50
McCall's Magazine50	Am. Poul. Advocate . . .50	People's Popular Monthly50
Farm & Home50	Farm Poultry50	Farm & Fireside50
Poultry Keeper \$.50	Poultry Keeper \$.50	Poultry Keeper \$.50
Bellable P. J.50	Fruit Grower1.00	Poultry Keeper \$.50
Housewife50		Book "Success With Poultry"1.00
Poultry Keeper \$.50	Poultry Keeper \$.50	Poultry Keeper \$.50
Farm Poultry50	Green's Fruit Grower .50	Book "Success With Poultry"1.00
Poultry Success50	Farm & Fireside50	
Poultry Keeper \$.50	Poultry Keeper \$.50	Poultry Keeper \$.50
Bellable P. J.50	Farm & Fireside50	Farm & Home50
American P. World . . .50	Farm & Home50	Farm & Poultry50

Poultry Keeper Publishing Co., Quincy, Ill.: Enclosed find \$1.00 for which send the following publications for one year to the address below:

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.....State

.....St. or R. F. D.

.....Name

chapters are such as you would find in any first class poultry book and not only give the reader a correct idea of what can be done in these different branches of the poultry business, but they also contain many suggestions that will be found of practical value in your daily operations.

As heretofore, this 1914 Annual Poultryman's Guide presents an "Open Letter" by Grant M. Curtis, president of Cyphers Incubator Company, wherein he tells about the company's big fire that occurred August 16th, 1912, and explains how this critical situation was overcome (the result being that the Cyphers Company is now in a new business "home" that is the largest institution of the kind in the world. Numerous pictures are shown of the new plant in full operation. Mr. Curtis in his 1914 Open Letter also points out the great benefit that the U. S. parcel post is proving to be to all poultry and egg producers who have taken advantage of it.

To obtain a free copy of "Poultry Keeping in All Branches" write direct to the home offices of Cyphers Incubator Company, Buffalo, N. Y., or address the Company's nearest branch store as follows, being sure to mention this journal: 12-14 Canal St., Boston, Mass.; 41 Barclay St., New York, N. Y.; 329-31 Plymouth Court, Chicago, Ill.; 317-19 South-West Boulevard, Kansas City, Mo.; 2127 Broadway, Oakland, Cal.; 121 Finsbury Pavement, London, England.

"THE SURE GOOD ONE."

So much is said about the oyster shells as a necessary medium for lime for the chicken for egg and shell making material as if it were the only available article. Now while oyster shells are all right and we can afford to say so, if you will become acquainted with Crys-co, you will find that it not only has more available lime than oyster shells but is an excellent grit besides.

Now what is Crys-co? It is the crystalized or petrified shell formation from ages past, (nature's own product) in plain words, sea shells, all kinds, turned into stone, guaranteed to contain 99 per cent pure carbonate of lime. Silica, a natural glass is contained in the combination, making Crys-co hard, sharp and cubical so that it is virtually oyster shells in grit form.

Crys-co is endorsed by experiment stations and prominent breeders in the U. S. who have made careful tests of same and so if you are looking for increased egg production, finer plumaged birds and more economical results, it will pay you to try it. Cost 1c per pound. Ask your dealer or write for booklet. W. A. Neusitz & Co., Dept. A., St. Louis, Mo.

Mark your layers with leg bands, especially if you are using trap-nests, so that you can keep a perfect record of what they are doing. We can furnish leg bands direct from this office at 25 for 20c; 50 for 35c; 100 for 60c.

Your Hens Need It!



They need Pearl Grit just as badly as you need teeth. They need it to help grind their food—to make it more digestible. Pearl Grit is the best, hardest, cleanest and sharpest grit you can buy. Helps hens quickly pass the molting season—helps them lay more eggs—makes them stronger, healthier, better birds.

Pearl Grit

Serves a double purpose. Its benefits to the fowl are two-fold. Besides helping the digestive organs, it possesses great shell, egg and feather-making properties. Egg shells contain a considerable amount of lime while the egg itself contains, among other substances, sulphur and carbohydrates. All of these ingredients are found in Pearl Grit in liberal quantities.

We have just issued one of the most handsome poultry booklets ever seen. It contains simple instructions and remedies for many of the common diseases among chickens. It also tells why Pearl Grit is such a practical food. Send for a free copy today. A postal will do.



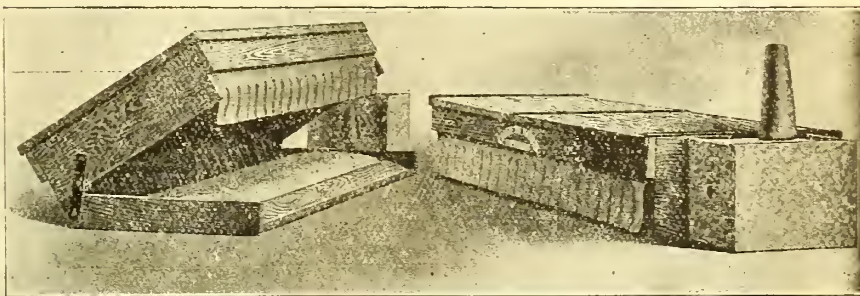

The Ohio Marble Company
13 S. Cleveland Street
PIQUA, OHIO

EGG MAKER PAR EXCELLENCE.

Vegetable Beef Scrap!

Experiments in our own yards show net results FIVE times as great from a pound of Vegetable Beef Scrap as from a pound of regular scrap. There's a reason; Vegetable Beef Scrap contains no dry, tough, putrid meat fiber but it contains a high percentage of protein which is available. It is predigested.

10 lbs. enough for 300 of mash, \$1 Formula for making and Practical Poultry 1 year, 50c. all three, \$1.35. NABOB REMEDY CO., Box B., Gambier, Ohio.



Close-to-Nature — Open Air Hovers

The longest Portable Hover now advertised. Contact warmth, open air ventilation, non-piling. Combines the fireless with the lamp. No such hovers on the market. Inductive heater. Both hovers and brooders hinged for cleaning out, airing, etc. Sanitary roosting beds of earth or litter. Don't buy a hover or brooder till you have read the Close-to-Nature. Circular. Very low prices.

CLOSE-TO-NATURE COMPANY, 20 Front Street. COLFAX, IOWA.

DURABLE AND SAFE BOXES FOR SHIPPING EGGS AND CHICKS.

As the season for the safe shipment of day old chicks is at hand, customers will be looking about for suitable boxes that will deliver chicks by express and eggs by parcel post or express in the best possible manner so that buyers will receive the chicks without loss and eggs in hatchable condition. The heavy corrugated card board boxes are being used by the largest hatcheries and breeders in the United States, who recommend them as the most up-to-date and cheapest boxes for such shipments. The Rippley Mfg. Co., Box 24, Grafton, Ill. make a complete line of these boxes and they will be glad to send you their free catalogues of boxes, brooder heaters, whitewashers, etc. Write them for a copy.

FOR ALL POULTRY RAISERS.

For many years there has been a need for a small hatcher of some kind that would answer the want of the large or small poultry raiser alike and the W. F. Chamberlain Feed and Incubator Company of St. Louis, Mo., seem to have solved the problem. They have placed on the market this season a very neat machine that is very attractive and is a successful hatcher as is shown by letters from persons that have used their machine. It is in the form of a sitting hen and is equipped with all the usual parts of large machines. Their advertisement in another part of this paper shows a cut of the incubator and further information regarding Chamberlain's Setting Hen will be sent to any one addressing them at 107-109 Olive St., St. Louis, Mo.

A BIG HELP.

Editor, Poultry Keeper:
I enclose fifty cents in stamps for Poultry Keeper Your paper has been a big help to me in the past year and I wish to continue my subscription.
Mrs. W. A. Phillips.
Georgetown, Delaware.

A COMPLETE POULTRY PLANT FOR \$25 IS THE LATEST OFFER OF "BOB" ESSEX.

The "high cost of living" so much talked of these days has a steady opponent in "Bob" Essex, judging by the low cost offers he is making to the poultry keepers in his new 1914 catalog. Prices of material may go up, and they do, but that has not prevented him from keeping his selling prices down. A glance at his new catalog makes one feel anxious to buy whether or not, when face to face with page after page of the bargains offered in the Essex-Model Superior products.

There is hardly a fancier but who will want to get one of his splendid little new style colony houses at \$8.50. It's like giving at away. It seems to

Orpingtons! White, Buff and Black

Won 17 premiums from 16 entries at one of the largest shows in Southern Illinois. At Carbonale (third largest show in this state) won 14 premiums and refused \$100 for first prize S. C. White Orpington hen, now in our pens. Also refused to price at this show a cockerel which now heads one of our pens. We have excellent quality in all pens. **10 per cent to 50 per cent REDUCTION SALE now on.** Excellent breeders at \$2, \$3 and \$5 each. Trios, \$6, \$12 and \$15. A further reduction of 25 to 50 per cent will be made for a limited time on our already low price of \$8 per 15 eggs from best pens. Write for new illustrated catalog. To please you means our success.

Progressive Orpington Farm

J. C. BEARE, Proprietor. Box 53. FORT GAGE, ILLINOIS.

The Best Way


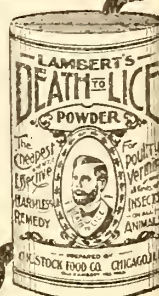
To Get Rid of Lice

on Poultry is to dust them separately with a good lice killing powder. Hold the fowl by the legs, head downward, so that its feathers will be open and the powder can penetrate through to the skin, especially around the vent and under the wings. The best time to do this is at night when the birds are at roost. The lice and mites are then on their job. It takes only a short time to dust an entire flock and the powder "works while you sleep." The best lice killer to use—

30 Years the Universal Favorite

The Old Reliable

LAMBERT'S DEATH TO LICE

Its effect is immediate and it does not injure eggs, hens or chicks, neither will it soil or discolor the finest plumage. It is the most reliable powder and a sure Profit Payer. If not at your Dealers, send 10c for sample. Larger sizes, 25c, 50c and \$1.00. Latest Pocketbook of Pointers (invaluable to all poultry raisers) mailed for 2c stamp.

O. K. STOCK FOOD CO., 504 Traders Bldg., Chicago, Ill.

SHIP EGGS AND DAY-OLD CHICKS

without loss or breakage. Use RIPPLEY'S Perfect Corrugated Card Board. So strong 5 men can stand on them, but so light the saving in express or parcel post charges more than pays for boxes. Money returned if not as recommended. Order from adv. Prices: 1 setting size, \$1.10 doz.; 30-egg size, \$1.85 doz.; 50-egg size, \$2.50 doz.; 100-egg size, \$4.00. 25 size Chick Boxes, \$1.25 doz.; 50 size, \$1.75 doz.; 100 size, \$2.85 doz. Mail order, or write for catalogue, chick and egg boxes, coops, brooder heaters, cockers, whitewashers, etc.

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Mineral
Fiber Wicks
Do Not
Burn or
Char.



Mineral
Fiber Wicks
Do Not
Burn or
Char.

Practically indestructible. Keep lamps well filled with oil and wicks do not need trimming, running uniformly throughout entire hatch. Can be used through two or three hatches. Made of non-combustible material. Save annoyance and aid keeping temperature even. Sold in three sizes. In ordering, state whether you want Number one, 5-8 inch wide; Number two 15-16 inch wide; or Number three, 1 1/2 inches wide. Price ten cents each. Fit any lamp. Address,

Poultry Keeper Publishing Company, Quincy, Illinois

Wyckoff's S. C. White Leghorns

Acknowledged everywhere the world's greatest laying strain; unequalled in standard quality. Remember that we are the originators and for over 30 years specialty breeders of the justly celebrated "Wyckoff" strain of S. C. White Leghorns, the most profitable strain of poultry in America today. Place your order at headquarters and make no mistake. Eggs for hatching in any quantity from the grandest of matings, both exhibition and utility. Catalogue and testimonials free.

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meet every requirement from a hen house complete with roosts to a brooder for newly hatched chicks. It is designed so that it can also be used for two separated pens for a couple of males for fitting them for the show, or for two pairs or two trios for special mating purposes. The front being equipped with both glasses and cotton removable frames, backed by wire, makes it suitable for all weathers, winter or summer. It is hard to beat it for raising chicks with the aid of the Essex-Model Improved 1914 Hover, and when its wire run is attached it is really a wonder of an all-round coop. Those fanciers who have not seen it should get a catalog right away.

There is a new \$25 combination offered this year that is an extraordin-

introduce it. Many a poultry keeper has wanted a Mammoth Coal-Heated Incubator, but not too big, not too high priced and here it is for the first time. Eight pages of the catalog are devoted to its illustrations and descriptions, and they are interesting reading to those who contemplate putting in a Mammoth either this year or next year.

Three pages of portable poultry houses give an idea of how good a house can be obtained for very little money. Some of these houses are sectional. That is, they can be added to any time by buying an additional section—starting off with one. The pictures show at a glance whether or not they suit your needs. And just to remind you that Bob is not after the almighty dollar alone, he devotes ten pages to illustrations and descriptions of thirty different kinds of poultry houses used on experiment stations all over the country; as much as to say, "If you don't like the ones I make, why here are some that will suit you." That's the way he does business. His theory is: "Do what you can for the poultry keeper. Give him a bargain and if you can't sell him goods, give him the best advice you can anyway."

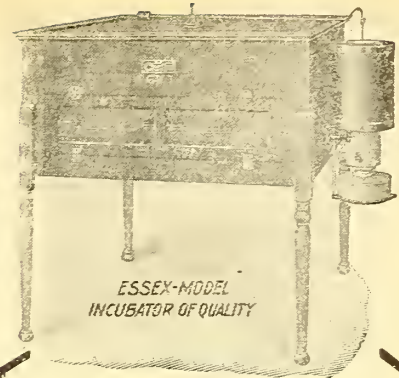
Following up this theory of giving advice, he has put into his catalog seven chapters: A Beginning in Poultry Keeping, How to Hatch and raise Better Chicks, How to Breed a Strain of Better Layers, Health and Disease in Poultry, The Year's Poultry Work, Month by Month, America's Biggest Poultry Farm, and The Truth About Poultry Keeping.

It would be a mistake to forget to mention the cover of Bob's new book. It's a peach. Something new in poultry illustrations that will please the ladies who keep poultry and those who don't not forgetting the man who has an eye for the female figure.

Better write for it today. It does not cost a cent even for postage. Tell Mr. Essex that you saw this in the Poultry Keeper and he'll send you one quickly.

By the way the cover is in colors and we want to say that the one color cut shown on this page does not do it justice.

In case you don't know where to write, address Robert Essex Incubator Company, Buffalo, N. Y., and mention the Poultry Keeper.



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You Will "Stand By"

You want an Incubator you can "Bank on" ALWAYS, one that will Hatch a chick from every Hatchable egg—year in and year out—in all climates. Such an Incubator is

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It is always Reliable, Trustworthy, Steadfast. Experiment Stations say so; Experts say so; Women Poultry Keepers say so; and the Unequalled Record of 100 Per Cent Hatches Proves It—eight different times in eight different states. No other Incubator equals that record.

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19 Sizes and Styles—\$2.25 to \$48

Get our Free Catalogue and read about Essex-Model Improved 1914 Chick-Comfort Hover. Heats up quickly and places the heat where you want it—down on the chicks. You will be glad if you get this Free Book before you buy any other Incubator or Brooder. Read the Seven Free Chapters:

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- II—"How to Hatch More and Better Chicks"
- III—"How to Breed a Strain of Better Layers"
- IV—"America's Biggest Poultry Farm"
- V—"The Truth About Poultry Keeping"
- VI—"Health and Disease in Poultry"
- VII—"The Year's Poultry Work—Month by Month"

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Robert Essex Incubator Co.

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ary outfit. Many an incubator alone costs that and more, but here you get an incubator, a hover, a colony house, with removable cotton and glass frames; a wire run with a wood-cotton frame, a food hopper and a drink fount, forming a complete poultry plant that gives anybody a good chance to start in the poultry business right at so little expense as to appear nearly impossible. How it is done we cannot say. The catalog tells. But there's one thing sure. Anything that "Bob" Essex offers is good goods.

