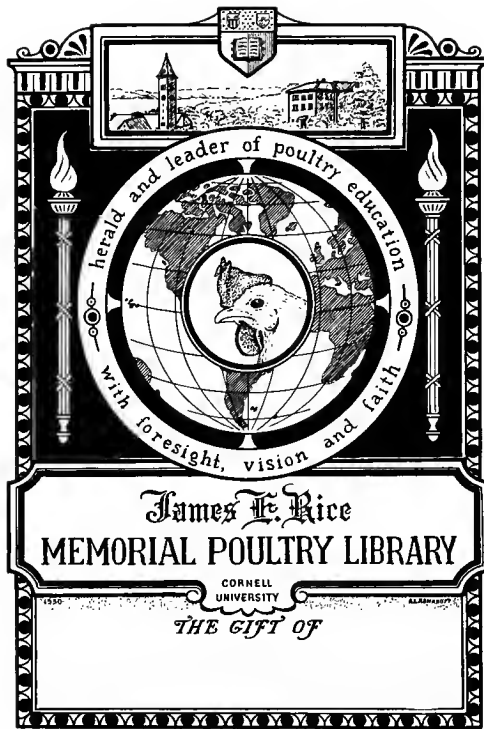


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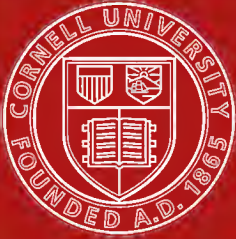
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THE  
POULTRY YARD:

HOW TO FURNISH AND MANAGE IT.

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A TREATISE

FOR THE

AMATEUR POULTRY BREEDER AND FARMER,

ON THE

MANAGEMENT OF POULTRY

AND THE MERITS OF

THE DIFFERENT BREEDS.

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By W. ATLEE BURPEE.



1890.

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## PREFACE.

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The favorable reception of "The Pigeon Loft, How to Furnish and Manage It," published May, 1875, and the large demand for it, together with numerous inquiries, have induced us to prepare the present treatise on Poultry, in the same form and at the same price. We lay no claims to entire originality in this work. All breeders meet with much the same experience, and it has been our aim to compile from all reliable sources a concise treatise, at a low price, giving instructions to beginners. We have not attempted an elaborate description of the breeds of poultry, only endeavoring to state their respective merits and demerits, and thus enable every amateur to answer for himself the oft repeated question, "which breed pays the best." We would express our indebtedness for valuable hints, especially to *The Poultry World* and *Wright's Illustrated Book of Poultry*.

W. A. B.

PHILADELPHIA, March, 1877.

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## PREFACE TO SECOND EDITION.

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In presenting the second edition of *THE POULTRY YARD* to the public we desire to express our thanks for the many kind words of approbation received from our readers, all of which have been very encouraging to us. In this edition we have introduced more illustrations and fuller descriptions of the various breeds, information much sought for by hosts of farmers and new fanciers, whose attention is constantly being awakened to the value of improved fowls.

W. ATLEE BURPEE.

May 27th, 1879.



# THE POULTRY YARD:

HOW TO FURNISH AND MANAGE IT.

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## POULTRY HOUSES.

Wherever practicable it is preferable to allow fowls entire liberty. Thereby they have abundant muscular exercise, can range at will over wheat stubbles, gathering many a worm, and are kept in the highest degree of health. When thus kept, as is the general custom of farmers, they must not, however, be allowed to "shift" for themselves, roosting on the trees or wherever they choose. No well-to-do farmer would allow his sheep or pigs to run at random, without proper stabling or pens. It is none the less necessary to success in raising fowls that the same attention should be paid to them. It does not pay to constantly clean up the implements, wagons, etc., on which the fowls have passed the night. A farmer cannot afford to lose the droppings of his fowls, as there is no more valuable manure in the world. A thrifty breeder cannot afford the time to hunt over hay-mows, under pig pens and among shrubbery, for hens' nests—perhaps only to find the eggs spoiled by incubation. For these and other evident reasons, poultry should have a house set apart especially for their wants. They do not require a large or expensive building. A building ten or twelve feet square is large enough for a flock of twenty fowls. The building should be about seven feet in height, and should face the south. The roof should be perfectly waterproof, and the sides free from any cracks or crevices to admit draughts of air. The front, if in a warm climate, can be made of slats, when abundant ventilation will be allowed. If the winters are severe it should be entirely closed in front, excepting a small hole for the entrance and exit of fowls, and a suitable opening for ventilation at the top. This latter can be accomplished by simply boring a considerable number of augur holes near together, or leaving an opening protected by slats arranged after the fashion of Venetian blinds. A suitable door must, of course, be made, for the entrance of the keeper. The house must be situated upon high ground, and the floor always dry. Many styles of poultry houses are in use, and the reader can easily invent one to suit his own taste and surroundings. For half a dozen fowls a very small house only is necessary. Unless protected, the entrance hole for the fowls will admit a great deal of cold air.

For the following simple arrangements we are indebted to the *Poultry Nation* :—

“Place a box in front of the outlet, tight up against the side of the house, leaving a hole at either end, next the building. Slanting a board from the ground to the top of the box in front of the hole, to break the wind in that direction, you have a house as near wind-proof as though it were entirely closed. If possible, pile manure, straw, gravel, or anything you might happen to have handy, around the box, thus keeping the wind out of the cracks, and making the house warmer.

The interior of the house should be fitted up with roosts and nests. The roosts should all be on the same level, to prevent fighting for the highest place. They should not be more than eighteen inches or two feet from the ground for large fowls, and should be sufficiently wide. A good plan is to arrange the nests on the floor, under the roosts, protected by a board which will collect the droppings, and which can be readily scraped off. When we published the *American Fanciers' Gazette*, we received a communication on nesting places, from an experienced fancier, under the *nom de plume* of “Amateur,” from which we give the following extract :—

“In almost every plan for the construction of a poultry house an elaborate row of boxes is introduced, cunningly devised with a darkened rear passage, favoring the secrecy which mistress Biddy, it is well known, takes delight in, and who, once ensconced therein, finds everything lovely and serene. But there is one fatal objection to this symmetrical arrangement, according to my experience, which is this—the liability of mistaking the nests, and the confusion and loss resulting therefrom.

“I have adopted, for years, the plan of having movable boxes placed on brackets, elevated from one to three feet from the ground. They should be painted in different colors, if possible, so that the hen can easily distinguish her own from others. Nothing could induce me to return to the plan of stationary boxes, as my losses from mistakes have been next to nothing since I adopted this plan of movable nests. A cover of coarse wire netting placed over the setting hen during the first few days of incubation will prevent any disturbance afterward, almost certainly.”

If the fowls are kept in confinement, or have no other shelter, they should be furnished with a covered run for wet weather. *Cleanliness* is all important, and it is *foul* management indeed to allow a stench to arise in the fowl house, rendering the very air the fowls breathe impure, and creating the presence of the chickens' mortal enemy—vermin. The roosts should be scraped, the droppings removed, and a little fresh ashes, gravel or loam strewn on the floor every morning. Also the nesting material should be changed whenever occasion requires. The interior of the house, the nests and the perches should all be thoroughly whitewashed every spring and

fall. No harbor should be presented for vermin, and the air must always be pure. If fowls are confined in a yard the ground should also be frequently raked, and occasionally dug or plowed over.

In constructing the nests we have already mentioned, it will be well to remember that several hens will frequently lay in the same nest, and consequently a smaller number of nests are necessary. Hens should not be set in the roosting and laying house. Some writers recommend a separate house for setting hens, and where poultry are raised in very large numbers this, doubtless, is desirable, but for the ordinary farmer is entirely unnecessary. The hens can be set on the hay-mow, in the barn, wagon house, an unused stall, or any place where they will be quiet and undisturbed.