The Baby Mammoth Incubator has come to stay, and Bob is the man to



P. K. MARKER.

There is nothing in a poultry yard more important to the breeder than a good poultry marker. By the use of the marker herewith shown any form of mark may be adopted by punching the web between the toes. A complete record of chicks from different breeders and strains can thus be kept, affording also a mark of identification for your birds wherever they may be. It may save you money and a valuable bird. This marker costs, prepaid, 25c; or for 45c we will send, postpaid, a marker and a full year's subscription to Poultry Keeper. Be sure to ask for the Poultry Keeper marker when ordering. It is the best there is. Address Poultry Keeper Publishing Company, Quincy, Illinois.

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3. BECAUSE it contains pure silicate grit, giving the hen finer plumage and being cubical in form a perfect grinder, thereby insuring digestion of the food.
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5. BECAUSE it means economy, as **Cry-co** goes half as far again as shells, as there is no waste, and you need no additional grit.
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7. BECAUSE it costs no more than ordinary shell or grit.
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10. BECAUSE as a wide-awake poultry raiser you want better results and in **Cry-co** you will find them. Let us prove it to you.

Therefore buy a sack from your dealer to-day, but look for the trade-mark on a white sack, or write us. Valuable booklet free.

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they are properly fed. Successful poultrymen everywhere have demonstrated this fact.

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balances the grain feed and makes a ration that makes hens lay more eggs and more fertile eggs and makes chickens grow faster.

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DARLING & COMPANY, 4203 Ashland Av., Chicago.
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Feeding Secrets of Famous Poultrymen

HATCHING AND BROODING THE NATURAL WAY.

There are yet, in spite of the many incubators and brooders used, a great many poultrymen, especially farmers, who prefer the natural way, or in other words, prefer to let the hen do the work of the incubator and brooder. Now if we have the Asiatics or American breeds we have a good chance to succeed, if properly handled, but if the smaller or so called, non-sitters are used for sitting or brooding you will usually have a run for your money at the best. Perhaps many who read this have tried to sit a Leghorn hen, or in fact any of the smaller, more vigorous breeds and can readily verify the above statement. If you keep only a few hens you may have fairly good success by sitting them among the layers, but if many are kept you should if possible, have a separate house, especially for the sitters. If you have this convenience and have good, gentle sitting hens (and it is well to remember here that you can make almost any hen gentle by the right kind of treatment) you can pick a broody hen up and change her to another house and nest with good results. I have found about the best way when you find a broody hen on the nest is to let her stay until the following night in order to make sure she means business, then if biddy is still on the job at the end of the second day, just about dark, lift her gently from her nest and transfer her to the new one. Have the nest in readiness by filling with good, fresh nesting material, into which you have sifted some good insect powder. I do not usually give the hen her eggs at the start, but put two or three nest eggs in the nest until the next day when, if she is satisfied with her new surroundings, and they usually are, I give her, if a large hen, 15 eggs, but if a small hen give her about 13. It is best to use the insect powder again about the 14th day, also dust hen well after hatching before moving to the brood coop. If you cannot have the separate house for sitting purposes, a good way is to have nest boxes with a wire or slat runway attached in which the hen may exercise and feed. Keep some feed and drinking water in the enclosure and you will have eliminated most of the loss by having the eggs chilled and broken by other hens crowding her off the nest.

tached to the coop if possible, for a while at least, for if allowed free range too quickly the mortality of chicks is apt to be large, especially on rainy days and days of heavy dews. It is best to keep the hen well under hand until the chicks are a couple of weeks old at least.

Keep a little coarse sand near coop, provide green food of some kind, plenty of good fresh clean water and charcoal at all times. Feed a good commercial dry chick feed and fight the lice and by using a little other good common sense at times you are in a fair way to succeed.

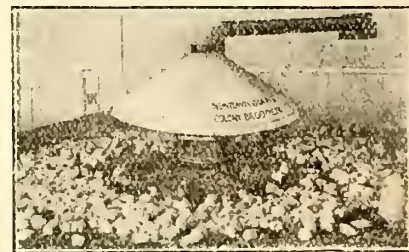
Henry Sherwin.

Illinois.

MODERN BROODING EQUIPMENT.

Since it has become so generally recognized that the greatest leak in the poultry industry is the heavy mortality of chicks during the brooding period, particular attention has been paid to this most important matter by leading practical poultrymen, investigators and manufacturers of poultry equipment. Probably the most notable improvement in brooding equipment which has been brought out as a result of this work is the Newtown Giant Colony Brooder, which is advertised regularly in these columns. From the moment of its introduction this appliance created greatest interest and its popularity has steadily increased because of its unusual merit.

In the Newtown Giant Colony Brooder are combined the three great essentials demanded by the business poultryman: economy, convenience and efficiency.



It is economical because the selling price is low; it does not require the erection of special buildings but may be operated in any comfortable structure, as barn, colony house or poultry building; it is inexpensive to operate since 5c worth of coal per day will furnish the necessary heat for a thousand chicks; it saves labor, because it is self-regulating, and the coal magazine requires filling but once in two to four days, according to weather; it is durable being constructed entirely of cast

Paint Without Oil

Remarkable Discovery that Cuts Down the Cost of Paint Seventy-five Per cent.

A Free trial Package is mailed to Everyone Who Writes.

A. L. Rice, a prominent manufacturer of Adams, N. Y. has discovered a process of making a new kind of paint without the use of oil. He calls it Powdrpaint. It comes in the form of a dry powder and all that is required is cold water to make a paint weather proof, fire proof and as durable as oil paint. It adheres to any surface, wood stone or brick, spreads and looks like oil paint and costs about one-fourth as much.

Destroys Vermin.

This paint is a strong disinfectant and effectually destroys disease germs and vermin. On this account it is especially valuable for the interiors (as well as the exteriors) of poultry houses, basements, stables, etc.

Powdrpaint is made in white and 20 non-fading colors. It does not rub or flake off, but wears practically for all time on interior surfaces. White Powdrpaint is the whitest paint in the world and it stays white.

Poultrymen and dairymen who once give this paint a trial and learn how much better and cheaper it is than whitewash and all such inferior preparations, use nothing else for purposes where Powdrpaint is adapted. Shipped to any part of the U. S. freight prepaid, if you order 100 lbs or more.

Write to Mr. A. L. Rice, manufacturer, 21 Wardwell St., Adams, N. Y., and he will send you a free trial package, also color card and full information showing you how you can save a good many dollars. Write today.

Now comes the hardest and most important part of all, that of taking care of the chicks after they are hatched. First, we must provide good, dry, well-ventilated coops. Get them on high, well drained soil and keep the hen confined to a small runway at-

iron and the highest quality of sheet iron; it has large capacity, the smaller size brooding any number of chicks up to 500 and the larger any number to 1500.

Its points of convenience are many. Since it is absolutely self-regulating and holds a large supply of fuel, the attendant is relieved of the necessity of constantly watching it. He may confidently depend upon the machine to run smoothly and evenly, maintaining the proper temperature regardless of weather changes. Further it may easily and quickly be moved from place to place as occasion demands.

But economy and convenience may be regarded as secondary considerations. Efficiency is primary, and right here the Newtown excels. It raises the largest percentage of the strongest, healthiest chicks. The reason for this is not hard to find. Unvarying temperature, ample ventilation, the absence of smoke and lamp fumes, plenty of space under the hover all make for continuous chick comfort, which in turn means maximum results.

Every user of a brooder should investigate the merits of the Newtown Giant Colony Brooder. It is sold by Giant Incubator Corporation, No. 37 Warsaw St., Harrisonburg, Virginia, dealers everywhere, who will gladly give demonstrations. If your dealer does not carry it, write the Newtown Giant Incubator Corporation, No. 37 Warsaw St., Harrisonburg, Virginia, for a brooder catalog. They will ship brooders freight paid to points where they have no agent. Try a Newtown this season and learn how easy it is to grow good chickens.

A SURE PREVENTIVE FOR ROUP, AND KINDRED AILMENTS.

If poultrymen but knew the wonderful results to be obtained by use of Oculum to prevent roup and colds among young and old fowls, there would be fewer losses of birds. F. W. Zeigler, a prominent breeder of New York has this to say regarding Oculum; "I think it but fair to tell of my experience with Oculum. I followed instructions last year and have not had a single case of roup, in fact, no disease of any nature. I have used no other remedy but Oculum and am sure it immunized my entire flock. The year previous I had the sickest looking lot of poultry that was ever kept. I recommend Oculum against all other remedies."

We advise Poultry Keeper readers to send for literature to Hancock Incubator Company, Salem, Va., and please mention Poultry Keeper. The company will give full particulars regarding the use of this wonderful remedy.

CAPONIZING INSTRUCTIONS.

The caponizing tools we offer are known as the Philadelphia Caponizing Set. They are made by expert surgical instrument manufacturers and are first-class in every respect. With each set of instruments we send a booklet containing instructions for using the instruments and caring for the capons. Price \$2.50 postpaid. Address Poultry Keeper Publishing Co., Quincy, Ill.

Save Your Chicks From Lice

Your chicks can't get the right start in life—they can't grow husky and big-framed—if they are pestered with lice. These parasites inflict constant torment on chicks, robbing them of flesh and blood and keeping their vitality in a low state.

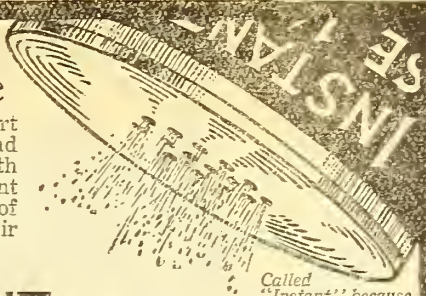
DR. HESS

INSTANT LOUSE KILLER

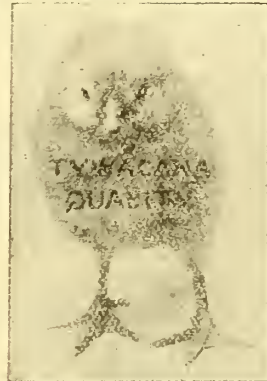
is a most effective louse killer. *Immediately* it is sprinkled on lice they die. Instant Louse Killer kills lice *instantly*—as soon as it touches them. Dust it on chicks when a week old, setting hens, brooding coops, nests, roosts, etc.

Destroys lice on farm stock, bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes. Sifting-top can. 1 lb. 25c; 3 lbs. 60c. Except in Canada and the far West. If not at your dealer's, write

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Baby Chicks, Eggs for Hatching, Breeding Stock

"Tywacana Quality" means heavy laying ability combined with fine marketing qualities and "Standard of Perfection" requirements. Improve your flock or start anew with some hardy and vigorous day-old chicks, breeding stock or eggs for hatching from

TYWACANA White Leghorns, Barred and White Plymouth Rocks

Book your order now for eggs or day-old chicks, as the demand for "Tywacana Strain" stock is increasing each season. Tywacana Baby Chicks and Eggs are shipped in strong, light, safe and sanitary boxes especially designed to save transportation charges and insure protection of chicks or eggs during long shipments.

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Send today for our big, beautiful catalog describing Tywacana Farms Leghorns and Rocks and giving prices on chicks, eggs and breeding stock. Prompt shipments. Satisfaction guaranteed.



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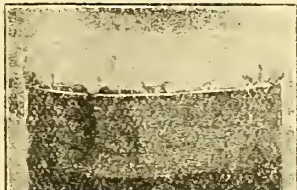
A. E. Wright, Supt. Box Farmingdale, L. I., N. Y.

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WILL THRIVE AND GROW LIKE WEEDS.

If you start them on National H-P Chick Feeds. These feeds are made just right, of food materials that are absolutely sweet and clean—easily digested and full of nourishment. Send postal for catalog and freight prepaid prices to

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Losing chicks, raise more and better chicks with less work in our fireless, hot water or electric heated Simplex hovers. Endorsed by U. S. Govt. Only \$5 on 30 days trial.

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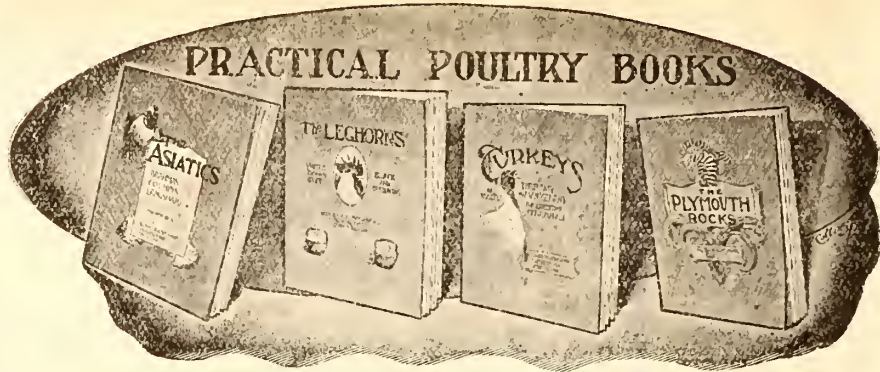
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Artificial Incubating and Brooding
SOLVES all problems of artificial incubating and brooding. Tells how to obtain strong, germ-free, fertile eggs, how to operate incubators and brooders, grow the greatest percentage of chickens, etc. 96 pages, 9x12, illustrated. Price \$ 1.50

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BRAHMAS, Cochins and Langshans, contains information on mating, breeding, selecting, exhibiting and judging. This information is of value to every breeder of Asiatics who wishes to produce the best of birds. Color plates of Buff and Partridge Cochins by F. L. Sewell. 96 pages, 9x12, illustrated. Price \$.50

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CONTAINS valuable information for breeders of any variety. Suitable for amateur and fancier. Articles by best breeders and judges. Color plates of S. C. White Leghorns and Brown Leghorn feathers by F. L. Sewell. Edited by J. H. Drevenstedt. 140 pages, 9x12, illustrated. Price \$1.00

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GIVES origin and description of type of this popular breed. A chapter on the Black, Buff, White and Non-Standard varieties. The Orpingtons in the show room. Prominent breeders' opinion of them and a discussion of the breed as a utility fowl. Edited by J. H. Drevenstedt, Breeder and Judge. 80 pages, 9x12, illustrated. Price \$.75

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A COMPLETE text book devoted to America's most popular breed of standard fowls. Explains standard requirements, tells how to select the right breeders and how to mate them. Edited by Wm. C. Denny and J. H. Drevenstedt, breeders and judges of wide experience. Three color plates by Sewell. 144 pages, 9x12, illustrated. Price \$1.00

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A TEXT book for the beginner and for all persons interested in better poultry and more of it. Contains the "secrets of success," both for pleasure and profit. New and valuable information on all branches of the poultry business. 176 pages, 9x12, illustrated. Price \$1.00

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Barred Rock Pittsfield White Rock
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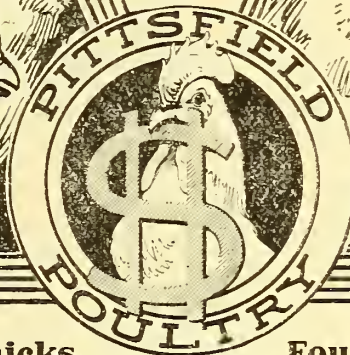
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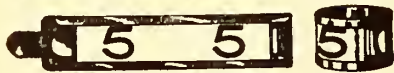
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QUESTIONS and ANSWERS

PARTRIDGE ROCKS.

What do you think of Partridge Rocks as practical birds? Does it take all of ones attention to get them bred true to color, and then lose out on egg production?
R. E. C.

Montana.

So far as the practical utility qualities are concerned the feathers cut no figure. You can probably find as good practical birds in Partridge as in other Plymouth Rocks, but if you attempt to breed them to both utility and standard qualities you will probably fall down. No one has ever succeeded in obtaining both the highest type of utility and standard qualities in the same fowls if you wish to breed for the fancy get stock from a breeder of that class of birds, but if you want utility fowls buy from a utility breeder and one who is securing results.

ROUP.