In breeding several yards of fancy poultry, the usual plan is to make a straight house with yards extending out the entire length, and separated by slat fences. This will answer, but is open to the objection that the cocks will occasionally fight through the rails unless the fence is solid at the base, and if ever one slat should fall off, woe to the pure breeds! A very simple plan for a breeder of several varieties is to give them each a small, separate house and yard, situated in different parts of the ground. When the yard space allotted is very small, a movable fence can be used, and then the fowls can at any time be transferred to fresh pasturage.

#### SELECTION AND MATING OF STOCK.

In selecting fancy stock, of course the standard must be followed, and only the best and most nearly perfect specimens of their kind retained, *provided they are all suited to each other*. No hen should have the same faults as the cock. If one is faulty in a certain point, the other should be especially good in that particular, so as to counteract the bad impress upon the offspring. Experience with each breed must teach the fancier the best birds to retain for breeding. Often a bird that is not up to the standard, and sometimes even a disqualified bird, is desirable in the breeding yard, nay, of the highest importance; for instance, in breeding Leghorns, a straight comb hen is invaluable to raise the finest and most erect combs on cockerels. So a spotted-breasted Dark Brahma and Brown Leghorn cock will produce the most beautifully penciled pullets. We remember seeing a communication in one of the poultry journals, by the late Mr. J. W. P. Hovey, in which he stated the case of a friend who ordered a trio of Brahmas, at a high price, *mated for breeding*, from a celebrated English breeder, and who was disgusted at receiving a poor-looking trio of birds, whose equals *in looks* could have been purchased anywhere at \$2.00 a head. But appearances are deceitful, and *blood* will tell, as was proven by the result. From that trio sprung noted prize birds. And so it is, the skillful breeder knows how to

mate his birds to produce the best offspring. Amateurs, in starting, make a great mistake in purchasing exhibition birds (as birds *matched* for exhibition are seldom rightly *mated* for breeding), or in purchasing low-priced birds from unknown sources. The best plan is to send the price of a pair or trio of breeding birds to a responsible breeder, who has a reputation to maintain, and state plainly that you want birds whose *progeny* will speak their praises. In nine cases out of ten you will be satisfied, not only in the birds received, but in the chicks they breed. In mating fowls, it is generally believed the hen effects mostly the size and form, and the cock the plumage and markings of the chicks. If a choice can be had, it is preferred to mate a cock (over one year old) with spring pullets. Be sure you select a good, vigorous cock, and the one who is the "boss rooster." One cock will readily serve eighteen or twenty hens of the large breeds, and twenty-four to thirty hens of the small breeds.

This has been our experience, and we first expressed our views on this subject in an editorial in the *American Fanciers' Gazette*. Instead of meeting the opposition we might have anticipated from "book fanciers," who had followed the laws of four to six hens to one cock, as laid down by other authors, we received several long letters giving experience strongly confirming our own. A good cock with a small number of hens will only worry and annoy them, often injuring them. With a large number of hens, as stated, some of the hens will, of course, generally be sitting. This ratio of hens applies to small flocks of fowls; where the number is multiplied there should be a rather less proportion of hens, as the majority of the work will devolve upon the "cocks of the roost." In selecting the hens, those of the greatest utility only should be used. If layers are desired, prove by actual count which individual hens lay the most eggs, and retain them. If size and early maturity, select the fowls most nearly perfect in these respects. Remember that *fat* is prejudicial to health and success with breeding fowls. It is not *weight*, but a large form, a *capacity* to take on flesh, that makes large chicks. See to it that the fowls do not breed large legs and necks; look to the greatest development of the most palatable parts. Raise fowls of bright yellow skin and legs. These latter remarks are especially intended for the market poulturer, and we will only add, that no one can realize the great improvement possible, even in "dung-hills," by following up the "survival of the fittest." We cannot make monkeys into men, life is too short for that, but we can vastly improve the condition and value of our poultry. One of our farmers, by a course of judicious mating and selecting of mongrel breeding stock, so well established a strain of large, well-bred fowls, that he was able to dispose of his surplus stock to dealers at \$5.00 a pair. There is no need of the farmer of to-day wasting tedious years in the improvement of his barnyard fowls, when for

five or ten dollars outlay in the purchase of a cock or pair of pure bred fowls he can avail himself of the labor of others for many years. Poultry should not be bred in-and-in too much, but judicious in-breeding, to a certain extent, is necessary to establish a fixed type or peculiar strain. For ordinary farm use, we would recommend the introduction of a thoroughbred cock of fresh blood every second year. Farmers cannot realize what a wonderful improvement a thoroughbred cock will make in a flock of mongrel hens. It will not hurt to make one cross of father with daughter, or of son with mother and half sisters. It is best to kill all hens when two and one-half years old, as soon as they begin to moult. After that the supply of eggs falls off greatly, and it does not pay to keep them. They can then be sold at a fair compensation. Do not count your chickens before they are hatched, is a wise injunction, but none the less will an intelligent breeder desire *to count his chickens before they die*, and to do this with profit, the breeding stock should be slaughtered for market at the age already named.

We will conclude our remarks on mating by the following extract, written by us for the *American Fanciers' Gazette*, August, 1875:—

LUCK IN MATING.—So much has been said and written about *science in breeding*, that we propose, by way of variety, to briefly call the attention of our readers to the intervention, oft-times, of *luck* in mating. We do not class ourselves among the believers in mere luck, nevertheless it must be acknowledged that birds mated on the same system (or oftener, perhaps, *lack* of system) will and do produce diverse results. This, when looked at in one light, is not luck, but the rational results of nature's own laws. However, as far as the breeder is concerned, it is bound to prove either a *lucky* or an *unlucky match*. For instance, two birds are selected which are as near approaches to perfection as the art and skill of the breeder has attained unto; they are mated, and in some cases the offspring will be satisfactory, in others (and the chances are about equal) they will be most unsatisfactory, the products coming worthless, as mongrels. Now, this can be explained in some cases by the assumption (if the birds were of different but unknown strains) that the strains of which they are members had been bred for different results, and the one still possessed the fault which had just been eradicated from the other, but of which a tendency remained. Then, these two birds possessing an inherent inclination to like faults, the offspring come possessed of those faults to a double degree. Again, the strains being bred for diverse purposes, all the breeder's pains are crushed to the ground by this sudden union, and nature will advocate its power. Now, on the other hand, if these birds are differently mated, they may *luckily* be paired to suitable birds, and then become the progenitors of worthy offspring.

All that we have just now said shows that there is at bottom, in such cases, although the breeder may be ignorant thereof, a natural cause for these *lucky* or *unlucky* results. That such, beyond doubt, is the fact, in nine cases out of ten of the varied results of promiscuous matings, we are ready to acknowledge. But, on the other hand, the experienced breeder has or doubtless will come across cases which can be explained upon no such ground. Despite all his care and *system* in breeding and mating, results (we do not mean an occasional exceptional bird, but *regularly*) contrary to the skilled breeder's expectations will crop out. And then, when the same birds are mated to other birds of the *same blood* as the previous matings, and having like defects and "fine points," vastly different will be the results. Not only so, but we have known different cases of two birds, upon being mated together, proving entirely sterile and unfertile, while both of these birds, being put to different mates, were perfectly capable of reproducing sound and healthy offspring. We could particularize cases which might more vividly illustrate the point at issue, but as we have already consumed considerable space, we do not think it necessary, as we can vouch for the truth of the above statements.

#### WHAT AND HOW TO FEED.

It is the general habit of Americans to give their poultry corn, corn, morning, noon and night. This may answer when the fowls have the unlimited range of a farm, and can constantly pick up insects, grubs, worms, etc., together with scattered grains around the barn floor, but even then it is very unwise. In confinement fowls would soon die on this diet. Corn is too heating and fattening for breeding purposes. Fowls should be fed *regularly*. They will soon learn the accustomed hours, and will employ the intervening time in hunting for worms, dusting and exercising themselves. Where they are at liberty, or have a large run, two feeds a day, morning and evening, are sufficient. It is best to make the morning meal of soft food; that, being most readily assimilated, will the sooner appease their empty stomachs and break the fast of the night. Boiled potato peelings, vegetables and scraps, mashed up with slightly scalded bran or meal, with a little salt mixed, is an excellent dish for fowls. In winter, a little pepper will be valuable as a seasoning.

As a soft food, the *Poultry World* recommends a warm compound of two-thirds wheat bran to one-third meal, wet with skimmed milk. This food has a good egg-producing effect. The bran does not tend to fat, and the milk is even better than meat in the production of eggs. Fowls may eat too much meat, but milk they may drink *ad libitum*, and those who have it cannot put it to a more profitable use. Fowls should have, like



human beings, a goodly *variety* of feed. Scraps from the table are highly relished. Grain should be fed at night, as it will remain in their crops longest. Corn is the best staple for cold weather, as it is very heating, and keeps the fowls in fine condition; but it should not be fed constantly in summer. Barley, buckwheat, oats, wheat screenings, cracked corn, rice, etc., are all excellent for a variety. Sunflowerseed is invaluable for poultry, and can be grown as cheaply as corn. The Mammoth Russian is the best and most prolific. Single heads which we raised this year will measure one foot in diameter, and are well filled with an immense number of large, plump seeds. Breeding fowls must not be over-fed nor stuffed, but only kept in good working order. Beef scraps can be bought cheap, and are highly beneficial, in winter especially; also occasionally a boiled sheep's or calf's pluck, chopped up, is recommended. In concluding our remarks on the feed of fowls, we cannot do better than append Lewis Wright's valuable table of the respective constituents of the various grains, etc., generally used for poultry, from which intelligent poulterers can draw their own conclusions:—

There is in every 100 parts by weight of	Flesh forming Materials, Gluten, etc.	Warmth giving and Fattening Material, viz:		Bone-making Materials, or Mineral Substances.	Husk or Fibre.	Water.
		Fat or Oil.	Starch.			
Beans and Peas.	25	2	48	2	8	15
Oatmeal Middlings .....	18	6	63	2	2	9
Thirds or fine Sharps.....	18	6	53	5	4	14
Oats.....	15	6	47	2	20	10
Wheat.....	12	3	70	2	1	12
Buckwheat.....	12	6	58	1½	11	11½
Barley.....	11	2	60	2	14	11
Indian Corn.....	11	8	65	1	5	10
Hempseed .....	10	21	45	2	14	8
Rice.....	7	A trace.	80	A trace.	...	13
Potatoes. ....	6½	...	41	2	...	50½
Milk.....	4½	3	5	¾	...	86¾

On most farms both fowls and ducks are allowed to run together, hence it is sometimes desirable to feed the one and not the other. The *American Agriculturist* suggests the following ingenious plan:—

“The fowls can be readily fed by putting the feed on boards slightly elevated from the ground; the ducks seldom attempt to fly up. To feed the ducks and not the fowls, a large flat pan should be procured and several bricks placed in the middle, in order to keep the food around the edges. Then a large inverted box or tub should be covered over the pan, supported by a brick in each corner. The ducks, by the flexibility of their necks, are enabled to feed, while the fowls can get nothing.”

Fowls require a constant supply of pure, fresh water. It is well occasionally to add a few drops of sulphate of iron to the water. The inde-

structible stone drinking fountains so generally used are well adapted to hold the supply. A large one on the same principle can easily be made out of any old keg or small barrel. Insert a spigot near the bottom, and let its mouth rest in a movable tin cup; the water will flow out only as fast as it is consumed in the cup. A cover should be prepared for the tin, in order to prevent the birds from fouling the water. This is best done by an oblong frame to fit over the cup—solid light wood at the sides and slanting top—the front being made of perpendicular wires. The water should be changed at least once or twice a day on excessively warm days in summer. In winter, once in three or four days is amply sufficient. It may often be desirable to give the feed in a hopper, when we would recommend one of the pattern described in *The Pigeon Loft*. We would here state that buttermilk and curds are highly relished by fowls, and are very nutritious.

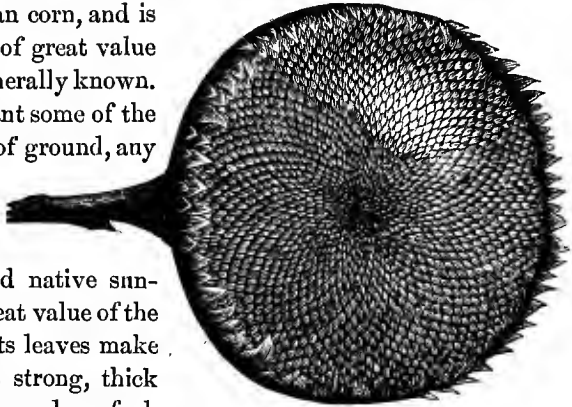
It now behooves us to mention the condiments requisite to good health in our feathered pets. These are neither many nor expensive, but are all important to the thrift and well being of fowls. Poultry must have *lime* in some form, for the formation of egg shell. Crushed oyster shells are the most desirable. They can be procured at a low price, crushed finely by machinery, at any dealer's store. Old mortar will also answer. They must have access to plenty of gravel containing small stones, which are a necessary aid to digestion. These are the "hen's teeth." Granulated or pure ground bone is invaluable for poultry, and it can be fed either in a dish or hopper, or scattered on the ground, like corn. Broken charcoal should be supplied. It abundantly stimulates digestion, and also acts as a purifier in cases of Roup, etc.

Fowls in confinement must have plenty of dust in which to cleanse themselves. Road dust is the best. Coal ashes are also good for this purpose. Customers have often asked our opinion as to the value of prepared food advertised for poultry. These preparations are, as a rule, tonics, which stimulate the production of eggs in fowls. From the great demand for the "Imperial" and the "Egyptian" Egg Foods, we know they are generally satisfactory. There is no doubt that the production of eggs is increased thereby, and it is a good thing for fowls, especially when kept in confinement. But it must always be remembered that *breeding* fowls should be in a *natural* condition, never over-fed or too much forced by stimulants.

Before closing our remarks on feeding, we desire to call attention to the Mammoth Russian Sunflower Seed, as valuable for a change of diet.

The accompanying illustration was drawn from a mammoth head of this variety grown by us the past season, from seed which yielded us 120 bushels per acre. Single heads measure 12 to 22 inches in diameter, and contain an immense quantity of seed, which is highly valued by all

farmers and poultry breeders who have tried it, as an excellent and cheap food for fowls. They eat it greedily, fatten well on it, and obtain a bright, lustrous plumage, and strong, healthy condition, better than on almost any other food. It is the BEST EGG-PRODUCING FOOD known, for poultry. It can be raised cheaper than corn, and is destined to be an article of great value as soon as it becomes generally known. Every farmer should plant some of the seed, on any waste piece of ground, any time from early spring up to the middle of July. It is a wonderful improvement on the old native sunflower, and besides the great value of the seed as a poultry feed, its leaves make capital fodder, while its strong, thick stalks can be profitably used as fuel. Three quarts of seed will plant one acre.