What is the matter with my pullets? They suddenly get sick and gasp for breath and rattle like a child with croup. They have bright red combs and are fat and in good condition, and are even ready to lay. Are sick only a day or two. I lost two in 24 hours I doctored them with Conkey's Roup remedy which has proven good before when they had swelled heads, but they did not open their mouths to breathe, or rattle like these did. Have lost three this way. Mrs. C. E. S. Washington.

This is a form of roup. The birds were probably too far gone when you doctored them. When they get the disease good and hard it is not worth while to try to save them. They are never of much value afterwards and we should never want to use them as breeders.

ABOUT BREEDS.

1. Is there such a breed as Golden Plymouth Rock? If so what breeds were used to produce it?

2. Will a Buff Orpington cockerel that is good in all points except under weight, do to breed from?

3. Can you tell me what breeds were used to make the Golden Wyandottes?
A. L. B.

New York.

1. Not in the Standard. We believe there has been an attempt made to make such a breed. The originators are probably the only ones who know what breeds were used in the make-up.

2. He is likely to produce undersized offspring unless the hens are exceptionally large. To keep up size the parents should both be well up to standard.

3. Golden Wyandottes are said to have originated by crosses of Silver Wyandottes and the Winnebago fowl, after which was introduced the blood of the Partridge Coch-in, Golden Hamburg and Brown Leghorn.

WEAKLINGS.

Last year during the hatching season I had a number of little chicks to hatch that seemed to have no control of themselves. They would flutter around in the nest all the time and when placed on the ground would turn completely over on their backs and still flutter and spin around. They never could right themselves and they chirped as if in pain. The other chicks in the hatch would be normal and I had fair success in raising those hatched. I never had such experience before and am at a loss to know the cause. I had all of those afflicted killed. M. E. H. Tennessee.

These were weaklings. The cause of it would be hard to determine, as it might be due to the parent stock or to bad conditions during incubation. Some of the eggs may have got to the outside of the nest and become chilled, or the eggs may have been chilled or heated before incubation.

TEN GENERAL QUESTIONS.

1. I am able to secure in this town Black Minorcas and White LeShorns. How about them. I am a little in favor of the Minorcas. Would like to raise 50 pullets to winter over, taking care of them along with any other business.

2. Please give outline of caring for young chicks.

3. Tell how to care for eggs for sitting.

4. Is fat meat harmful to chickens?

5. Is it wise to keep a small box of broken glass where chickens can get at it? Also how about salt.

6. Give a good plan for keeping hens busy.

7. What is the reason for a fat hen not laying?

8. In referring to chopped clover do you mean hay or green clover?

9. I have lots of potato parings. Is it harmful to feed them every day? How is the best way to feed them, cooked or raw and chopped finely?

10. Is it wise to put a teaspoonful of dry mustard in three quarts of mash?
Pennsylvania. O. L. S.

11. Either of these breeds will please you if you get a good strain.

2. So much depends on the method you are to employ that it would be useless to attempt to even outline the work, as we do not know whether you are to raise them with hens or in a brooder, and if a brooder what kind. There has appeared in P. K. many good articles on raising chicks by various methods. "The Chick Book" advertised on the last cover page would be valuable to you, as this gives many methods and the details.

3. They need no special care except to keep them in a temperature of from fifty to sixty degrees. Some say turn them every day or every other day, but we have found no advantage in this. We place them in a commercial egg case and where the temperature does not vary much.

4. Not in moderate quantities.

5. No. While glass does not seem to hurt fowls we do not believe it is the best grit for them and prefer either the commercial grit, gravel or broken crockery. A small amount of salt is beneficial to hens.

6. Throw their grain in well littered pens.

7. You will have to give us something easier. Why is a fat man lazy? Some are and some are not. Some fat hens lay and some do not, but a really poor hen seldom does. Hens can get so fat that they will not lay, in which case the fat is really a disease. You will not be troubled with that condition with Leghorns or Minorcas.

8. Usually when reference is made to cut clover it means cured clover cut fine.

9. No. It is immaterial whether you cook them or feed them raw. If cooked they can be placed in a moist mash, and this can also be done when they are chopped fine, but it is less trouble to throw them to the hens and let them prepare them.

10. Mustard is a good condiment for hens, but should only be used in sufficient quantity to give the mash a pungent taste. We should not use a very big teaspoonful.

MOLTING—MITES—GRIT.

1. Most of my hens molted late in the fall. One of them did not molt and has just commenced to shed her feathers. She is in good health. What could cause this?

2. What tonic should be given hens to make them molt early?

3. Is oil-meal all right? Should it be mixed with something else or should the hens be fed more of a mineral or animal food?

4. I have a pullet that last month seemed to have been attacked by depilating mites. The quills on the back of her neck stuck out straight and showed where the feathers were eaten off. I put vaseline on it. In three weeks the feathers commenced to grow out again and now look normal. I have seen no mites. Could it have been something else?

5. What becomes of the grit and shell a chicken eats? We never find it in the droppings. We keep S. C. White Leghorns.
New York. R. R. S.

1. There is nothing particularly strange about a hen's molting late. Hens that lay into the fall are usually slow about molting.

2. They do not need any tonic to cause them to molt. Usually when hens become thin in the late summer they will molt, so to hasten molting some cut down on the feed. A better plan is to keep them laying with a good ration and let them molt when they will. It is a mistaken notion that early molting hens are the profitable hens. The good layers usually molt late.

3. After the hens have shed their feathers it is a good plan to give them a rich, feather forming ration. A little oil meal, bone meal and beef scraps added to the mash will assist them at this time.

4. The depluming mites usually attack the quill as well as the web of the feather. Vaseline usually has little effect on them. It needs something stronger like sulphur ointment or Zenoleum. Perhaps it was the new feathers starting that you mistook for feathers that had been eaten.

5. Grit and portions of shell are passed off by the fowl. You can find them in the droppings if you make a careful examination, but of course, they do not come through whole. They are dissolved and that portion not taken up by the body is passed off.

PEKIN DUCKS.

How many Pekin Ducks can be bred to one drake and fertility insured? Can two or three drakes be mated to a small flock of ducks with good results, or is it better to pen each lot separately? I have them in the back yard and there is not running water, but I keep them well supplied with clean drinking water.

Subscriber.

Five ducks to one drake early in the season; later, seven. It is a common practice to let them run in one large flock. It would be better to separate them, but it is not necessary in order to secure good results.

STOPPED LAYING.

I have a pen of 100 yearly hens, White Leghorns, in a house 32 feet long and 16 feet deep. It has good ventilation with some glass windows, with top sash of muslin. The hens molted in August, while they were on free range and had a good long rest. About the 1st of November I started to feed them for eggs, and got them in fine shape by the middle of the month. I fed Eaton's Dry Mash and gave them all they wanted, keeping Boston hoppers filled all the time. This dry mash has fourteen different things in it and still I added a quart of beef scraps every time I filled a hopper, which holds a half bushel. I also feed green bone twice a week, a handful to each hen. At noon I give a little wheat and at night all the corn they will eat. I got 15 to 20 eggs a day from this lot of hens and they have kept dropping off till now I get 3 to 4 eggs a day. Some of them began to lose their feathers again and their combs whitened, so I began to eat some of them picking the ones that were losing the feathers. When we killed them we found they had no eggs, except little ones like pin heads, and we have killed ten already. They have plenty of water, shells and grit and lots of straw to work in all the time. They are looking well. Please tell me what is the trouble. P. H. S.

New Jersey.

Your ration is probably too stimulating and you are coddling your hens too much. When you keep mash before them it is unnecessary to feed grain three times a day. At most we should give them scratch grain in the morning and a little corn at night. You make no mention of greens or even dry fodder. It is probably a continuous feeding of grain and meat which has put your hens out of condition. Give them green food every day. If you can get cabbage, roots, etc., feed them, and if not, give some clover or alfalfa hay and sprouted oats.

INCUBATING GOOSE EGGS.

Please give information about sitting goose eggs in an incubator, through Questions and Answers column. M. B. Ohio.

The incubation of goose eggs does not vary much from the method employed with hens' eggs, except that it takes thirty days. A treatment which is said to be very beneficial is, after the first ten days, to each morning wring out a cotton cloth in water at 105 degrees and place over the eggs, putting them back into the incubator and leaving for fifteen minutes. This

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It is said, will soften the shells. It is quite a common practice with duck eggs.

BUFF ORPINGTON DUCKS.

What is the size, color and markings of Buff Orpington ducks? Also color of eggs? Are they good layers?

G. W. A.

Ohio.

Buff Orpington ducks are not standard so they can be anything. Those we have seen have been nearly a solid buff color and were about the size of the Pekin. They are claimed to be great layers of large white eggs, but this claim is made for all ducks, and especially when being introduced. Just what the breeders of these ducks have decided on for a standard we do not know. You can probably get full information about them by writing Mrs. William P. Masters, Pleasant Valley, N. Y., Secretary of Water Fowl Club of America.

INCUBATING AND FEEDS.

1. Are eggs incubated in a cellar or elsewhere liable to be damaged by severe thunder claps?

2. What is the specific value of sunflower seed as poultry food?

3. What is the relative food value of barley as compared with other grains? Oats are boomed to the sky and my past experience has established the fact that barley is a strong, invaluable food.

4. A big percentage of my wheat threshed this year is mustard seed. Is it of value as a food or tonic to chickens and how can it be fed?

J. A. A.

Utah.

1. No. The only damage thunder does to eggs is when atmospheric conditions are such that humans can scarcely live, or when lightning strikes the eggs. A cellar is as good a place as anywhere for the incubator.

2. The average analysis of sunflower seed is: Water, 8.6; ash, 2.6; protein, 16.3; fiber, 29.9; nitrogen-free extract, 21.4; fat, 21.2 per cent.

3. There is less than one per cent difference in the protein content of oats and barley, this difference being in favor of the barley. In fat there is a difference in favor of the oats of over three per cent. On the Pacific coast barley is considered a very good feed for poultry, but in the east it is not largely used on account of the price.

4. The mustard seed will not injure the wheat for feeding. The hens will soon learn to eat this seed and will take what they want of it when fed scratch grain. If ground they will eat all the mustard seed and the quantity may be more than they need.

GUINEAS.

Please tell me what is the matter with my guineas. They hop around on one leg.

D. W. S.

Indiana.

You must give a little more detail before we can tell what the trouble is. It would be rather a long distance guess. If we could see the leg they don't hop on we could probably tell the reason.

FEEDING INDIAN RUNNER DUCKS.

My neighbor has some Indian Runner ducks and gets eggs all winter. I have had some since the first of September and feed exactly as he does, but get very few eggs—just now, none at all. My neighbor tells me that you must never change their feed. If you give them a wet mash in the morning and corn at night, continue with the same and never give them any change. Now mine won't eat corn till they are very hungry. The corn stays there all night and most of the next day. They have water before them all the time. Mash consists of bran, 2 parts; corn meal or cracked corn, 1 part; beef scraps, 1 part. Can you suggest any change? Do you think White Runners are better layers than Fawn and Whites? I give them grass or vegetables when I can.

A. M. M.

Kentucky.

If you are feeding the same as your

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neighbor and he gets eggs and you do not, the reason must be the housing. We never favored giving whole grain to ducks. Your mash is good as far as it goes, but it contains no greens or fodder. You should mix in some cut clover or alfalfa, cooked vegetables, etc. Then if you have a nice, dry house the ducks will lay.

BREWERS' GRAINS.

I have often wondered why we could not make use of brewers' grains. Would they make good dry feed to mix with dry mash. Would you mind telling how they prepare it, for we can get it very cheaply here.

Mrs. J. D. C

Colorado.

Dried and brewers' grains are used to some extent for poultry feed, but more largely by dairymen. They average to contain about 24 per cent protein and nearly 7 per cent fat and so should be used in connection with bran, middlings and corn meal in a mash.

OFF FEATHERS.

We have twenty Barred Rocks that we bought for thoroughbreds. They are very nice looking except that they show jet black feathers. Most all except the roosters have the black feathers. Can you tell me why this is?

H. B.

Indiana.

This is a very common fault with Barred Rocks. Unless they are very carefully bred the females will run dark and the males light. This is due to the fact that the breed had a black mother. It has resulted in making many resort to two matings, one with dark females and dark male, to secure exhibition colored males, and the other with the lightest colored females and a very light male to secure exhibition colored females.

DISEASE—FEEDING.

I have in my flock of chickens, a disease that seems to take the chicken one at a time sometimes two months apart. They drop around and their heads get colorless and they won't eat although I have never lost any with this disease. Have been using permanganate of potash, dipping their heads in this three or four times. Would like to know if this is all right and how to get the disease out of my flock.

2. I have 43 hens and 3 cocks. I feed them in the morning, a moist mash of wheat bran and middlings. I feed one half

gallon in the morning and one quart of soaked wheat in the evening in leaves. Besides this, they have a good many scraps from the table. Their range is one acre. I have been getting from one to five eggs a day. Tell me how to feed and how much to get better results.

Arkansas.

W. A. C.

If none of the fowls have died the trouble cannot be very serious. When fowls have liver trouble the comb usually turns yellow and they refuse to eat, but usually they do not get well. Don't you believe that it is simply because they have quit laying? Your next question seems to indicate that you are getting a very small number of eggs.

2. You are not feeding enough nor of exactly the right kind of feed to get a large egg yield. You should add corn meal and meat of some kind to the mash and give them at least a third more of it. Don't bother to soak the wheat and give them three quarts. If they eat that up increase the quantity.

GUINEAS.

Please tell me how to care for guineas. I had a pair of pearl guineas given me for Christmas. I never owned one before, so am all at sea about feeding, care and raising. I live in a village and some people tell me I cannot let them out in the yard as they will fly on buildings and I will lose them. I have been feeding them the same as my chickens, keeping them shut in a pen by themselves.

L. A. J.

Guineas are naturally of a wild nature and should be allowed free range. We do not know of anyone keeping them in close confinement. They will get quite tame and come home to roost. As to feed, they will eat almost anything that a hen will. On some farms they are allowed to hunt their own living and rear their own young, but this is not the best plan, as the Guinea hen will lay some twenty eggs before wanting to sit and cannot cover them all. If you remove the eggs from the nest by hand the hen will not lay there again.

WATER GLASS.

Please tell how to use water glass and in what proportions. How long will eggs

keep in this preparation? What temperature is best? What is the cost of water glass?

J. H. L.

Canada.

Take one part water glass to nine parts water. It is best to first dissolve it in a smaller quantity of water and the water should have been previously boiled and allowed to cool. It will depend on the condition of the eggs when placed in the solution how long they will keep but they will be good at the end of six or eight months. The cooler you can keep them the better. A cool cellar is a good place to keep stored eggs.

R. I. REDS.

I have a R. I. Red cock that I purchased a year ago last fall. This fall after molting, he has white in the end (about half) of a flight feather in his wing; and a little in one of his tail feathers. Also have a cockerel purchased last fall that has white in one of the flight feathers, which he did not have when I purchased him. I paid a pretty good price for this bird and he was supposed to come from good stock. Would it be advisable to use these birds for breeding?

H. H.

Maine.

If you are breeding for high class exhibition birds it might not be advisable to use either of these birds, but ordinarily, other things being favorable, we should use them. If you are breeding for utility it is more important to know what their mother did on the nest than what the color of the feathers is.

BREEDING.

Am a reader of your paper and would like to know about breeding. Are two hens enough to start with. My hens are of a good strain of Buff Leghorns. I have

other chickens, but like the Buff Leghorns the best and would like to know how about getting a cockerel.

W. W. T.

Pennsylvania.

Two hens are enough to start line breeding. If you have plenty of hens it is as well to start with more. If you use trap nests you can have as many in the pen as you wish

PRESCRIPTION FOR LEG WEAKNESS.