## GENERAL MANAGEMENT.

Success in any branch of business or industry is achieved only by the most diligent and the most eager to improve every opportunity. We often receive letters from men whose health has failed, very frequently disabled ministers, who desire some easy occupation whereby they can gain an honest livelihood, and who are inclined to favor poultry breeding. A man is always safe to keep out of a business he knows nothing about. If, however, a good opening presents itself, we can safely say the raising of first-class poultry can be soon learned. We would advise new beginners to start on a small scale and gradually increase. Poultry costs less to produce than beef, and brings a higher average price. Fowls and eggs are always in demand. The intelligent poulterer can often secure a slight advance on the ordinary market rates by invariably selling a superior article to appreciative customers. To succeed in the poultry business, one should have a natural love for fowls, and should start determined to devote to the breeding of fowls the same application and study which would be necessary to success in any business undertaking. Conducted on business principles, poultry breeding is as profitable—considering the small amount of capital required—as any of the lines of trade, and is not nearly so much overdone. But especially to the general farmer is poultry breeding remunerative. Fowls pay a speedy return for the money expended, and no farm stock yields a larger percentage on the capital invested. In breeding fowls there is one quite important item that is often neglected. We allude to the value of

poultry manure. Wright states that he found the droppings from four Brahmas, for one night, weighed, in one case, exactly one pound; and in another more than three-quarters, an average of nearly four ounces each bird. By drying this was reduced to  $1\frac{1}{2}$  ounces. Other breeds make less; but allowing only 1 ounce per bird daily, of dry dung, fifty fowls will make, in their roosting-house alone, about 10 cwt. per annum of the best manure in the world. Hence, in half a year this number of fowls, to say nothing of their offspring, will make more than enough manure for one acre of land, 7 cwt. of guano being the usual quantity applied per acre, and poultry manure being even richer than guano in ammonia and fertilizing salts. These figures demand careful attention from the large farmer. The manure, before used, should be mixed with twice its bulk of earth, and then allowed to stand in a heap, covered with a few inches of earth, till decomposed throughout, when it makes the very best manure that can be had.

We quote this to show that no "little things," which seem but trifling economies, should be neglected, but everything possible should be made a source of revenue. The droppings must be kept dry, under cover. If fowls are slaughtered in large quantities the feathers also will be worth saving. The webs of the large feathers should be stripped from the quills and the smaller ones left as they are. They should be cured by baking four times in a cool oven, about half an hour each time, and allowed to dry for a couple of days between each baking. In supplying the market it is very desirable to have winter eggs. A little foresight will secure a good supply. Animal food must be furnished.

#### DRESSING AND SHIPPING POULTRY.

On this subject we quote the following, as given by a large commission house:—

"In preparing poultry for market, do not feed for at least twenty-four hours before killing, as food in the crop injures the appearance, is liable to sour, and purchasers object to paying for this worse than useless weight. Opening the veins of the neck is the best mode of killing, and let it bleed freely, as poultry not properly bled will not have a bright, healthy appearance. The intestines or the crop should not be 'drawn.' For scalding poultry, the water should be as near to the boiling point as possible, without actually boiling; the bird being held by the head and legs, should be immersed and lifted up and down in the water three times; this makes picking casing. When the head is immersed it turns the color of the comb, and gives the eyes a shrunken appearance, which often leads buyers to think the fowl has been sick. The feathers should then be at once removed, pin feathers and all, very cleanly, and without breaking the skin. It should next be 'plumped,' by being dipped about ten seconds into water, nearly or quite boiling hot, and then once into cold water about the same length of

time. Most of the dressed poultry sold here is wet picked, and such is generally preferred ; but very fat, handsome turkeys, dry-picked, sell well at Thanksgiving and Christmas. Great care should be taken to avoid cutting or bruising the flesh or breaking the bones. It should be entirely cold, but not frozen, before being packed. This is a matter of importance ; for if packed with the animal heat in it, it will be almost sure to spoil. If it reaches market sound, without freezing, it will sell all the better. In packing, when practicable, use hand-threshed dry straw ; be sure that it is clean, free from dust of any kind, and entirely dry. Place a layer of straw at the bottom, then alternate layers of poultry and straw, taking care to stow snugly, backs upward, legs not doubled up under the body, but straightened out, and fill the package so that the cover will draw down very snugly upon the contents, to prevent shifting or shucking on the way. Boxes are the best packages, and should contain from 100 to 200 pounds. Larger boxes are inconvenient, and more apt to get injured. The objection to barrels is, that the poultry is apt to be much bent and twisted out of shape ; they answer better for chickens and ducks than for turkeys and geese ; but when packed in barrels, should be packed on the side, keeping the legs out straight. Straw should be placed between the poultry and sides of the package, to keep from freezing, though in very cold weather this cannot always be avoided. In packing large lots, avoid putting more than one kind in a package, and mark the kind on the cover.

“In preparing frozen poultry for the late market, dry pick the poultry, as it will keep longer, hold its color better, and command better prices ; the head should be left on, and the manner of packing much the same as in the general directions, except no straw or packing of any kind should be used. Boxes of the following dimensions are preferable—say four feet long by two feet wide and fifteen inches deep (outside measurement). Use new inch lumber, well seasoned, and smoothly planed for the inside of the package ; they will pack two layers of turkeys or three of fowls. Larger-sized packages are inconvenient to handle, and do not meet with as ready a sale ; pack a layer of poultry in as many boxes as will be required to make one layer for each day’s work ; when frozen sufficiently, the second layer may be packed in like manner ; when full, the covers should be placed on and snugly nailed, and the boxes placed together and well covered with straw, say two or three feet in depth, or, should the weather moisten and thaw when the boxes are but partly filled, they should be protected in the same way, in which manner the poultry can be held and forwarded with entire safety. The packing should be done in a cold, dry room, separate from the slaughter-house, and not in the open air, as the wind is apt to turn the poultry dark. Mark plainly on each package the gross weight and tare, and the kind it contains.”

## EGGS AND CHICKS.

Eggs should be regularly collected every day. The wide-awake fancier can often learn to distinguish the eggs of individual hens, and when this is possible it is very desirable. Thereby, when it is desired to set a hen, the eggs can be retained only from the finest hens or those that are the best layers. Hens of the laying breed will lay 150 to 250 eggs per annum; common hens average about 100 eggs per head. Every nest must always have a nest egg (white china is the best), as it prevents the hens from laying away. Hard-shell eggs are always preferable, and hence it must be seen that the hens have constant access to shell-forming material. It is not best to give them this in the form of broken egg shells, as they may from that acquire the unprofitable habit of eating their own eggs. The cure recommended, if the habit is detected early, is to place in the nest an egg shell filled with the strongest mustard, mixed rather thick. We often have inquiries as to whether eggs for hatching can be sent safely by express, for long distances. We answer, unhesitatingly, Yes! We have sent eggs hundreds of miles by express, and had 11 and 13 to hatch out of a clutch (13). And again, we have sent eggs equally as far and *had none to hatch*; then the purchaser, if he is a novice, is apt to think himself swindled, and write a very ungentlemanly letter. There is, of course, always some risk in transportation, but there are many other reasons why the eggs will sometimes fail to hatch, whether sent by express or set at home. Our plan for shipping eggs for hatching is to take a good-sized box and make a "cushion" on the bottom, *inside*, with hay, one or two inches deep, then spread a layer of bran, on which pack the eggs, each nearly one inch apart and the same distance from the sides of the box. Cover with bran and then fill up with a good layer of hay. In cold weather each egg should be neatly wrapped in a piece of paper. The lid of the box should be gently *screwed* on. The box should have a handle, of a piece of leather or the rim of a barrel. When eggs are ordered from a distance a sitting hen should be in readiness to receive them as soon as they arrive. If none of the hens are ready a broody hen can always be bought at a low figure from some neighboring farmer, or "swapped" for a laying hen. To make the hen take to her new nest she should be changed at night, and it should be as nearly as possible like her old nest. She should first be given some china eggs until she settles down quietly to incubation. The period of incubation is twenty-one days. Right here we might say that to preserve eggs for family use, the best plan recommended in *Wright's Book of Poultry* is to pack them closely together and keep tightly covered up in a mixture prepared as follows:—

"To four gallons of boiling water add half a peck of new lime, stirring it some little time. When cold, remove any hard lumps by a coarse sieve, add ten ounces of salt and three ounces of cream of tartar, and mix the whole

strongly. The mixture is then to be let stand to temper, for a fortnight before use. Thus treated, if put in when newly laid, at nine months after they will eat quite as good as though only laid six days, though, of course, not quite like *new laid*."