In your Questions and Answers department I saw where L. M. of Hannibal, Mo., had leg weakness among his chicks and some one offered treatment of baking soda, sodium bicarbonate, NaHCO₂ and Strich-zine, 1-60th grain. I wish to know if a mistake has not been made in the latter drug, strichzine, and if it should not have stated strychnine, C₂₁H₂₂N₂O₂, a poisonous, bitter alkaloid, from nux vomica? If such is the case, the sixtieth grain of Strychnine is a large dose for a person, let alone a chicken. I am sure that a sixtieth grain of strychnine would kill a chicken. The reason I ask this question, is that I have some very fine chickens that have leg weakness and want to make sure of this treatment before giving it to my chickens.

J. W. F.

Washington.

It is immaterial whether it is spelled with an "i" or a "y". If you ask the druggist for sixtieth strychnine tablets he will know what you want. These tablets are put up in strengths of twentieth, thirtieth, fortieth and sixtieth grain and are largely used as a tonic. A sixtieth of a grain is a safe dose for a chicken over two months old when administered but once a day. So far this is the best treatment for leg weakness we know of and our friend need have no fear of bad results if he secures U. S. prescription tablets which bearly every druggist carries. Here is an-

other point, buy them in quantities. Some druggist will ask you ten or fifteen cents per dozen for them while others will sell them at fifteen cents per hundred.

DEPLUMING MITES.

Please tell me through the Questions and Answers department what the trouble is when a hen is having the feathers eaten like specimens enclosed? Also what to do to remedy it.

A. L. R.

Illinois.

This is the work of the dep-luming mite. We found clusters of them on some of the feathers. These mites are so small they cannot be seen with the naked eye and are very similar to those which cause scaly leg. Make an ointment of vaseline and powdered sulphur, using about twice the bulk of vaseline you do of sulphur and smear the feathers around the head and neck. To make it more effective we have used just a pinch of red precipitate of mercury added to the above.

WHITE WYANDOTTES. Black Langshans, and Rose Comb Black Minorcas. Stock for sale. Eggs in season \$1 per 12. The Oak Lawn Farm. Mrs. G. C. Simmons, proprietor, Blandinsville, Ill. 3-5

WHITE WYANDOTTES. Winners. Indian Runners, English white eggs. \$1. 13; \$2. 45; \$6. 100. Satisfaction guaranteed. Harvey Eurdette, Monrovia, Md. 3-1

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It is heated with warm, pure air. Foul or impure air is carried off. No chance for lamp fumes to enter egg chamber. All parts are heated evenly. Side walls and top are made of 1-inch lumber and lined with heavy deadening felt, and again lined with half-inch lumber inside. Heat cannot get out—cold cannot get in—fuel is saved. The Brooder is water heated—fire-proof and weather-proof—easily handled.

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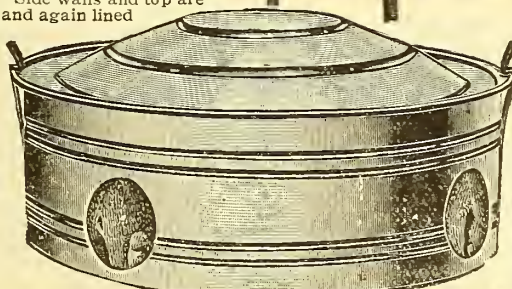
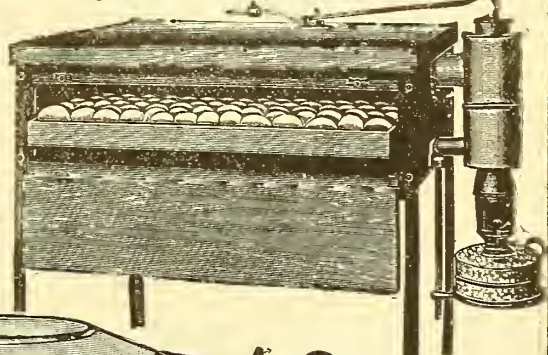
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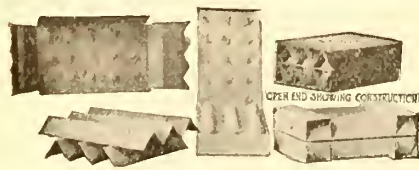
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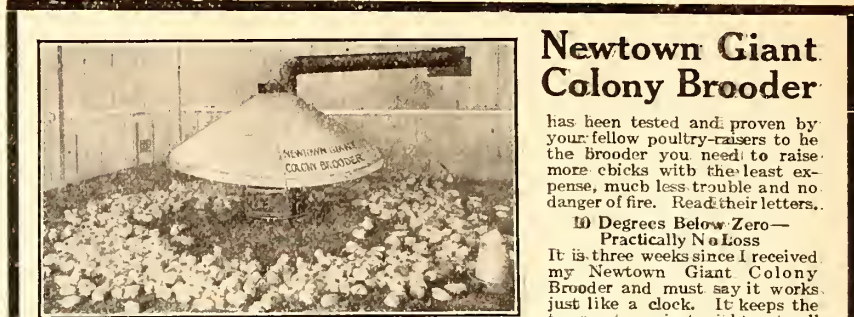
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has been tested and proven by your fellow poultry-raisers to be the brooder you need to raise more chicks with the least expense, much less trouble and no danger of fire. Read their letters.

10 Degrees Below Zero—Practically No Loss

It is three weeks since I received my Newtown Giant Colony Brooder and must say it works just like a clock. It keeps the temperature just right at all times and in all kinds of weather.

My house is 14 x 16 and I have about 300 chicks in it. The death loss is almost nothing, only one chicken a week. Friday the 6th, the thermometer was up to around 60 and it has been a very warm January, and the cold wave struck us and the thermometer went to 10 below in 36 hours. The Colony Brooder held the heat all O. K. and I know 20 below would not affect the room in heat for the chickens.

I have used nearly all kinds of brooders and lost chickens by the hundreds by their crowding, but I am done losing chickens now. There is no crowding in your brooder as in others—always fresh air to breathe, and I expect to use nothing but your brooders in the future.

—GEO. W. TIMBY, Atchison, Kans.

Four Stoves use Two Buckets of Coal in Twenty-four Hours.

"The four brooder stoves received from you last season gave good satisfaction, and I recommend them to any one wishing to brood 200 or more chicks. The 4 stoves use 2 buckets of oil hard coal in 24 hours."

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This Brooder is not an experiment. It was formerly manufactured by a small Virginia Company, from whom it was purchased and then added to the Newtown family of products. You get a tried and proven Brooder when you order a Newtown, and with it you will save your chicks and greatly reduce the cost of raising them.

Write now for handsomely illustrated catalog that will give you more information to prove that you should install a Coal-burning, Self-feeding, Self-regulating Newtown Colony Brooder for better results and more profit this season.

Newtown Giant Incubator Corp'n, 37 Warsaw St., Harrisonburg, Virginia

CONVENIENT WAY TO FILL LAMP.

I am eighty-three years old and not married yet and living alone. A short time ago, I was taking one daily, one weekly and eight monthly papers, but of late my eyesight is so poor that I read but little. I have been using incubators for several years and lamp filling has been one of my troubles. I have invented two devices. About the only fault with them was that they were slow, having to be too small as the filling holes were small. If the filling holes in the lamps were about twice as large as most of them are, it would make any old way good enough but of late, I have found a way of filling that suits me very well. Fill any convenient way, being careful to get about the proper amount of oil in the lamp. When filled, set on a platform scale, made with a face like a clock and note the weight. When filling next time, set on the scales and fill till it weight the same as before.

Perry Crippen.

WHAT'S THE REAL TEMPERATURE?

When you take the downy chicks from the incubator you perhaps begin to count on the fine flocks of mature fowls you'll have next fall. But hatching in the chicks is really the easiest part. Raising the youngsters by artificial heat in brooders has often proved a rather hard problem because the heaters sometimes furnished too much or too little heat for the chicks.

If it's too hot in the brooder, your chicks suffer, smother and become weakened, if too cool they become chilled and crowd together in a heap, trampling and suffocating many. The survivors will be sure to contract colds

and be subject to bowel trouble. However, if the temperature in the brooder is kept just right at all times, your chicks will be happy and healthy and grow to maturity in the pink of condition. But if the brooder thermometer is inaccurate how can you regulate the heat correctly? An accurate thermometer, then is an important factor in the successful raising of chicks.

"Tycos" thermometers are absolutely accurate and dependable and have proved their worth during years of careful testing by the best incubator and brooder manufacturers as well as experienced poultrymen everywhere. They have saved the lives of many chicks by giving an immediate warning of the slightest change in temperature.

"Tycos" Brooder Thermometers are made with great care. After filling, each one is "aged" and then "pointed" to ascertain its absolutely correct individual scale. A "Tycos" thermometer does not leave the factory of the Taylor Instrument Companies at Rochester, N. Y., unless it passes a final test of 100 per cent accuracy. All this care in manufacturing costs time and money but it is absolutely essential to make a high grade thermometer. "Tycos" Brooder Thermometers are much better than ordinary ones, because nothing has been neglected to make them accurate and dependable as long as they remain unbroken.

When buying a brooder or incubator insist on "Tycos" Thermometers and you will eliminate most of the causes of failure in hatching and rearing sturdy chicks. The Taylor Instrument Companies, Rochester, N. Y., have an instructive little booklet "Thermometer Facts Worth Knowing" which will be mailed free to readers of this publication. We suggest that you write today for a copy of this booklet.

GET THESE BOOKS.

Attention is called to the poultry books advertised on page number 512 of this issue. These books are elegantly printed books and are authority on the subjects treated. A little time and effort on your part in soliciting subscriptions to the Poultry Keeper will enable you to earn copies of these books.

A copy of either of the following books will be sent to you on receipt of one subscription to the Poultry Keeper at the regular price, fifty cents a year.

Egg Record and account book, 32 pages, 6x10.

Reliable Poultry Remedies, 92 pages 6x9.

Any of the six following books sent for two regular subscriptions to Poultry Keeper at fifty cents each.

Artificial Incubating and Brooding, 96 pages, 9x12.

The Asiatics, 96 pages, 9x12.

The Bantam Fowl, 70 pages, 9x12.

The Chick Book, 80 pages, 9x12.

Eggs and Egg Farms, 96 pages, 9x12.

Poultry Houses and Fixtures, 96 pages, 9x12.

Any of the following four books sent for three subscriptions to Poultry Keeper at fifty cents each.

Ducks and Geese, 104 pages, 9x12.

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Rhode Island Reds, 88 pages, 9x12.

Turkeys, Their Care and Management, 96 pages, 9x12.

Any of the following four books sent for four subscriptions to the Poultry Keeper at fifty cents each.

The Leghorns, 140 pages, 9x12.

The Plymouth Rocks, 144 pages, 9x12.

Successful Poultry Keeping, 176 pages, 9x12.

The Wyandottes, 160 pages, 9x12.

These offers are not intended to interfere with the regular offers we carry offering the books in combination with single subs to the Poultry Keeper, but mean new subscriptions which present readers secure for us. If you are interested in any of these books, the above offers will enable you to get them without expense to yourself. Show this offer to your friends and get them to help you.

Especially attention is called to our special basis on any of the regular fifty cent poultry papers. Most of the subscriptions for the entire year will come to us during the next ninety days.

Order your papers all together and save the trouble of making separate remittances to each paper as well as save on the price of subscriptions. Our terms are 75c for any two of the fifty cent per year poultry journals; three for \$1.00; four for \$1.40; five for \$1.75; six for \$2.00. Our clubbing list on another page will show what some of the papers are but remember that we can furnish any of the fifty cent poultry papers at this scale.

IMPROVING THE EGG YIELD BY SELECTION.

Am enclosing a trap nest record sheet for Jan., which, while not extraordinary, is very good. This is a pen of S. C. White Orpingtons, that we are breeding from. We have a four day old brood of eighty, from ninety-eight eggs set from them. Our stock is housed in open front houses and fed the ordinary farm feeds, corn, oats and skimmed milk. Bran, middlings and oyster shell are all that we have to buy for them. Our houses are always dry and odorless and practically without lice. By painting or spraying the inside with a mixture of crude carbolic acid and kerosene twice a year, we are not bothered with vermin. We have been using the trap nest for three years and our Orpingtons are laying better every year. The breeders average fifty eggs each a year, more than they did when we started to trap nest. It requires a little extra time to give them the proper attention, but it pays us big interest as every year we add to the egg yield.

Pen No. 2, January record:

Layer 47	19	eggs
Layer 8	24	eggs
Layer 35	14	eggs
Layer 42	18	eggs
Layer 21	22	eggs
Layer 16	23	eggs
Layer 49	24	eggs
Layer 14	21	eggs
Layer 31	21	eggs
Layer 41	20	eggs

Total 206 eggs
H. A. Millard.

Ohio.

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1 month	4c	per word
2 months	8c	per word
3 months	9c	per word
4 months	10c	per word

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in Campines? If so, send postal for circular before buying. Costs nothing. Much information.

The Martling Hennyery Co.

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GRIMM'S CELEBRATED ANCONAS

Winners at Kansas City, St. Louis and Springfield. Quality high; prices low. Booklet free. Eggs, \$1.50 to \$5.00 per 15. Fertility of every egg guaranteed. Fred Grimm, Webster Groves, Missouri. 1-4

SINGLE COMB ANCONAS from high scoring birds. Heavy egg production. Try 15. Get my special prices on eggs and baby chicks. Giant Homer Pigeons, \$1.25 per pair. John Geiger, Chatfield, Ohio. 1-4

SIX HUNDRED YEARLING ANCONAS for our big baby chick trade this coming season. You will want the best; get your order in early. Illustrated catalog. J. O. Somers, Bedford, Ohio. 12-4

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S. C. ANCONAS bred from Sheppard famous strain, farm range, best stock. Eggs 15 for \$1. \$4 per 100, Tillie Brinker, Mt. Erie, Ill. 3-3

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SINGLE COMB ANCONAS. Hardy Northern raised stock, bred for egg production. Fine blood lines. Stock, eggs, chicks. Write your wants. Do it now. Dr. Norman Campbell, Box 7, Germfask, Michigan. 2-4

TRUE BLOOD ROSE COMB Mottled Anconas. Buff Orpingtons, both combs. Snow white Minorcas, both combs. Eggs \$3 per 15, \$5.00 per 30. Cain Lord, prop. Palace Poultry Pens, Equinunk, Pennsylvania. 2-4

SINGLE COMB ANCONAS. Send postal for my mating list. Satisfaction guaranteed. G. L. Zeigler, Elizabethtown, Pa. 2-4

R. C. ANCONAS and R. C. Rhode Island Reds. Splendid layers. Eggs, either breed, \$1.25 and \$1.75 per 15. Ancona stock for sale. Mrs. E. J. Crawford, Owatonna, Minn. 2-4

ANCONAS. The egg factory kind and show birds. Eggs \$1, \$2, \$3 per sitting. Please try me. E. Metcalf, Stockport, Ohio. 2-3

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MOTTLED ANCONAS, Partridge Wyandottes, Single Comb Rhode Island Reds, White Cornish, White Leghorns; Rouen, Pekin, Indian Runner and White Call Ducks. Black Rose Comb Bantams, White Rose Comb Bantams, Red Pyle Game Bantams. First class stock. Healthy vigorous, line bred cockerels. Have score cards with every bird and satisfaction guaranteed. Judge Cary, Trimble, Ohio. 1-4

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ROBY'S WHITE LEGHORN baby chicks. Strong, vigorous, bred, hatched and shipped right. 8c to 12c each. Quality and delivery guaranteed. Order early. Correspondence promptly answered. H. Roby, Box 163, Fairfield, Illinois. 3-4

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WILL TAKE only a few more orders for S. C. White Leghorn baby chicks (strong, healthy). Price, 5 cents straight, Young strain. Send your order. Peter Rezelman, Route 3, Holland, Michigan. 3-4

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WE ARE BOOKING ORDERS for S. C. White Leghorn day old chicks for March, April and May delivery. Eggs at \$5.00 per 100. Send for circular. Address Meeme Poultry Yards, Kiel Wis. 1-4

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LOOK! Black, White and Buff Cochins Bantams must be sold as we must make room for young chicks. Dachs Bros Bantam Yards, Milwaukee, Wis. 3-2

RAKE BARGAINS, GOLDEN AND SILVER SEBRIGHT, BUFF, BLACK, White and Partridge Cochins, Rose Comb Black, Black Tailed Japanese, Red Pyle and Black Red Game Bantams. Proper & Son, Schoharie, N. Y. 3-13

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BLACK COCHIN BANTAMS for sale at reasonable prices. Lewis Moser, Scottsburg Indiana. 2-3

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LIGHT BRAHMA stock for sale. Young and old, both sexes. Eggs for hatching in season. Satisfaction guaranteed. Send for my prices. They are reasonable. Geo. Lister, Box 27, Sibley Iowa. 1-4

DARK BRAHMAS—We have made a specialty of breeding Dark Brahmans for 39 years. Can furnish a small number of fine breeding birds when fully matured. Thos Perrine, Lebanon, Ohio. 12-4

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BUCKEYES for layers, shape and color. Eggs, \$1.50 and \$5.50. W. G. Yearly, Granite Falls, Minn. 3-1

BUCKEYES, thirteenth year, Columbus winners, best shaped male. S. Dunning, St. Marys, Ohio. 3-3

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BUCKEYES. Weisberg's Quality Buckeyes, the leading strain. Thirteen grand pens mated. Ten chicks guaranteed. Free illustrated catalog. A. H. Weisberg, Nevada, Mo. 2-4

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SICILIAN BUTTERCUPS. Prize winning kind. Mating list ready. Harry C. Knopp, Rocks, Md. 3-4

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FIFTEEN YEARS breeders and importers Sicilian Buttercups. We have no other breeds. Send for circular. Lake View Poultry Farms, Dr. E. E. Reynolds & Son, Bullston Lake, N. Y. 3-4

BUTTERCUPS bred from best strains; Dawes, Browe and others, 30 eggs, \$4. Black Orpingtons, six years breeding, never better, 30 eggs \$10. Satisfaction guaranteed. Rev. H. N. Van Deusen, Milford, N. Y. 3-4

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SICILIAN BUTTERCUPS. April and late; hatched cockerels from best strains. Vigorous farm raised birds at reasonable prices. Eggs after February 1st. G. A. Williams, Box 324, Warwick, N. Y. 12-4

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SICILIAN BUTTERCUPS. Choice stock. Eggs \$2.50 and \$3.50 for 15. February to June. Fertility guaranteed. Baby chicks in season, 35c. Floyd P. Smith, Laddonia, Mo. 2-3

BUTTERCUPS. Eggs reasonable. Doctor Stevens, Canev, Kansas. 1-4

BUTTERCUPS. My birds were blue ribbon winners, Battle Creek and Jackson this season, 3 pens, headed by prize winning males, \$3, \$4, and \$5 per sitting. Prize cock for sale, also cockerels. Mrs. May Worden, 1012 Lansing Ave., Jackson, Mich. 2-4

CAMPINES.

IMPROVED SILVER AND GOLDEN CAMPINES. Winners of twelve first and eight second prizes at Palace Show, London, England; Iowa State Fair; St. Paul, Minn. Show; Iowa Poultry Show; Des Moines, Ia. Send for special prices on fine stock and eggs, also for free copy of the finest Campine book and catalog published. E. Benson, Latimer, Iowa, Box 279. 3-1

SILVER GOLDEN CAMPINES. Queens of egg layers. Remember, before buying elsewhere 'twill be to your interest to get my prices on eggs. Descriptive booklet free, send for it. Dr. Prudhomme, Desk K., Thurmont, Md. 3-3

SILVER AND GOLDEN CAMPINES. We are the pacemakers of America in this popular breed. Our yards contain the greatest number of high class birds ever brought together. If you are going to breed Campines this spring, send for our egg mating list. It is now ready and yours for the asking. Manhattan Farms, Geo. E. Noth, owner, Brighton, N. Y. 3-1

SILVER CAMPINES. First pen headed by cock five consecutive times winner of blue. Mating list free. 15 eggs \$2.50. S. A. Moore, Alledonia, Ohio. 15-1

CAMPINES that are Campines. No more stock for sale until after breeding season. Eggs from best matings, \$4 per 15. All other mating \$3 per 15. Chas. Abel, Johnstown, N. Y. 1-6

PARAGON POULTRY YARDS. Cumminsville, Cincinnati, Ohio. Specialty in improved Golden and Silver Campines, also S. C. White Leghorns trapezoid winter and summer layers. Exhibition stock and eggs in season. Book egg orders early 3-1

GARRELL'S PEERLESS CAMPINES have proven their merit by their winnings of many first prizes at St. Louis, Kansas City and Springfield. If you want highest quality, stock or eggs, at modest prices, write for free booklet. Julius Garrell, Webster Groves, Mo. 1-4

SILVER CAMPINES, SICILIAN Buttercups. Eggs. Write, E. H. Adams, Outwood Pa. 1-4

IMPROVED SILVER and Golden Campines. Imported stock. Eggs for sale. F. G. Miltner, Painesville, Ohio. 1-4

SILVER CAMPINES. Improved English strain. Write for mating list. Deal Poultry Farm, Aurora, Ill. 2-4

SILVER CAMPINES. English and Belgian imported. Get them with big egg record. Eggs and baby chicks. **Milners** Minorea Farm, Dept. N, Watertown, N. Y. 2-4

IMPROVED SILVER CAMPINES, and Sicilian Buttercups. Jacobus and Tilling-hast strains. The 20th century mortgage lifters. Eggs, \$2 per 15, \$3.75 per 30. Satisfaction guaranteed. James H. Keefer, Millersburg, Pa. 2-4

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LARGE PARTRIDGE COCHINS. Cockerels pullets and eggs. Nintzel Bros., Oshkosh, Wis. 3-1

COCHINS, Buff and Partridge. Eggs \$1.50 per 15. P. S. Mahaney, Jr., Winterrowd, Ill. 3-1

PARTRIDGE COCHIN cockerels, pullets and eggs for sale. Write for description and prices to Chas. B. Ogg, Mt. Pleasant, Iowa. 2-3

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WHITE CORNISH Indian Games. Beef stock. Three dollars per 15. Replace free all infertiles. Ten to fourteen pound males. Seven to ten pound females. Circular. Mountville Farms, Mountville, Va. 3-4

DARK CORNISH, the victors. A few for sale. "Satisfied customers" is my motto. Stamp for prices. John R. Wall, Yards 719 W. Marietta St, Decatur, Ill. 1-4

CORNISH—Dark, White, White Laced, Red and Heathwoods. Finest I ever raised. Circular free. Fowls all times. Eggs, \$2.00 per 15; single rates. C. D. Smith, Ft. Plain, N. Y. 1-3

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DOGS. Collies. All ages. Catalogue Falling Poultry Farm, Lafargeville N. Y. 1-4

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SILVER GRAY DORKINGS. If in doubt about profits, try the grand old English breed. D. W. Seibert, Somerset, Pa. 2-4

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DORSEY'S AMERICAN DOMINIQUES are winners. Lay like Leghorns. Best for market. Fresh, fertile eggs. P. J. Dorsey, 65, Leon, N. Y. 3-4

AMERICAN DOMINIQUES. The best all purpose fowl. Columbian Wyandottes, superior stock. Circulars. Dr. Harwood, Malone, N. Y. 3-4

AMERICAN DOMINIQUES. Very best. there is in Dominiques. A. Q. Carter, Freeport, Maine. 1-3

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FOR GENUINE Buff Orpington Ducks, eggs, address O. K. Hobbs, (specialist), Hickory Grove, Kentucky. 3-3

BUFF ORPINGTON DUCKS. Prettiest, greatest laying duck grown. Stock. Eggs, \$2-\$5, 12; \$7, 50; \$12, 100. One-fifth off shipped before April 1st. Catalog. H. Pheron, Bainbridge, Ind. 9-3

BUFF ORPINGTON DUCK eggs \$1.50 per 20. I will replace all infertile eggs. Alex J. Fix, Monroe, Mich. 3-3

DUCKS.

FINE WHITE INDIAN RUNNERS of the racy type. Also choice White and Fawn Runners Eggs at \$1.00 per twelve. Oscar Wells, Farina, Ill. 1-1

SEND 1c STAMP for Duck Culture for beginners. Show Pekins and White Runners for sale. Oscar Wells, Farina, Ill. 10-12

MAMMOTH PEKIN DUCKS. Big breeders from stock that has won at state and other big shows. 16 years' experience breeding and showing Pekins White eggs always. \$5.00 per 100. Oscar Wells, Farina, Ill. 10-2

PENCILED WHITE EGG RUNNERS. Young stock for sale. Eggs and ducklings in season. Member Cumberland Club. Mrs. Wayne Flint, Randolph, Pa. 12-4

WHITE RUNNERS 250 for sale. Fishel and Spencer strains. Pure white eggs, pure white breeders. As good as money can buy anywhere. Price on application. C. W. Michael, Independence, Ind. 12-4

OH! YOU DUCKS. Hatching eggs, day old chicks or ducklings, breeders, pure white, Fawn and white Runners, Barred Rocks. White Wyandottes, winners and layers. Mating list. John F. Crane, Spencer, Ind. 3-4

MAMMOTH PEKIN EGGS. \$1.25 per 12. J. C. Loewer, Worden, Ill. 3-4

FAWN AND WHITE Indian Runners, also S. C. White Leghorns, pure white eggs, each, \$1 per sitting. Fred Walker, Oskaloosa, Iowa, Box 78. 2-4

ENGLISH PENCILED Indian Runner duck eggs (Walton strain). 1st pen, \$2.50; 2nd, \$1.50 per 15. L. J. Titus, Spartansburg, Pa. 2-4

MAMMOTH PEKINS (Rankin) and Toulouse Geese (Davidson) for sale. C. McFerren, Belleville, Ohio. 12-4

INDIAN RUNNERS. Fawn and White. Choice white egg strain. 12 eggs \$1.00. H. E. Littleton, Farina, Ill. 1-4

INDIAN RUNNERS. Light, Fawn and White, heavy white egg strain. Eggs, 15 for \$1. Young ducklings in May. Also White Runner eggs 13 for \$1.50. R. H. Vreeland, Manassquan, N. J. 1-4

COOK'S STANDARD FAWN INDIAN RUNNERS America's oldest and best large white egg strain. Ask for descriptive booklet and prices of stock and eggs. Irving E. Cook, Munnsville, N. Y. 1-4

WHITE RUNNER DUCKS. Winners at Chicago and Ill. State Show. Racy, large, white eggs. No stock. Eggs, 13, \$1.50; 50, \$4.00; 100, \$7.00. Orders booked. A. A. Whitford, Milton Junction, Wis. 12-12

FAWN AND WHITE. Also English Penciled Indian Runners. Wonderful layers. large pure white eggs, 15, \$1; 50, \$3; 100, \$5. B. F. Morgan, Independence, Ind. 2-4

COOK'S BUFF ORPINGTON DUCKS again winners at Chicago, St. Louis and Des Moines. 8 firsts, 11 seconds, and 4 third prizes. Special Display cup at St. Louis. Will have three grand pens for this season. Stock and eggs for sale. E. H. Cook, Huntley, Ill. 2-4

ROUEN AND PENCILED Runner Duck eggs, \$1 per sitting. August Walbel, Lupus, Missouri. 2-3

HARSHBARGER FAWN and White Indian Runners White Egg strain, also Rhode Island Whites. 100 eggs \$5. One sitting \$1. Mrs. E. W. Hickman, Marietta, Ohio. 3-4

INDIAN RUNNER DUCKS. White eggs. 15 eggs \$1; 100, \$4. S. A. Moore, Aledonia, Ohio. 3-1

MY ENGLISH, also White Runners, have won firsts wherever shown, Batavia, Owego, Waverly. Laid all winter. Eggs. Mrs. Galvin Wilcox, Spencer, N. Y. 3-1

FAWN AND WHITE Indian Runners (Harshbarger white egg strain). Rhode Island Whites, Knox strain. 100 eggs \$5. One sitting \$1. Alpine Poultry Yards, Marietta, Ohio. 2-4

WHITE INDIAN RUNNER DUCKS, True Runner type. 11 eggs \$1.50. F. W. Rodenberg, Metropolis, Ill. 2-2

RUNNERS (Fawn and White). Foundation stock, four noted breeders of white egg strains, large sales last year. Write. Instructions free. Dora Sheldon, Scranton, Iowa. 3-4

MAMMOTH PEKINS (Rankin). Choice, large stock. Eggs, \$1 per 12, 100, \$6; 200, \$11. Buff Orpington Ducks (Dunrobin). Clear buff. Eggs \$2 per 12; 50, \$5. C. McFerren, Belleville, Ohio. 3-4

PURE FAWN AND WHITE Indian Runner ducks. White eggs for hatching. Prices reasonable. Write. B. D. Runyon, Golden Rule Farm, Fillmore, Ill. 2-4

EGGS FROM FAWN AND WHITE Indian Runner ducks. White egg strain. \$1 per 12, \$5 per 100. J. B. Dingsley, Rowley, Iowa. 3-4

FAWN AND WHITE RUNNERS (Harshbarger white egg strain). Eggs \$1.50 per 13; \$8 per 100. A. E. Iiams, Bushton, Ill. 2-3

BUFF ORPINGTON DUCK eggs, \$1.50 per 13. Large white eggs. Swain's strain. Recen duck eggs, \$1 per 13; \$5 per 100. Good stock for sale. Mrs. Jennie Biddle, Darlington, Ind. 2-3

ENGLISH PENCILED RUNNER DUCKS. White eggs. \$1.25 per 12; \$6 per 100. Bourbon Red Turkey eggs, \$3 per 11. Lou Daugherty, Rardin, Ill. 2-4

PURE WHITE RUNNERS. White egg layers. White Rocks (Fishel direct). Eggs from either, \$1 per 12. Leroy McKinzie, Independence, Ind. 2-4

BUFF ORPINGTON DUCK eggs from exhibition stock, \$2 per 12. Phildon Condon, Box 15, West Chester, Ohio. 2-4

WHITE INDIAN RUNNERS with upright racy carriage. Prize winners. Great layers. large white eggs 15, \$1; 50, \$3; 100, \$5. Circular on feeding ducklings free. B. F. Morgan, Independence, Indiana. 2-4

FAWN AND WHITE INDIAN Runner ducks. White egg strain. Eggs \$1.50 per 15; \$7 per 100. Thomas Ebersole, Carrollton, Ohio. 2-4

WHITE RUNNER DUCK eggs from blue ribbon winners. Free circular. S. J. Hunter, Washington, Pa. 2-4

PURE WHITE RUNNERS. Pure white eggs, long slender bodies, racy, upright carriage. 12 eggs, \$1.50. Mrs. Ella Whitwood, Hudson, Ill. 2-4

HARSHBARGER'S LIGHT FAWN and White runners. Wonderful layers of pure white eggs, 15, \$1.50; 100, \$6. Mrs. Ella Whitwood, Hudson, Ill. 2-4

PURE WHITE INDIAN RUNNER ducks of quality and beauty. Great layers of large white eggs, by the sitting or hundred. Mrs. L. J. Ferrill, Farina, Ill. 2-12

DUCKS, WHITE EGG PENCILED, also White Runner eggs, ducklings. Mrs. Geo. W. Church, K-1, Townville, Pa. 2-4

INDIAN RUNNER DUCKS. Eggs for sale, 75c per 15. Mrs. Staples, Lathrop, Mo. 2-3

BUFF ORPINGTON DUCK eggs from large, choice, even buff, white egg strain. White Wyandotte eggs from great layers. large, blocky rocker comb, stay white. Mrs. V. E. Harding, Corunna, Indiana. 2-4

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BLACK BREASTED Red Game. Stock and eggs. Prices reasonable. E. C. Huff, Wiota, Iowa. 3-4

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GEESE, Mammoth Toulouse, White Embledan, White China, Brown China, Gray African, Ducks; Imperial Pekins, Indian Runners, Rouens, Muscovys, Gray Call, Buff ducks. Turkeys: White Holland, Bourbon Red. High quality fowls at low prices. Alf A. Ziemer, Austin, Minn. 12-4

SILVER SPANGLED HAMBURGS.