In keeping fowls for eggs it is not necessary nor even desirable to have a cock with the hens. Virgin eggs are preferred by epicures, and will sometimes bring a slight advance in price on that account. To raise fowls in large numbers they should be colonized in separate families. Twenty-five or thirty breeding fowls are plenty in one flock. An experienced poulterer once remarked to us that he could raise more young chicks and make more money from a flock of twenty-five fowls on his farm than he could from fifty—and we believe him. If it is desired to raise poultry in large numbers, they should have separate yards, with plenty of room. When this plan is adopted, and at the same time eggs are the desired product, one pen of the finest fowls can be mated, to replenish the stock, and in the others no cocks will be necessary. In breeding fowls in separate enclosures in this manner, it will be well to allow each flock, on different days in rotation, the range of the farm. When fancy fowls are bred, it is always well to keep a sufficient number of common hens as sitters. Do not confine your fowls in too close quarters. We constantly see the bad effects of this mismanagement. The fowls become enfeebled, lose their vital power, and, as a consequence, the eggs are often worthless. Whenever it is practicable, we advocate unlimited range. When fowls are bred in confinement their wants must be constantly kept in view, and a plentiful supply of some greens, scraps, worms, etc., given. Some large breeders of thoroughbred poultry now adopt the plan of "farming out" their breeding stock. This has always been our plan, and it has worked very well. We now employ about thirty different farms in raising pure-bred poultry for us. We furnish the breeding-stock (to responsible parties only, in the neighborhood), and pay a specified price per dozen for eggs, and per pair for the chicks that are fit to sell. The inferior chicks are marketed and the farmer pockets the proceeds. Every year we mate our breeding stock ourselves, for the season. In putting our fowls out this way we are careful to give each farmer a breed he *fancies*. We make it to his best interest to serve us well, by paying him better than he could do with his own poultry.

Hens should be set in the evening, and should be furnished with comfortable nests in a darkened and unmolested spot. The nest should be made flat (when very concave the eggs do not lay so well), and is best made out of an inverted sod, or three layers of dry earth or ashes, with straw, hay, or forest leaves placed thereon. Thirteen eggs are the best number covered by average hens. But in cold weather eleven, or even nine, or seven—according to the size of the hens and eggs—are amply sufficient. A larger

number would only become chilled. The hen should be taken off the nest (if she does not go off of her own accord) every day, for food, water, brief exercise and a good dusting. Do not, as a rule, remove the young chickens until twenty-four hours after all are hatched. Occasionally one may need some assistance to get from the shell. This should be given cautiously, and only in extreme cases, by gently indenting the finger into the shell (without touching the inside membrane), in a circle from where it is clipped. When the chicks are hatched the mother should be placed in a coop about two or three feet square, placed on the ground and with slats in the front, through which the chicks can run out to exercise and receive food. Young chicks should always be kept dry and where they can get plenty of sunlight. It must be remembered that fowls attain their growth in from four to eight months, and can never make up for any "back-sets" in that period. Feed regularly and often until five or six weeks old, at first with cooked meal and hard-boiled eggs mixed. Give fine-chopped green food, and let them have the benefit of a grass run. The floor of the chickens' coop should always be kept clean and free from vermin, by a fresh supply of dry dirt. Chicks should always be kept growing while young. If intended for marketing they should be forced and marketed early; spring chickens pay the best, by all odds. For breeders, however, it is not necessary to hatch the chicks too early, as those hatched in milder weather require less care, grow better, and are fully as profitable. Asiatics, however, intended for fall shows, should be hatched by the first of March. April, May and June, however, are the best months for hatching fowls intended for breeders. After the first few days a small bit of meat can be chopped with the food once a day. Soft food should be fed fresh very often—only so much each time as is entirely consumed. A little bone meal should be added to the food. After the chicks are two or three weeks old the evening meal can consist of cracked corn and wheat, or good screenings. Chicks should always have a grass run; if deprived of this, green food must be furnished to them daily. Chopped cabbage leaves are highly relished by them. A plentiful supply of pure, fresh water must be constantly at hand. In winter the chicks require more stimulating food than in summer. Beef scraps can be boiled and mixed with the soft food. If the chicks have been liberally fed they will be in prime condition for the table without any extra fattening. Growing chicks must always have plenty of exercise, and should not be crowded together in too close quarters. In raising fowls for market, as a rule, the chicks should be killed as soon as ready, certainly as soon as they have attained full size, as then better prices are generally procured than later in the season. The food afterwards fed is, therefore, worse than wasted. Besides this, there is considerable risk from disease in holding a large lot of poultry. In breeding fancy fowls the young chicks that turn out inferior,



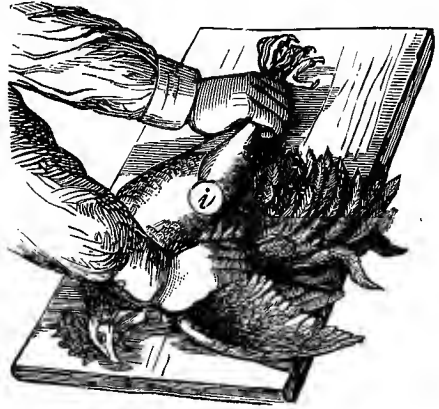
“culls” or “scrubs,” as commonly called (and alas! even the best strains will sometimes throw these despised and ought-to-be-rejected specimens), should be marketed as soon as distinguishable, at from three to six months old. Don't be afraid to kill your poor chicks; it is the only way to ultimate success. If all are killed this year there will be fewer next year.

## DIRECTIONS FOR CAPONIZING.

At the request of numerous readers we give the following explicit directions for caponizing, for which we are indebted to the *Poultry World*:—

The object of caponizing is to improve the quality and increase the quantity of the flesh of fowls. A capon will outgrow a cock of the same age, just as an ox will exceed a bull in weight, and for the same reasons, which are, that castration makes an animal less restless and quarrelsome, and less of the nutriment it digests is diverted from flesh-forming. The operation is not very difficult, and is quickly performed after a little practice.

The instruments consist of a pair of crooked concave forceps, pointed hook, a pair of tweezers, and a steel splint with a broad flat hook at each end. Remove the feathers upon a spot a little larger than a watch, at a point upon the line between the thigh and shoulder. Next, pull the skin backward, so that it may slip forward again after the operation is completed, and with a keen knife make an incision an inch and a half long, parallel with the two last ribs, and between them, until the intestines are visible, taking care not to injure the latter. Now separate the ribs by attaching one of the hooks to each, and allowing the ends of the splint to spread, as they will do when let go. The intestines may be pushed



HOLDING THE FOWL.

away with a teaspoon handle, or other flat, smooth instrument, and when the testicles are found (attached to the back), the tissue which covers them must be held by the tweezers, and torn open with the pointed hook. Next grasp one of the testicles with the crooked concave forceps, and with the tweezers lay hold of the spermatic cord, to which the testicle is attached. Now twist the testicle off with the crooked concave forceps, after which the operation is repeated on the other testicle, the incision is closed (no sewing being necessary), the skin allowed to resume its place, and then the feathers which

were removed are stuck on the outside and left to adhere by means of the blood, forming the only bandage necessary. Take pains not to disturb the parts to which the testicles are attached. The pressure of the tweezers tends to prevent pain and loss of blood. Wrenching off the testicles is more humane than the old method of cutting them with a horse hair, and is more expeditious, and torsion produces less bleeding than cutting does.