SILVER SPANGLED HAMBURG eggs. \$1 per 13, from exhibition stock. Also Buff turkeys and eggs. Harry Prouty, Cumberland, Ohio. 3-4

SILVER SPANGLED HAMBURGS, cocks and cockerels. Prize winners, \$2.50 to \$5.00 each. Also utility stock, \$1.00, \$2.00 each. Great laying strain. Eggs, \$2.00 per fifteen. Raymond Heald, West Chester, Pennsylvania 12-4

SILVER SPANGLED HAMBURGS. Prize winners. Eggs from choice matings, \$1.50 to \$3 per sitting. Baby chicks 15c and 30c each. Satisfaction guaranteed. Rev. C. O. Myers, Olney, Ill. 2-3

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SUPERIOR HOUDANS, originated from one of the best strains in the world and are always blue ribbon winners. Eggs reasonable. Alfred J. Alexander, State vice-president American Houdan Club. Mt. Vernon, Ind. 3-3

HOUDANS. Winners at American, Royal, Missouri State and Kansas City shows. All pens headed by prize males. Eggs \$2 per 15. M. Mullett, 47th and Madison Road, Rosedale, Kans. 3-4

HOUDANS. Beautiful birds. Eggs \$1.25. Stock. Circular. H. A. Aune, Baldwin, Wis. 3-4

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HOUDANS, 278 egg strain. Silver Spangled Hamburgs, fancy and utility, eggs and baby chicks. Catalog. Fred Brenon, 122 North Pleasant St., Watertown, New York. 2-4

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EGGS FOR HATCHING from my prize winning Lakenvelders, \$3 for 15. Send your order early. Satisfaction guaranteed. August Larson, Albertville, Wis., R. D. Box 40. 3-1

LAKENVELDERS. Winners at Hagerstown, Pittsfield and Johnstown. Booklet free. Riverside Poultry Yards, Johnstown, Pa. 3-4

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BLACK LANGSHANS. Eggs for sale from prize winners. big Burlington Poultry Show, 1914, 1st pen, 1st cockerel, second and third hens. Scored cockerels, 2 for \$5. H. P. Myers, Murray, Iowa. 3-4

BLACK LANGSHANS Eggs from silver cup winners. \$2 sitting. Incubator eggs at \$5 100 Red Comb Farm, Lafayette, Ind. 2-4

COCKERELS. Black Langshans, \$2 to \$5. Golden Gate Farm, Lafayette, Ind. 12-4

BLACK LANGSHANS. Eggs from excellent utility stock, \$1.25 per 15. Hatches guaranteed. H. F. Cory, Colfax, Ind. 2-4

WINTER LAYERS. Black Langshans Trap nested for eggs. Columbus, Ind., 1st and 2nd pullets; 2nd pen; 2nd cock, 8 birds entered. Eggs. Portland Poultry yards, J. B. Green, Mgr., Sellersburg, Ind. 2-4

BIG BONED, greenish, glossy, dark eyed. Black Langshans (scored). \$2.50 and \$5. Eggs, 15 cents. H. Osterfoss, Hedrick, Ia. 1-4

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BLACK LEGHORNS, the coming fowl. Heavy winter layers. Bred for eggs and show room. Stock, eggs and baby chicks from blue ribbon winners. Park Side Poultry Farm, J. A. Morrison & Son, Mansfield, O. 3-1

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AMERICAN QUALITY Single Comb Buff Leghorns. Egg bred winners at last Chicago Coliseum, Atlanta, Ga., Spokane, Wash. and other shows. Egg records, 150-224. Stock, eggs, chicks, priced right. Leo Munger, DeKalb, Ill. 3-4

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EGGS FOR HATCHING after Feb. 1st. S. C. White Leghorns, \$1.50, 15 eggs; White Plymouth Rocks, \$1.50, 15 eggs. Wm. Hoffman, Jr., Middleton, Wisc., Box 113 2-2

ROSE COMB BROWN LEGHORNS. Fine cockerels, \$1 to \$3. Eggs after March 1st, \$3 per 50, \$5 per 100. John W. Cook, Bluffton, Ind. 2-4

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DO YOU WANT Money Making Poultry? The Prairie Ranch (Hoyleton, Ill.) sells eggs from their bred-to-lay S. C. W. Leghorns at \$3 per 50 and \$6 per 100. Circular free. 2-3

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S. C. WHITE LEGHORNS. Trap-nested Young's Strain. Splendid cockerels and pullets for sale. Chicks hatched on orders. Three fine matings. Satisfaction guaranteed. Inquire of J. W. Weber, Belleville, Ill. 2-4

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"BUSYASTHEBES" are the Clarion S. C. White Leghorns. They would rather lay than loaf, one dollar invested here brings you fifteen eggs and a successful start in the chicken business. Satisfaction guaranteed. W. Foss Littler, Dunkirk, Ind. 2-4

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S. C. BUFF LEGHORN eggs from pedigree stock, \$2 and \$3 per 15. Satisfaction guaranteed. Mrs. Clemens Kelsor, W. Walnut St., Bloomington, Ill. 2-4

HIGH CLASS Single Comb White Leghorns (Young's Strain) direct. Wonderful layers. 15 eggs, \$1.; 50 eggs, \$3.; 100 eggs, \$5.; 200 eggs, \$10. Strictly fresh laid. Henry Heitkamp, New Bremen, Ohio. 2-4

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WILLIAMSON'S EGG STRAIN Single Comb White Leghorns. Hatching eggs, \$2 per 15; \$6 per 100. G. W. Williamson, Horseheads, N. Y. Eight years ago manager 300 acres devoted to poultry. 2-4

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LEGHORNS, WHITE AND BROWN. 15 eggs prepaid \$1.15; 100, \$4.50. 100 Chicks, \$12.50. Glick's Leghorn Farms, Smoketown, Pa. 2-4

ROSE COMB BROWN Leghorn cockerels, \$2 to \$8; eggs, \$1 to \$3 per 15. Big winners, big layers Mating list. Gerald J. Donahue, Box 60, Delavan, Wis. 3-4

ROSE COMB BROWN LEGHORN eggs from prize winning birds, \$1.50, \$2 per 15 or \$5 hundred. J. H. Youmans, Esperance, N. Y. 3-1

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EGGS FROM FINE S. C. W. Leghorns. \$3 per 15 from best pen; \$6 per 100 other pens. Baby chicks, \$15 per 100. E. H. Marks Madison, Wis., R. 7 3-4

S. C. W. LEGHORNS. Eggs from trap-nested bred to lay stock, \$1.50 per 15; \$8 per 100; \$35 per 500. Baby chicks, \$16 per 100; \$70 per 500. Circular free. Devils Glen Poultry Farm, A. H. Schlosser & Son, Davenport, Iowa, 416 Harrison street. 1-5

ROSE COMB BUFF Leghorns. Eggs for sale reasonable, from grand pens of continuous winners and layers. Four years of show records. Satisfactory hatch guaranteed. Write, Carl Hardung, Ft. Wayne, Ind. 3-4

THOROUGHBRED ROSE COMB White Leghorn cockerels, blue ribbon winners. choice and fine, \$2 to \$5. Better order. score card. Circular free. Mrs. W. E. Masters., Manhattan, Kans. 3-4

ROSE COMB BUFF LEGHORNS. Tocktonius strain. Winter egg producers. First pen, \$2.50 per 15 eggs. Utility pens \$1.25. E. B. Stacy, 229 South Cedar, Lansing, Mich. 3-3

S. C. BUFF LEGHORNS. The laying strain is what counts. I have it. A few cockerels for sale. Eggs \$1.50 per 15. A. T. Stoll, R. D. 4, Ravenna, Ohio. 3-3

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ROSE AND SINGLE COMB White Leghorns. Blue ribbon and silver cup winners wherever shown. also have Chicago winners scoring to 9615. Eggs, \$3, \$2, \$1 per 15. Harry C. Aiken, Chaseburg, Wis. 3-4

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S. C. W. LEGHORNS. Eggs from trap-nested, bred to lay stock, \$1, \$2, \$3 per sitting of 15. Free range stock. Write for mating list. C. E. Mattison, Livingston, Montana, 3-3

WHITE AND BUFF LEGHORNS Single-comb. Eggs, baby chicks, stock. Ray Reynolds, Ft. Atkinson, Wis 2-4

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50 PER CENT EGG YIELD right through November, December and January. Many owners of Keystone White Leghorns report this and better. Flock average 190 eggs per hen in eleven months. One customer raised 290 chicks from 300. Another hatched 271 chicks from 315 untested eggs. Many raise 95 per cent of chicks. Prices reasonable. Catalog free. Keystone Poultry Farm, Box K, New Milford, Pa. 3-4

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QUALITY Single Comb White and Buff Leghorns. 100 eggs \$4. Baby chicks. 10c each. Acme Poultry Farm, New Bremen, Ohio. 3-4

SINGLE COMB BUFF LEGHORNS. Large buff colored birds for sale. Males and females. Grand layers, none setters. Eggs \$1 per 15 and \$5 per 120. Geo. C. Schwegman, Richmond, Ind. 3-4

WYCKOFF-BLANCHARD SINGLE COMB White Leghorn eggs, \$4.50 per 100. Farm range, 98 per cent fertile in Feb. O. B. Williams, Tuscola, Ill., R. 5. 3-3

PURE ROSE COMB Brown Leghorn eggs. Farm range, prices reasonable. Write B. D. Runyon, Golden Rule Farms, Fillmore, Illinois. 3-4

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SINGLE COMB WHITE LEGHORNS. Sired by cocks scoring 94 direct from Young, mated to females with long backs and low, well spread tails. Also heavy winter laying strains of Brown Leghorns and Rhode Island Reds. Eggs, \$2 per 15, \$5 per 100. Chicks 12c each. \$10 per 100. Safe arrival and satisfaction guaranteed. Hoak, the Incubator Man, Ligonier, Ind. 3-1

WHITE LEGHORNS, Rose Comb. Great layers of large, white eggs. Weigh 26 ounces to dozen, bring fancy prices. Bred exclusively for twelve years. Satisfaction guaranteed. Mating list on request. Guy M. Watson, R. 3., Morley, Mo. 3-4

BENEDICT'S BUSINESS BEAUTY Buff Leghorns. Both Combs. Choice cockerels \$2. from hens laying large eggs successive days and unrelated mates from same character. stock. Eggs. Square deal. J. C. Benedict, Chevy Chase, Md. 11-x

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TOM BARRON'S S. C. W. Leghorns, White Leghorns direct from England. Eggs for hatching. No other Leghorns on my farm but Barron strain. Ketchum Bros. Poultry Yards, Antrim, Pa., P. O. Box 7. 3-4

TOM BARRON'S S. C. W. Leghorns. World's best layers. We are direct importers. Guaranteed eggs, \$1.50 per 15; \$7.50, 100. Wilkinson & Mortimer, Cherwell Farm, Bristol, Pa. Route 2. 3-4

S. C. WHITE LEGHORN eggs for hatching. Bred for size, heavy egg production. 90c per 15, \$2.50 per 50; \$4.50 per 100. Stock for sale. Hens, \$1.50 each. R. H. Eichhorst, Twin Lake, Mich. 3-1

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PEDIGREED S. C. WHITE LEGHORNS. 500 breeders, prize winners. Eggs, 15, \$1.50 to \$3. Chicks, \$15 to \$30 a hundred. Satisfaction guaranteed. C. H. Harger, Orchardview Poultry Farm, Benzonia, Mich. 2-3

GET MY WINTER bred to lay strain S. C. White Leghorns. 116 dozen eggs during month of December. Eggs, \$1.50 per 15; \$3 per 50. C. L. Shaver, Saranac, Mich. 2-4

ROSE COMB BUFF LEGHORNS, 13 eggs \$1. Leonard A. Waltman, New Albany, Penn. 2-4

SINGLE COMB WHITE LEGHORNS. Bred for heavy laying, quick maturity and exhibition purposes. Blue ribbon winners wherever shown. Stock, baby chicks and eggs for hatching in any quantity at reasonable prices. Some bargains in cockerels. Densmore Poultry Farm, Roanoke, Va. 2-4

JERSEY STRAIN S. C. White Leghorns. Guaranteed large white eggs, from vigorous two year old females. Send for catalog. North Jersey Poultry Farm, Box K, Ramsey, N. J. 2-4

SINGLE COMB WHITE LEGHORN eggs two and three fourths cents each. Kalix Farm, Madrid Iowa. 2-3

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WHITE ORPINGTONS (Kellerstrass strain). Eggs from pen No. 1, \$3; pens 2 and 3, \$2 per 15. Pens are made up with winners. Write your wants. W. O. Ryler, Bucklin, Mo. 3-1

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ROSE COMB WHITE ORPINGTONS. Won 17 out of possible 18 firsts, 5 seconds, 2 thirds, 1 fourth, silver cup for best cock, hen—cockerel—pullet and 34 other special on 23 entries. Stock and eggs. Rose Comb Reds, choice cockerels \$2 and \$3 each, a few pullets at \$2. A few exhibition birds in S. C. Black Minorcas. Prices right. Utility \$1 up. Write me your wants and booklet of winnings, etc. E. M. Mengel, Dreshersville, Penn. 11-x

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FIVE VARIETIES of Pheasants, Wild Geese and Brant wild ducks. All the leading varieties of chickens. Eggs and stock list free. G. H. Harris, Taylorville, Ill., R. R. 5. 1-4

\$12.00 a pound for pheasants, easily raised with chickens. Investigate. Complete history natural colored, raising pheasants, wild game, poultry, rabbits, etc., 75c copy. Colored catalog illustrating most every thing from white mouse to ostrich, 25c. Lowest prices. Eggs for hatching. Exchanges made. 1000 pheasants, foxes, peafowls, etc. wanted. U Pheasantry, Poughkeepsie, N. Y. 12-4

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PURE BRED BARRED ROCKS Large size, beautiful barring, \$2 each; 3 for \$5.00. Also Mammoth Toulouse Geese, \$2.50 each. Write Toledo Sensel, Carlinville, Illinois. 2-4

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BARRED ROCK hatching eggs \$1.50 for 15; \$6.00 per hundred. "T-O-P" heavy laying utility strain. Seven hundred yearling breeders. Book orders early and avoid disappointment. Twin Oak Poultry Farm, Williamstown, Mass. 1-4

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BARRED ROCKS that lay, win and breed right, among winners at St. Louis Coliseum Show, 1912-13. Eggs, \$2.00 per 15. Henry V Voss, Jennings Sta., St. Louis, Mo 1-4

WHITE PLYMOUTH ROCKS. Standard bred, farm raised. Have won wherever shown since 1895. Eggs, \$2 per 15, \$5 per 45, \$10 per 100. Louis Mackensen, Route 1, Houston, Texas. 2-4

FINE BARRED PLYMOUTH ROCK cockerels \$1.50, \$3 each. Holterman strain. Eggs in season, \$1.50 per 15. E. F. Stockert, 526 East Pierce St., Council Bluffs, Iowa. 2-2

WHITE AND BUFF ROCKS. Well bred. Farm raised. Good laying strain. Eggs for hatching, \$1.50 per sitting. Also Buff cockerels and hens \$1 each. Rachel Sheppard, Route 1, Pearl, Illinois. 2-4

BUFF PLYMOUTH ROCKS. Line bred since 1893. Winners wherever shown, at Hartford, Conn., Brockton, Mass., Belkows Falls, Vt. Won New England district Buff Plymouth Rock cup, including shape and color special. Eggs same as we use. Circular if you mention P. K. R. D 3, F. S. Zwick, Seymour, Conn. 2-4

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THOMPSON'S IMPERIAL RINGLET Barred Rocks direct. Eggs for hatching. Exhibition cockerel and pullet matings; \$1, 15; \$5, 100. By parcel post prepaid; \$1.25 15. H. D. Pinckney, Mahopac, N. Y. 2-4

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RINGLET BARRED ROCKS. A grand lot of snappy Barred Ringlets. Eggs \$2.50 per 15. L. R. Veatch, Lewistown, Mo. 3-3

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WHITE ROCK EGGS and day old chicks from hens scoring 90 to 94 points. Eggs 1 sitting \$2, 45 eggs \$5, 1 dozen chicks \$3, 25 chicks \$5. Orders booked. Sunflower Poultry Yards, Grafton, Ill. 3-3

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BARRED ROCKS of the large type, deep narrow barring, with clean yellow beaks and legs. (Bradley strain). Satisfaction guaranteed. John Platz, Jewett, Ill. 3-2

YOUNG'S WHITE ROCKS. Pens scoring 90 to 95, \$2; cockerels, \$1.50, \$3; cocks \$2. \$5. Chicks, 25c each. Pen eggs, 15, \$2.50. Flock \$8, 160. Mrs Robert Young, Palestine, Ill 2-4

FANCY PARTRIDGE ROCKS Eggs \$2 per 15; \$5, 45. J. A. Stormont, Salem, Ill. 3-4

HIGH CLASS White Rocks (FisHEL strain) 15 eggs, \$1.50; 100 eggs \$5; 200 eggs \$9. George Lehmkuhl, New Bremen, Ohio. 3-3

WYMAN'S Partridge Plymouth Rocks. Cleveland winners. Eggs and baby chicks for sale. E. F. Wyman, Route 2, Brunswick, Ohio. 11-5

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WHITE ROCKS EXCLUSIVELY (FisHEL). Good layers. Eggs from choice, snow white, large, vigorous stock, \$2 per 30; \$3 per 50. From all pens. Satisfaction guaranteed. W. H. Dougherty, Sellersburg, Ind. 3-2

ROCKS. Barred, White, Buff, Partridge and Silver Pencilled. Eggs \$1.50 per 15. P. S. Mahaney, Jr., Winterrowd, Ill. 3-1

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WHITE ROCKS EXCLUSIVELY. Eggs for hatching from correctly mated pens. headed by males scoring to 92 3-4. FisHEL strain. Prices reasonable. Satisfaction guaranteed. Write your wants, F. P. Carothers, Nodaway, Iowa. 3-4

WHITE ROCK EGGS (FisHEL) \$3. Cockerels for sale. Member of American White Rock Club. Dr. J H Martin, Binghamton, N. Y. 1-4

EGGS! Barred Rocks. Fine cockerel and pullet mating. Hens scoring 89 to 91 3-4, \$5 per 100. Have few cockerels and pullets. Few Indian Runner ducks for sale. Mrs J. Liphart, Lena, Ill. 3-4

FOR SALE 24 utility laying Buff Rock pullets \$1.25 each or \$25 for the bunch. Also 1 pen of Black Leghorns consisting of 1 male and 6 females, price \$9.00. J. C. Heckert, Jr., Dallastown, Pa. 3-1

MY HEN HATCHED White Rocks are large, vigorous bred to lay birds; pullets lay at 6 months and keep at it; 10 lb. cockerels head each mating; 15 eggs \$2. Order early or you'll be disappointed. Satisfaction guaranteed. E. Gasser, Webster, Mass. 3-4

FANCY BUFF ROCKS, the great winter layers. Eggs \$2 and \$2 per 15. Orders booked now. Wm Schrumpp, Lyons, Neb. Member of the American Buff Plymouth Rock Club. 3-4

WHITE PLYMOUTH ROCKS. Bred for eggs. Purdue Egg Show Winners. Won 3 ribbons and FisHEL Silver Cup. Mating list free. W. R. Lyon, Terre Haute, Ind. 1826 Lafayette Ave. 2-4

WHITE ROCK COCKERELS. Large, vigorous birds. Prices very low, quality considered. Eggs for sale. Orders booked now. Can furnish February 20th. Write me your wants. Satisfaction guaranteed. E. L. Taylor, Kenwood, Iowa. 2-4

PARTRIDGE PLYMOUTH ROCKS. Chicago, St. Louis, Hamilton, Ohio, Topeka, Minneapolis winners. Stock and eggs for sale. M. A. Schmidt, Chaska, Minnesota. 2-4

BUFF ROCKS. Large laying kind, 15 eggs, \$2. Rev. Wm Cunningham, Tamaroa, Illinois. 2-3

DO YOU WANT TO KNOW about our Monarch strain Barred Rocks? Bred scientifically on fee range and ideal surroundings. Eggs, breeders and young stock. Everything shipped guaranteed. King's Lany Lodge Poultry Farm, Vandalia, Mich. 2-4

PURE BRED BARRED ROCKS from Thompson and Bradley strains. Large boned, fine shape and barrings. Eggs, \$1 per 15; \$5 per 100; \$9 per 200. Satisfaction guaranteed. Mrs. Henry Confer, Lena, Ill. 2-4

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WHITE ROCK COCKERELS. pullets (Fishels). \$1. to \$5. Eggs, 15 for \$2. fertility guaranteed. Send for mating Mat. MacDonald Bros. New Concord, Ohio. Box F. 2-4

BUFF ROCKS. Choice birds. Prize winning strain. Eggs: 15, \$1.25; 30, \$2. No stock. A. A. Whitford, Milton Junction, Wisc. 2-3

EGGS. Barred Plymouth Rocks. \$1 sitting; \$4 hundred. Mrs. Arch Lagle, Depauw, Route 2, Indiana. 2-4

IF YOU WANT WHITE ROCKS that lay, pay and win. All pens headed by prize winning males. Stock and eggs at low prices. Write your wants. R. Beck, Sullivan, Wis. 2-4

PARTRIDGE PLYMOUTH ROCKS. Eggs \$1.50 per 15; \$2.50 per 30. Orders from this advertisement receive prompt shipment on date to suit you. Mating list free, L. C. Smith, Cushing, Iowa. 2-4

PARK'S 200-EGG BARRED ROCKS. Pens headed by son of Park's hen "Muzz," 232 eggs. Hens with record 238-246 eggs. 15 eggs. \$1.50. Circular free. Frederick Matteson, 5548 Woodley Lane, Washington, D. C. 1-4

BUFF ROCKS. "Gold Nuggets." Cockerels, \$2 and \$3. 300 farm raised, good size and color. Eggs. \$2 per 15. fertility guaranteed. John W. Morgan, Marietta, Ohio. 1-4

PLYMOUTH ROCKS. Bickerdike and Fishel strains. White Rock eggs. \$2 and \$3 per 15. One choice mating. \$5 per 15. Barred Rocks \$1 and \$2 per 15. Fancy Hill Poultry Yards. Joseph Bird, Hagerstown, Ind. 1-4

PARTRIDGE PLYMOUTH ROCKS. Illinois State Show Winners. Circular free. Stock \$2 to \$5 each. Eggs \$3 per 15. Noftzger strain. State vice president of club. John Hacker, Marissa, Ill. Box K. 1-4

BARRED ROCKS OF QUALITY and utility. Bred to lay, pay and please. Splendid winter layers. Mature birds for breeding used. Eggs, sitting \$1.50 prepaid. C. G. Johnson, Richwood, Ohio. 1-4

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HOMING PIGEONS. Large, any color. Mated, young or old. 75c per pair. George Miller, Wayne St., Defiance, Ohio. 2-1

WANTED. 5,000 COMMON OR HOMER PIGEONS. Pay at least 25c per pair. Guineas and market poultry wanted. M. Gilbert, 1128 Palmer Street, Philadelphia, Pa. 12-4

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GET SEELY'S White Crested Black Polish if you want winners. Won first, third, fourth, fifth and sixth prizes, silver cup for veterans display, Boston, 1914. Stock and eggs. Chas. L. Seely, pres. Crested Fowl Breeders Assn., Afton, N. Y. 2-4

WHITE CRESTED BLACK POLISH. Home of quality. Grand exhibition birds, also fine breeders for sale. Write me you wants for the show room or breeding pens. Eggs \$2 per 15; \$3.50 per 30. Mark Cutts, Dundee, Minn. 3-4

WHITE CRESTED BLACK POLISH. Home of quality. Grand exhibition birds, also fine breeders for sale. Write me you wants for the show room or breeding pens. Mark Cutts, Dundee, Minn. 12-4

TEN TRIOS Golden Spangled Polish beauties. Variety excels Polish for beautiful plumage and great laying qualities. Sold cheap. \$5, \$6, \$8, trio. T. F. Adams, Binghamton, N. Y. Route 3. 2-4

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S. C. R. I. REDS for sale cheap. High scoring quality. Going out of business. Cockerels, hens, pullets. Old Trusty incubator, \$5.00; Humphrey bone cutter, new, \$7.00. Scotch Collie dogs. G. M. Saunders, Independence, Iowa. 1-4

RHODE ISLAND REDS. Fawn and White Indian Runner Ducks. Vigorous stock. Satisfaction guaranteed. All eggs, \$1.25 per 15. Mrs. Ed. Criger, Alvada, Ohio, Route 1.

K. C. R. I. RED cockerels. No more score cards just utility and breeders, \$1.25 to \$3. A few utility pullets. Eggs after March 1st. Write Grace Roe, Wlota, Iowa. 2-4

S. C. REDS. (Lester Tompkins strain direct.) Pen eggs \$2 per 15; range eggs \$5 per hundred. Fertility Guaranteed. Edward Schoepfel, Ellis Grove, Ill. 1-1

SPRAGUE, the oldest Red breeder in Illinois. Stock best money and experience can produce. Eggs. One-third what others charge for same quality. Circulars free. P. E. Sprague, Maywood, Ill. 2-2

ROSE COMB REDS. (Buschmann strain). Breeding stock. Eggs for hatching. Prices reasonable. Quality and satisfaction guaranteed. Let us have your inquiries. We can please you. E. A. Jordan, Vanport, Pa. 2-4

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EGGS and BABY CHICKS from my Sibley strain Rose Comb R. I. Reds. Eggs, \$1.50 per 15; \$5 per 100. Chicks, 15c each. English Pencilled I. R. ducks (Walton strain), eggs, \$1.50 per 12. Choice Rose Comb R. I. Red cockerels, 2 for \$5.00. N. W. Laird, R. 4, Chelsea, Michigan. 2-4

SINGLE COMB RHODE ISLAND RED eggs \$2 per 15. Fertility guaranteed. Headed by cockerel of Hall's famous strain. Cockerels and pullets for sale. Mrs. DeWitt Van Orsdol, Rowley, Iowa. 3-4

SINGLE COMB REDS. Eggs for hatching from fine farm range flock. \$5 per 100. Ingleside Farm, Westfield, Ind. 3-3

SINGLE AND ROSE COMB REDS. Pens headed by Tompkins cock birds. Good type and color. Best layers. Eggs \$2 and \$3 per 15 by parcel post. Wilber Myers, Osgood, Ind. 3-1

S. C. REDS (Cardinal strain). Eggs from pen \$2 per 15. A few good cockerels for sale. Mrs. E. Liphart, McConnell, Ill. 3-1

HATCHING EGGS. Heavy laying S. C. Reds. Pedigreed Fox terrier dogs, all ages. F. M. Kaley, Bridgeport, Illinois. 3-2

FARM RANGE, scored S. C. Reds. Deep red color, red eyes, long back, low tail, big boned, layers. Eggs 25 cents. Highland Farm, Hedrick, Iowa. 1-5

S. C. RHODE ISLAND REDS. Scranton strain, extra nice pen. 15 eggs, \$3. F. W. Rodenberg, Metropolis, Ill. 3-1

S. C. R. I. REDS exclusively. Large, hardy, of fine color, excellent winter layers. Eggs \$1 and \$1.50 per 15; \$5 per 100. Mrs. W. L. Stoner, Henry, Ill. 2-4

SINGLE COMB RHODE ISLAND REDS. Long backed, big boned, cherry red. Large and vigorous. Great winter layers. Eggs, \$1 per 15; \$3 per 50. Frank Sternberg, Gordonville, Mo. 3-4

EGGS FROM TRAP NESTED Single Comb Rhode Island Reds, bred for egg laying and show points. \$1 per 15; \$5 per 100. Cecil Moyer, Hindsboro, Ills. Route 1. 3-3

ROSE COMB Rhode Island Reds. Bean strain, trap nested. Won silver cup both at Pittsburg, Pa. and Bowersstown, Ohio, 1913. Eggs, \$1.50 per 15. Circular free. W. Laughlin, Jewett, Ohio. 3-4

SINGLE COMB RHODE ISLAND REDS that are red. Cockerels, pullets and eggs. Nintzel Bros., Oshkosh, Wis. 3-1

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DO YOU WANT Standard bred Reds that are dark red to skin, bred to lay? Stock for sale. Eggs \$1 sitting; \$5, 100. Chicks \$15, 100. Willis Slate, South Windham, Conn. 3-4

EGGS FROM HIGH SCORING Rose Comb Reds. Prices right. J. A. Stormont, Salem, Ill. 3-4

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SINGLE COMB RHODE ISLAND RED cockerels from prize winning layers 3 to 5 dollars. Eggs from heavy winter egg strain 2 to 5 dollars per 15. Russell H. Umbarger, Westfield, Ill. 3-4

"REDLAYER" ROSE COMB REDS. Developed by several years of careful selection and breeding for winter layers. Real utility eggs \$5 per 100. All Magic Egg tested and fertility guaranteed. Write for list. Mrs. M. E. Smith, Box 86, Kirkwood, Ill. 3-3

S. C. R. I. RED eggs for hatching. Good laying strain. \$1 per 15; \$3 per 50; \$5 per 100. Mrs. Emery H. Lee, R. 4, Harlan, Iowa, Box 39. 2-4

EGGS FROM HEAVY WINTER laying strain of S. C. Rhode Island Reds. Extra choice pens, \$2 and \$3 per 15. Farm range \$1 per 15; \$5 per 100. Fertility guaranteed. Alvin O. Ramge, Plattsmouth, Neb. 2-3

RHODE ISLAND RED cockerels, both combs. Eggs \$1 sitting, free delivery. Mating list ready. Fred Weiss, Shenandoah, Ia. 2-4

SINGLE COMB Rhode Island Red eggs. Pen (1) \$3, 15; \$5, 30. Pen (2) \$1.50, 15; \$2.75, 30. Utility \$5, 100. Fine color, heavy winter layers. R. S. Hart, Lyons, Nebr. 12-4

SINGLE COMB REDS. Good stock. Winter laying strain. 15 eggs \$1.50; 100, \$6. Mrs. Ella Whitwood, Hudson, Ill. 2-4

SINGLE COMB REDS. Fine shape and color. Scored by competent judge. \$2.50, \$3.50 and \$5 as to score. Mrs. C. Frank Spurling, R. 3, Lovington, Ill. 12-4

R. C. REDS. Stock and eggs. Vernon Ray, Albion, Indiana. 2-4

RHODE ISLAND WHITES.