There need be no more than six or eight per cent. of the birds killed, even by an indifferent operator; and as those die by bleeding to death, they may be eaten as if they had been butchered in the regular way. To avoid bleeding, take care not to rupture the large blood vessels attached to the organs removed. The best age for cockerels to be operated upon is three to four months. In order that the intestines may not be distended, prepare the bird by shutting it up without food or drink for thirty-six hours previous to the operation. Capons continue to grow fat for a long time, and they should be kept until twenty months old, in order to gain the full advantage of the operation.

The feathers on each side of the incision can be twisted together with the bloody fingers, to help hold the wound together. After the operation give the birds plenty of water, but feed very sparingly, with soft, cooked food, until they move around with ease and begin to scratch. If fed to the full with hard grain at first, some will die.

Caponizing may be defended against objections on the score of cruelty, just as well as castrating colts, calves, pigs and lambs. The rearing of capons will certainly be followed to a great extent in this country, so soon as the people learn the excellent quality of the flesh, which is not only extremely delicate and juicy, but the birds grow to nearly the size of turkeys, and are so quiet that their growth is produced with less feed than in the case of fowls. Already there are many persons making money rapidly at the business. Capons command prices from 30 to 50 per cent. higher than other poultry, in market.

#### DISEASES.

We do not believe much in doctoring fowls. In fact, we have had very little disease among our fowls, and when it did appear we generally resorted to the hatchet. If we can't cure, we can at least kill, and thereby prevent the spread of the disease. Prevention is always better than cure. VERMIN are a very frequent cause of disease in fowls. Every precaution should be taken to prevent their appearance. Don't *crowd* the fowls, or, as the *Poultry World* tersely remarks, you will breed thousands of vermin and precious few chicks. The poultryhouse should be thoroughly whitewashed inside and out, in the nests and every crevice, three or four times a year.

Mix two ounces of carbolic acid to a bucketful of hot whitewash. The house should occasionally be fumigated with sulphur. The nests should be strewn with tobacco dust and sulphur. The ground powder of the leaves of an imported plant, known in commerce as *Persian Powder*, and by various other names, is the most powerful exterminator of insects. The odor kills them. The feathers of the hens should be thoroughly rubbed with the powder. Gapes will seldom appear in young chicks if the hen and nests are thoroughly rid of all insects.

ROUP, including colds, canker, diphtheria, etc., is best prevented and often cured by the use of the celebrated Douglass mixture. This consists of

Sulphate of iron.....	½ lb.
Sulphuric acid.....	1 oz.
Water.....	2 gal.

This is to be added to the drinking water, in the proportion of a tablespoonful to a pint. Fowls affected by the Roup should be separated and put in dry, warm quarters. The head and nostrils should be well washed with warm water, and also with warm alum water. Give daily half a grain Cayenne pepper with half a grain allspice, in a bolus of meal.

GAPES.—If treated early, a small pill of camphor daily, and also a little camphor in the drinking water, is recommended. When fully developed, the worms should be removed from the windpipe by inserting a loop of horse hair into the organ, and withdrawing it while turning it around. Repeat the operation until all the worms are removed.

FOR GENERAL DEBILITY, bad moulting, etc., use stimulating food, with sulphate of iron or Douglass mixture in the water. If the fowls are in general affected with the disease, especially in the case of Catarrh and Roup, it is an excellent plan to thoroughly fumigate the poultry house with sulphur. To do this, close the doors and windows, and burn a small quantity on a shovel. In many such cases the following prescription will be found valuable. It was given to us by a doctor fancier some five years ago, who recommends it as very successful in most cases of disease among the chickens:—

Pulv. capsicum, }	} .....	each 50 grains.
Pulv. allspice, }		
Diluted carbolic acid.....		2 scruples.

To form into a mass, add syrup and flour, or powdered gum arabic. To form into pills, 100 of ½ gr. each.

One pill three times a day, or alternate with boluses, as below:—

Pulv. charcoal and yeast.....	200 grains.
Flor. sulphur.....	150 grains.
Syrup of flour.....	2 scruples.

To form into a mass, which make into 100 boluses of 5½ grains each.

One three times a day.

With Roup, give also three or four drops diluted carbolic acid, washing out nostrils with Castile water, and inject some of the acid into the nose.

**CROP BOUND.**—The following is recommended:—

Warm water should be forced down the throat, and the crop gently kneaded or worked for an hour, if necessary, until it becomes soft, holding the bill open and the head down; then give a tablespoonful of castor oil, and feed sparingly for a day or two, to prevent permanent distention. If this is not effective, an incision about an inch long should be made at the top of the crop, first removing some of the feathers, and care being taken not to cut any of the large blood vessels. The contents of the crop should then be removed, and the outlet examined, to see that it is not stopped up. The incision may be closed by making three or four stitches, with horse hair or silk, in the inner skin, and the same in the outer. Be careful not to sew the two skins together, as it is almost certainly fatal. Feed on sopped bread, and allow no water for twenty-four hours after the operation.

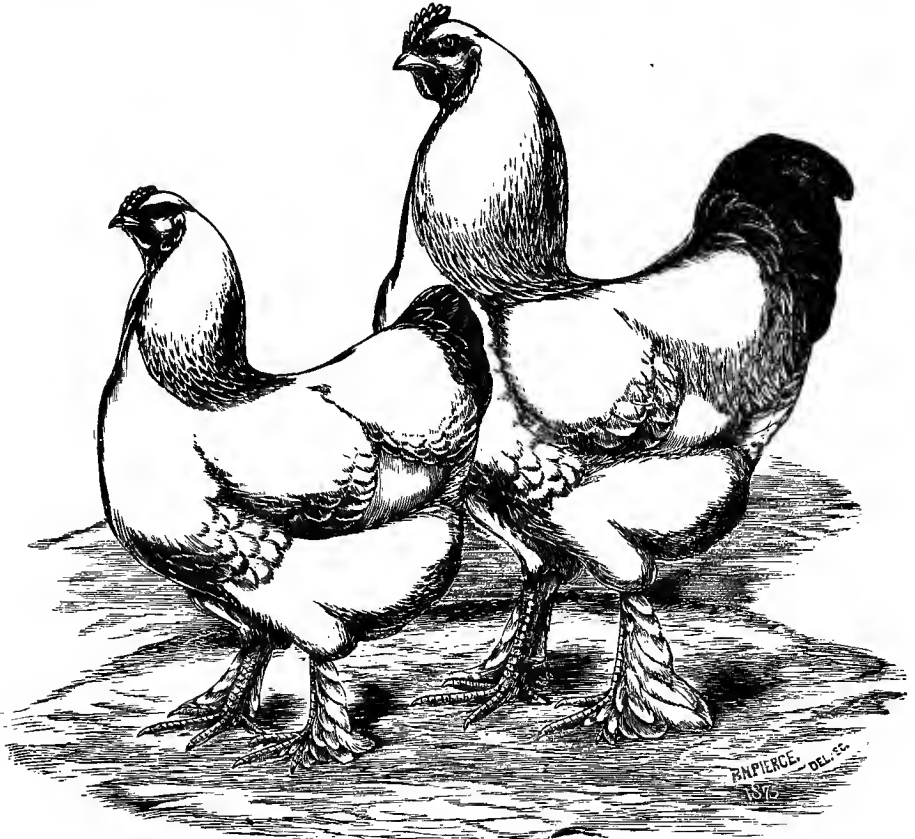
**STRAINED HIP JOINT.**—A customer of ours, and for many years a practical breeder, has called our attention to a common ailment in fowls, which we believe has never before been noticed by any writer on poultry. Especially in the large breeds, where the rooster is heavy, good laying hens, after two years old, often become so strained and weak in the hip joints that they slide out of position, letting the body fall very near the ground, and making the hen walk like a duck. The rooster, seeing the hen in this position, naturally thinks she is courting his attentions, and the weakened hen is thus very much injured. The remedy is simple, and the cure nearly always complete. Tie the two legs together by a string around each at the hip joints, a little nearer than they would be when the bird was standing naturally. They must be tied back of the breast bone, so that they cannot slip out of position. The hen will soon learn to walk, although not so rapidly, using her hock joints, and in a few weeks she will have recovered the full and perfect use of her limbs.

## VARIETIES OF FOWLS.

### BRAHMAS.

No breed of pure bred poultry, from the days of the hen fever to the present, have so universally maintained a front rank in the estimation of all poultry men, as the Brahma. They are quiet in their disposition, and very tame. Our late lamented Brahma cock, "Joe Hooker," was almost as affectionate and knowing as a dog. He would come into the kitchen at meal times, and would quietly walk around and eat out of the hand what was given him, but never would he eat anything within his reach that was not set aside for him. Brahmans can easily be picked up anywhere by a

child. A three-feet fence will confine them, and no breed in the world is so well adapted to close confinement. They thrive well in the smallest quarters. They are excellent winter layers; their eggs are of varied shades. That *pure* Brahmas should lay eggs of one uniform color, is an exploded bubble. They are very much inclined to sit, and this is a great drawback. They do not mature early, and are not so desirable for spring market pure bred as when crossed. For mothers, they are the very best, when not too

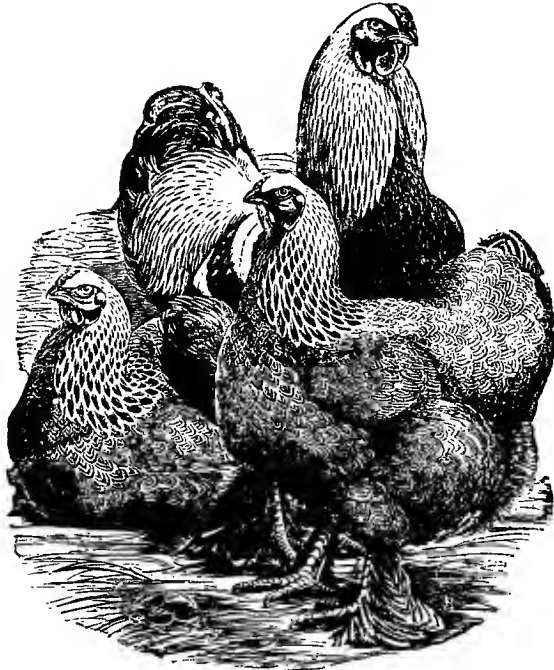


LIGHT BRAHMAS, DRAWN AND ENGRAVED FROM LIFE.

heavy. They have plenty of loose fluff, and will cover a goodly number of eggs. They should be of large size, but no giants. The days of the "long-legged Shanghaes, that could eat off the top of a barrel, and all there is in it," is past. Farmers and poulterers are beginning to realize that utility of form must be studied. It needs no demonstration to prove that it is highly unprofitable to feed corn and wheat to produce such unpalatable parts as neck and leg. Matured cocks of 12 pounds, and hens of 8 to 10 pounds, are fully as large as can generally be had in connection with other

meritorious points. One peculiarity of this breed is the pea comb, which, being so small, is safe against the winter's frosts.

LIGHT BRAHMAS, with us, are perhaps more generally bred throughout the entire country than any other breed, and yet there is always a very lively demand for good stock at satisfactory prices. They are often inclined to be long-legged; this must be guarded against by judicious selection. In mating the cock and hens should not both have dark hackles, or the progeny



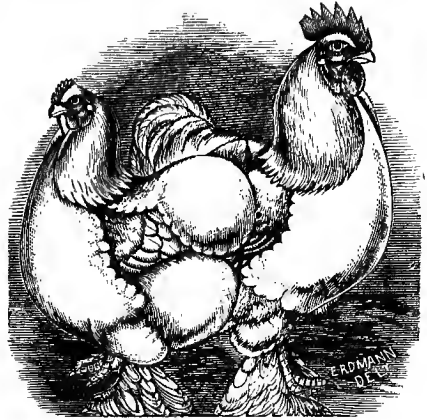
DARK BRAHMAS.

will be very unsatisfactory. There is a prejudice in the minds of some, that Light Brahmas are delicate, on account of their plumage. This is entirely a mistake. They are altogether a most worthy breed, and invaluable to increase the size, laying and early maturity of a lot of "dunghills."

DARK BRAHMAS have nearly the same characteristics as the light. They are, however, deeper and more compact in body, with shorter legs. They are, like the lights, well feathered down to the ends of the toes, but should be free from vulture-hock. They are very hard to breed to the "standard;" only four or five birds out of every hundred will be meritorious show birds, even from the best stock. But all the remaining birds are by no means disqualified. Many of them are generally as good, and some even better, for breeding.

## COCHINS.

Cochins are large, noble-looking fowls, with an abundance of loose, fluffy feathers, especially in the hens, thus making them the very best mothers. Mature cocks should weigh 10 to 13 pounds, and hens 8 to 10 pounds; small weights should not be tolerated, neither should extra heavy birds be bred, if, as is generally the case, they are correspondingly badly proportioned. The legs should be abundantly feathered to the toes, but not "vulture-hocked." They are very docile, can be picked up by a child, and are easily confined. They are rather poor foragers, and must be fed liberally. They are good winter layers. Their eggs are of various shades. They are very much inclined to sit, and hard to break.



PAIR OF WHITE COCHINS.

On account of their large size they are invaluable for crossing, whereby they can be improved in early maturity and flesh. They have single, erect combs, of fine texture. Recently a strain of Pea Comb Partridge Cochins has been introduced, and it is claimed for them the undoubted advantage for cold winters. We fear, however, that should this variety become popular, the distinct types of Brahmas and Cochins would be lost—merged into one common mixture. Cochins have so long been bred almost exclusively for large size and fashionable form and markings, that the economic qualities have been neglected. Much can be done in the way of improving their laying, etc. The varieties are the **BUFF, PARTRIDGE, BLACK and WHITE COCHINS**. There is also a new breed, styled the **Sebright Cochins**, not yet recognized in the standard, nor will that name be allowed. **BUFF COCHINS** are fowls of unusual beauty. They should be of one clear buff color throughout, free from any white or colored feathers, or uneven shading. **PARTRIDGE COCHINS** are very aristocratic, with the deep black breast and beautifully resplendent and varied plumage of the cock, and the exquisitely penciled hen. For small city yards a more pleasing

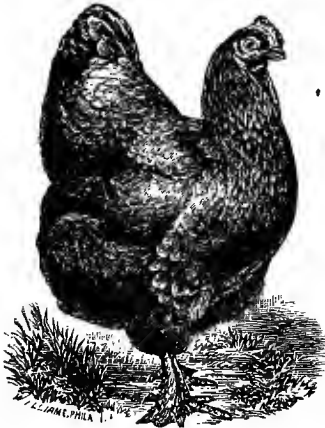


PARTRIDGE COCHINS.

breed could scarcely be desired. **BLACK COCHINS** are only recently established, but are very beautiful and profitable. They cannot fail soon to take a prominent position among their fellows. **WHITE COCHINS**, being of a pure snowy whiteness throughout, do not present the difficulties to the young breeder which are sure to be experienced in raising the other varieties of Cochins, and hence are one of the best varieties to start with. All Cochins possess the same prominent characteristics, and the amateur should select the variety best suited to his fancy.