SINGLE COMB RHODE ISLAND WHITES. First prize New York and other shows. Eggs five dollars per sitting; six week chicks one dollar each. E. E. Field, Hasbrouck, Heights, New Jersey. 3-4

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BLACK SPANISH. Better than the rest. The coming breed. Made a clean sweep at Cleveland Coliseum show. Eggs from choicest matings, \$5 per 15. Frank Miller, Box K, Crestline, Ohio. 3-4

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MY CHAMPION BRONZE turkeys and Barred Rocks. Win for my customers in 25 states. They win, lay, weigh and pay. 52 lb. tom. Eggs for hatching. Ike Hudnell, Milan, Mo. 3-4

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MAMMOTH BRONZE TURKEYS. Finely marked, large boned. Best in state. Toms and hens. Flock headed by 50 lb. tom. Hens reach 25 lbs. Prize winners. Write Mrs. Laban Williams, Huron, Indiana. 1-4

MORGAN'S GIANT BRONZE TURKEYS. Prize winners, large size, finely marked, strong, vigorous birds. Descendants from largest strains in America. Prices low. Quality high. Satisfaction guaranteed. B. F. Morgan, Independence, Ind. 12-4

MAMMOTH BRONZE. Just a few more toms for sale at \$6 each, weighing 23 to 29 lbs. Wm. Prosser, Locust Grove Poultry Farm, Shelbyville, Ill. 3-1

"GIANT" M. B. TURKEYS from 45 pound tom, with enormous bone. Big Barred Plymouth Rocks, snappy barings, from Indianapolis winners. Prices reasonable. L. Glenn Clipp & Bro., Bx. 2, Saultillo, Ind. 12-4

CHAMPION STRAIN of Mammoth B. Turkeys. Pure white markings. Extra early. Large boned. Also S. C. R. I. Red chickens. Prices reasonable. Mrs. H. Rogers, New Virginia, Ia., Route 4. 12-4

MAMMOTH BRONZE TURKEYS. Good size and color. Flock headed by extra large well marked, vigorous yearling toms. Descendants of prize winners. Eggs, \$3 per 10. Barred Rock eggs, \$1 per 15. Leroy McKInzie, Independence, Ind. 2-4

GENUINE BOURBON REDS. Rich, deep red. Farm range, vigorous stock. Eggs \$3.50 per 10. Mrs. Elmer Crooks, Waveland, Ind., R. F. D. No. 2. 2-3

BOURBON RED TURKEY trios \$12 up; toms \$4. Eagle Farm, Sparta Ky. 2-4

WHITE HOLLAND TOMS weighing from 22 to 25 lbs. \$5; big hens, \$4. Pink legs, pure white plumage. The big boned kind. M. E. Blackledge, Oak Dale Farm, Monroe, Iowa. 2-4

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WHITE WYANDOTTE EGGS from high scoring winners at Illinois and Missouri State shows, \$1.50 to \$3 per 15. Write for mating list. Stock for sale. Mrs. Arthur Seymour, Murrayville, Ill. 2-4

WHITE WYANDOTTES. Send for photographs. Winter layers and prize winners. Pen No. 1 headed by first prize cockerel, Fireport and Warren. Eggs, \$3 per 15. Eggs from pen No. 2, \$1.50 per 15. E. C. Allinson, Lena, Ill. 2-4

WHITE WYANDOTTES exclusively. Eggs \$1.00 and \$2.00 per 15. Special mating that will sure produce winners at \$3.00 per 15. Stock all sold. Chas Laub, Collinsville, Ill. Route 1 1-4

BUFF WYANDOTTES that win the premiums at such shows as St. Louis, Missouri State Fair, Terre Haute, Ind., and other. For mating list write Ben H. Neazy, Martinsville, Ill. 1-4

SILVER LACED WYANDOTTE cockerels and hens, scored and unscored for sale. Eggs in season. Mrs R. R. Whitham, Fairfield, Iowa. 1-4

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WHITE WYANDOTTES for sale, Eggs in season. Frank Bigelow, Moberly, Mo. 12-4

BARKERS OLD RELIABLE White Wyandottes. The kind that pays. Fourteen years breeding for heavy laying. Eggs \$2, 15; \$10, 100; Strong, vigorous chicks that live, 25 cents. Satisfaction guaranteed. Edw. K. Barker, South Weymouth, Mass. 3-4

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GOLDEN WYANDOTTES AND SINGLE COMB ANCONAS. Young and old stock for sale, utility or exhibition. Quality our motto. Write for prices. Eggs in season. C. H. Mills & Son, Warren, Ohio. 12-4

GOLDEN WYANDOTTES. Old and young male birds at \$5.00 each. Satisfaction guaranteed. Eggs in season, \$2.00 for 15. W. H. Liddick, Montgomery, Penna. 12-4

COLUMBIAN WYANDOTTES. Markings just right. Write for catalog. Deal Poultry Farm, Aurora, Ill. 2-4

EGGS FROM FIRST CLASS White Wyandottes at two dollars per fifteen, Louis Wiegmann, Hoyleton, Ill. 2-3

HIGH GRADE GOLDEN WYANDOTTES. Won four first prizes Terre Haute, Ind., show, Jan. 1914. Theo. Hewes awarding. Eggs, \$3 per 15; \$5 per 30. Satisfaction guaranteed. Fred H. Sinclair, Martinsville, Illinois. 2-4

LARGE, BLOCKY, snow white Wyandottes, Best blood lines. Eggs \$2, \$3, 100; utility \$5 Arthur Zimmer, Warsaw, Ind. 2-1

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PREMIER STRAIN Partridge Wyandottes. Cockerels \$2 and up. Eggs \$2 and \$3. Phil. J. Rottmeier, Marissa, Ill. 3-1

BLUE RIBBON STRAIN White Wyandottes. String of six, 1st cock, 1st hen, 1st cockerel, 1st pullet, 2nd pullet, 3rd pullet. Cockerels, pullets, eggs and baby chicks in season. Dr. H. W. Holden, Randolph, Vt. 2-4

TARBOX STRAIN Silver Wyandottes. Bloomington winners. Eggs. Roy McCracken, Paxton, Illinois. 2-4

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WHITE WYANDOTTES exclusively; 350 superior birds on free range, scientifically produced direct from John S. Martin's bred to lay, stay white, exhibition stock. Lllac Terrace, R. D. 6, Fond du Lac, Wis. 2-3

SAILOR'S SNOW FLAKE White Wyandottes. Large, vigorous birds. Eggs for hatching ready March 1, \$1.50 and \$2 per 15. Egg orders booked. Moses W. Sailors, Wakarusa, Ind. 2-4

WHITE WYANDOTTES 11 years exclusively. Farm raised, big boned, pure white birds. Fine winter layers. Booking egg orders now from birds scoring 92.1 to 111. Elmer Hutton, Cooksville, Ill. 3-3

GOLDEN LACED Wyandottes exclusively. Farm raised, Blue ribbon winners. Eggs \$2, fifteen. Alfred Williams, Olney, Ill. R. 3. 3-4

TRAP NESTED WHITE WYANDOTTES. Famous laying strains. Eggs now \$1.50 per 15; \$2.50 per 30 delivered. M. G. Wells, Sellersburg, Ind. 3-1

WHITE WYANDOTTES. Good, free range stock. Eggs \$1 and \$1.50 per 15. Satisfaction guaranteed. Ella Kohli, Wakarusa, Ind. 3-2

WHITE WYANDOTTE EGGS. Males leading pens sired by males out of females with records 185 to 200, \$2 per 15. From pens headed by males out of 247 record hen mated to 2 year old best laying females, \$4 per 15. F. A. Groezinger, Caledonia, Minn. 3-3

WHITE WYANDOTTE eggs for hatching, \$3 per 15. Parcel post paid to 4 zone. Write John F. Qualls, Temple Hill, Ill. 12-4

WHITE WYANDOTTES exclusively. (Duston strain) 200 two year old layers. Eggs from choice; selected, pure bred stock, 15, \$2, \$5; 50 \$3.50, \$12; 100, \$6, \$20. Fertility and safe arrival guaranteed. Omaha shipments, Forest Lawn Wyandotte Yards, James Faris, Florence, Nebraska. 3-1

GOLDEN WYANDOTTES or quality. Special and blue ribbon winners. Eggs \$1.50 and up. Write for 1914 mating list. Ormo Poultry Farm, Cedar Rapids, Iowa. R. 1. 3-1

BEST SILVER WYANDOTTES. 15 eggs \$1.25. Victor Felter, DeSoto, Iowa. 3-3

COLUMBIAN WYANDOTTE eggs from 1st prize cockerel last Chicago show. Few fine cocks and cockerels for sale. Won 72 ribbons, 4 cups at 5 shows. Henry Laue, Wheeling, W. Va. 3-4

SILVER WYANDOTTE eggs from Illinois champions. Helfrich Brothers, Hammond, Illinois. 3-4

WHITE WYANDOTTES. Heavy egg laying strain. Eggs, \$1, \$1.50 and \$2 per 15; \$5, \$8 and \$10 per 100. Alvin Wixom, LaSalle, Ill. 3-3

WHITE WYANDOTTES. Keeler and Fishel strain. Eggs, best pen, \$2; other pens, \$1.50 per 15. Leonard Anderson, 535 East Ninth St., St. Charles, Ill. 3-1

WHITE WYANDOTTES (Duston direct). Standard shape, bay eyes, bred to lay and win. Won wherever shown. Scoring to 96. Eggs \$2, 15; \$3, 30; \$4.50, 50. Frank Hardwidge, Poneto, Indiana. 3-4

SILVER LACED WYANDOTTE eggs for hatching from high scoring stock. Prices reasonable Adolph Stoockl, Aurora, Iowa. 3-3

WHITE WYANDOTTE eggs from pure Duston stock. \$1 per 15, \$4 per 100. Mrs. C. C. Calhoun, Dow, Ill. 3-2

400 PURE Duston and Regal White Wyandottes mated, 50 acre farm. Allen Sechrist, Port Trevorton, Pa. 3-3

SHENK has 5 breeds of Wyandottes that win, lay, weigh and pay. Laid all the winter and laying now. 15 eggs \$1.25; 30, \$1.25. Free catalog. Clarence Shenk, Luray, Va. 3-4

SILVER WYANDOTE hatching eggs. Young chicks from good winter layers. Write E. G. Estabrook, Evanston, Ill. 3-2

COLUMBIAN WYANDOTTES. Winners at Chicago, Minneapolis and St. Paul last shows. 27 prizes, 5 firsts, 6 seconds, 5 thirds, 4 fourths, 4 fifths, largest winners at Minneapolis and St. Paul for 5 years. T. J. Cavanaugh, Hutchinson, Minn. 3-1

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SILVER WYANDOTTES exclusively. Chicago, Indianapolis, Springfield and Club Show winners. Eggs from finest matings. Circular free. C. F. Schroeder, St. Peter, Illinois. 2-4

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WHITE WYANDOTTES thoroughbred. Eggs \$1.25 per 15. H. N. Reed, Newark, Delaware. 2-4

WHITE WYANDOTTES. Won nine prizes Missouri State Fair and St. Louis shows 1913. Eggs from pens headed by prize winners, \$1.50 and \$2. per 15. Baby chicks, 18c each. E. W. Schaperkötter, Valley Park, Mo. 2-3

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TESTED EGGS FOR HATCHING. Spanish, Anconas, R. C. Reds, Buff Orpingtons. \$2 per 15. S. B. Stoller, Wiota, Iowa. 3-4

LISTEN! White and Pencilled Indian Runner ducks, Barred Rocks, Blue Andalusians, all varieties of Geese, African Guinea stock and eggs for sale. Satisfaction guaranteed. John Turnbull, Sturgis, Mich. 3-2

S. C. BUFF ORPINGTONS and White Rocks. Large bone and full of vitality, the kind that wins and lays. Eggs, \$2, 15; \$3, per 20. Otto Low, Cartersburg, Ind. 3-4

EGGS from selected pens, R. C. Rhode Island Reds, S. C. Black Minorcas, S. C. White Leghorns, Fawn and White Indian Runner ducks, Red and Minorca cockerels for sale, write for prices. Fred N. Smith, Whitewater, Wis. 3-3

SELECTED EGGS. Rose C. Reds, Single C. White Leghorns, 15, 75c; 100, \$4. Fawn and White I. R. ducks, 12, 75c. G. Kitterer, Emma, Mo. 3-2

EGGS FOR HATCHING from R. Reds, White Orpingtons, White Leghorn, All Single Comb. They have laying ability, bred into them. Lay and win from habit. J. O. Beckner, Onnalinda, Pa. 12-12

EGGS. Prize pen Buff Orpingtons \$2.50 for 15, second pen \$2.50. R. C. Rhode Island Red eggs, \$2.50, 1st pen; \$1.50 from second. Heavy winter layers. A. C. Walters, Lancaster, Ohio. 2-1

HOUDANS, ANCONAS. Single Comb Brown Leghorns. Stock and eggs in season. S. Durand, Millersville, Ill. 3-1

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D. W. YOUNG WHITE LEGHORNS exclusively. Shoemaker Barred Rocks. Eggs \$1 per 15. Steve Ambort, 401 Charlotte St., Alpena, Mich. 3-3

R. C. RHODE ISLAND REDS and Blue Andalusians, 15 eggs for \$1. J. Fred Young, Route 1, Edwood City, Pa. 3-1

90 VARS, POULTRY. Eggs, Pigeons, Dogs, Ferrets, Hares, etc., 60 page booklet free. Descriptive colored book includes all. Actually a store at your home for 10c. J. A. Bergey, Box 45, Telford, Pa. 3-4

HAHN'S Rose Comb Rhode Island Reds, White Plymouth Rocks, Single Comb Buff Orpingtons. My stock is first class. Eggs and baby chicks in season. Cha. A. Hahn, Drake, North Dakota. 3-4

EGGS \$1 to \$8 per sitting. S. C. White and Brown Leghorns, Black Orpingtons, Rhode Island Whites, Buttercups, Golden and Silver Campines. White, Fawn and White Runner and Buff Orpington ducks. Winners in pens. Orders booked. Chas. J. Rauch, Jenera, Ohio. 3-3

BUFF ORPINGTONS. S. C. White Leghorn eggs \$1.50 per 15. W. H. Ahlering, Dupont Ind. 3-4

CUMBERLAND POULTRY YARD. Eggs \$1.50 per sitting 15, from pure bred birds, R. C. Black Minorcas, Buff Rocks, R. C. R. I. Reds, S. C. White Leghorns, Black Javas \$2 per sitting. White Wonder, \$2.50 per sitting. J. R. Stewart, Box 45, Cumberland, Ohio. 3-4

BARRED PLYMOUTH ROCKS and White Wyandottes. Cockerels, \$1.50 to \$2.00. Baby chicks, 20c. Eggs \$1.50 per 15. Loren Truex, Wakarusa, Ind. 1-12

BUFF, BARRED ROCKS; White, Golden, Partridge Wyandottes; White, Buff, Brown Leghorns, Colored Muscovy, Pekin, Wild Maryland ducks; White Geese; Turkeys; Geese. Prize winners. Fine catalog. E. F. Kahler, Hughsville, Pa. 11-5

BUTCHER'S SINGLE COMB White Leghorns, 21c egg strain; Black Minorca (Single Comb); White Wyandottes (Rose Comb); Buff Orpingtons (Single Comb). Orders booked for eggs and chicks. C. M. Ditcher, 2911 Industrial Ave., Flint Mich. 1-4

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ALL LEADING VARIETIES chickens; Bronze, White Holland, Bourbon Red Turkeys; Toulouse, Embden, African geese; Pekin, Muscovy, Indian Runner ducks; Bantams, Guineas. Catalog 2c. Theodore Franz, Mankato, Minn., Box 30. 12-6

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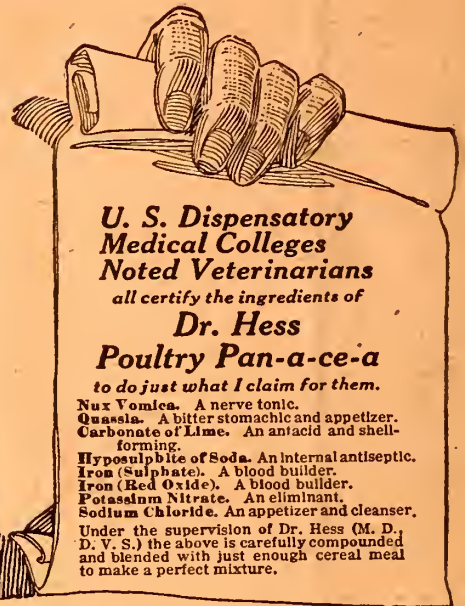
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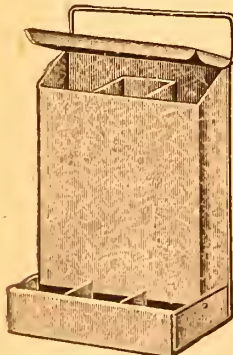
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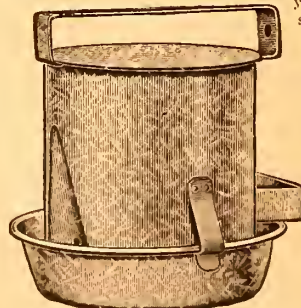
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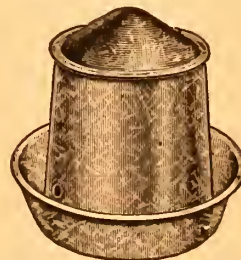
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