#### LANGSHANS.

This new Asiatic breed has already attained considerable popularity. In color of plumage the Langshans are a rich metallic black, and resemble the Black Cochins, but are a distinct breed. They are round and deep in body, with breast broad, full, and carried well forward. They attain maturity early and grow to a large size; a cockerel of 7 or 8 months old, fattened, will weigh 10 lbs, and pullet, same age, 8 lbs. Their meat and skin are white, and they are an excellent table fowl; the meat being of a delicate flavor. They are *first-rate layers* and *not* inveterate sitters; they lay better than any other Asiatics.



LANGSHAN HEN.

The laying qualities of the Langshans are certainly remarkable for so large a breed; none are better winter layers, and few so good the year round, and when their large size and quick growth are taken into consideration, the Langshans must certainly be acknowledged a most profitable breed. It is not too much to say that they lay as well as the best laying strains of Plymouth Rocks. Being a *new breed*, they will command a more ready sale than the older varieties that are more generally disseminated; hence it will pay farmers and others to grow them, to sell surplus stock to neighbors. Their fine qualities, together with their handsome appearance and fine, stylish carriage, cannot fail to make this breed prove eminently satisfactory.

#### LEGHORNS.

Of late years Leghorns have attained a wonderful, almost miraculous popularity. And well deserved it is, too. They are without doubt the best layers. They are non-sitters, although, as in all non-sitting varieties, a hen will occasionally take a notion toward incubation, and will often perform her unaccustomed duties very satisfactorily. Leghorns lay as many



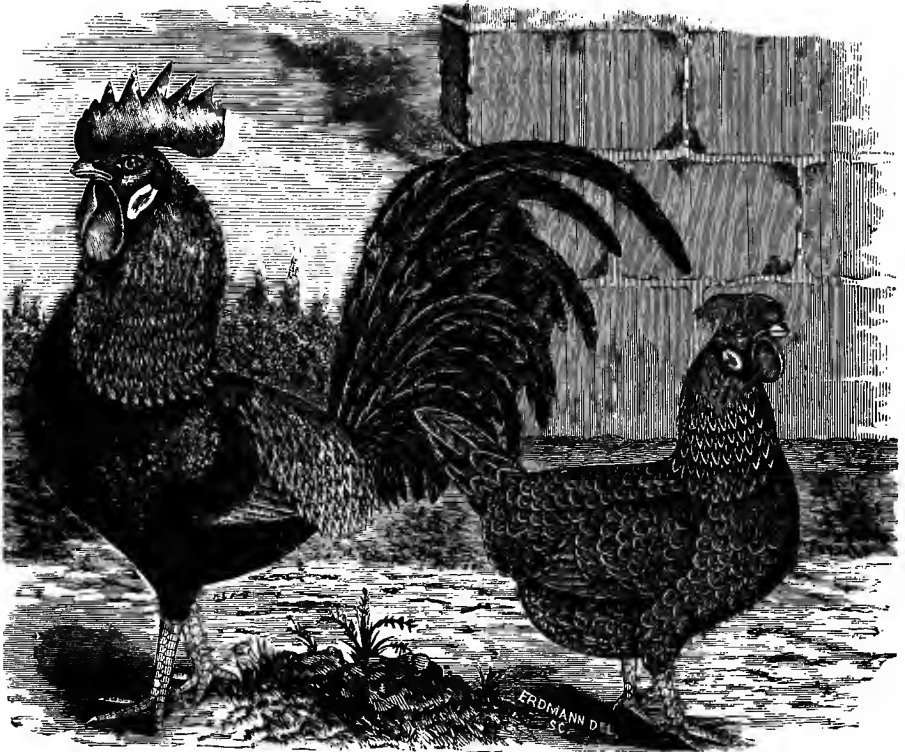
as 200 and even 250 eggs per year. The pullets begin to lay at  $4\frac{1}{2}$  and 5 months. The cockerels will crow at seven weeks old, and a very amusing sight it is to see a large flock of chicks at this age. They very soon learn to run after the hens. From the very eggs, almost before "their mother knows they are out," they are the liveliest of all chicks. They are splendid foragers, and after eight weeks old they generally pick up all their own food among the wheat stubble, around the barn, etc. The eggs are pure white, rather thin shell, and nearly transparent. They are not a large breed, but where eggs are desired, are all the more profitable on that account; *i. e.*, with less machinery to feed, they will shell out larger results than any other breed. The cocks weigh  $4\frac{1}{2}$  to 6 pounds, and the hens  $3\frac{3}{4}$  to 4 pounds. They are very hardy and easily raised. For market, although not large, they are very presentable, with bright yellow legs and skin. They have high single combs, which in this climate are apt to get frozen in winter. This spoils their looks, but does not hurt their breeding qualities. No breed will so improve the laying qualities of barnyard fowls as Pure Leghorns. A cross of a White Leghorn cock on Light Brahma hens makes excellent farm chickens, early matured, good size, fine quality of flesh, and excellent layers.

WHITE LEGHORNS were the first introduced, and are the most generally disseminated. They should be pure snowy white throughout, and entirely free from any colored feathers, or a shade of yellow. Their ear lobes should be solid white or creamy white, and in this particular good strains breed remarkably true. Their combs should be of medium size, perfectly erect and evenly formed, deeply serrated, with five prominent points, wattles pendant; legs bright yellow; carriage proud and upright.

BROWN LEGHORNS are of more recent introduction, but are already the most popular. They are very beautiful, resembling the Black Red Games in plumage, and from their fighting qualities we have reason to believe they contain some game blood. We well remember our first experience with them. We had three favorite cocks, two of which were placed on one farm until one should be mated to another lot of hens. No sooner had they escaped from their respective cages than a terrible fight ensued, and before they could be separated one was killed. The Brown Leghorns are shorter in the legs and rather heavier bodied than the whites. They have bright yellow legs and skin, and are very palatable as table fowls. They are excelled by none as layers. One hen owned by a friend, who kept a careful record, in ten consecutive months of 1876 (including February, when she was rather "under the weather"—which by-the-by was very severe—and only laid eight eggs) laid 223 eggs. This hen was not selected, but was the only one the party owned of this breed. The following is the record:—

1st month, 23 ; 2d month, 8 ; 3d month, 22 ; 4th month, 28 ; 5th month, 27 ; 6th month, 26 ; 7th month, 24 ; 8th month, 24 ; 9th month, 23 ; 10th month, 18 ; total, 223.

In England this breed is becoming very popular, although as yet quite rare. They are pre-eminently an American breed. We have exported them ourselves to England, as have also other breeders. L. Wright, in his *English Book of Poultry*, says, "We consider them *the best layers we have ever met with.*" They have always been our own favorites, and wherever introduced they soon take the lead for eggs, on account of the immense quantity



CENTENNIAL PRIZE BROWN LEGHORNS, BRED BY W. ATLEE BURPEE, PHILADELPHIA.

and admirable quality of same. They have all the desirable qualities of this breed to a pre-eminent degree. We give below a letter just received from a good breeder of this variety, which demonstrates an important fact.

"I will write you a word about the standard as now given for Brown Leghorns. There is just one fault here: a solid white ear lobe and the plumage (standard) of this variety cannot consistently go together without white feathers being made allowable, or dark legs not a disqualification ; but *white ear lobes—spotless white*—and yellow legs cannot be made to breed ; it is altogether *inconsistent with natural laws.*

“In a certain number of the *Poultry World* there appeared an article in which the writer stated that the original jungle fowls were nearly of the plumage of the Brown Leghorns, and some have willow legs, and some white ear lobes; to prove, doubtless, that it was natural to have this white lobe. I inquired, in the succeeding number of the *Poultry World*, whether it was the yellow or dark-leg birds that had the white ear lobes, but have never learned; there is too much trying to cover up the defects of the standard as given to Brown Leghorns. The most open confession I have ever seen, is in an article in January 22d number.

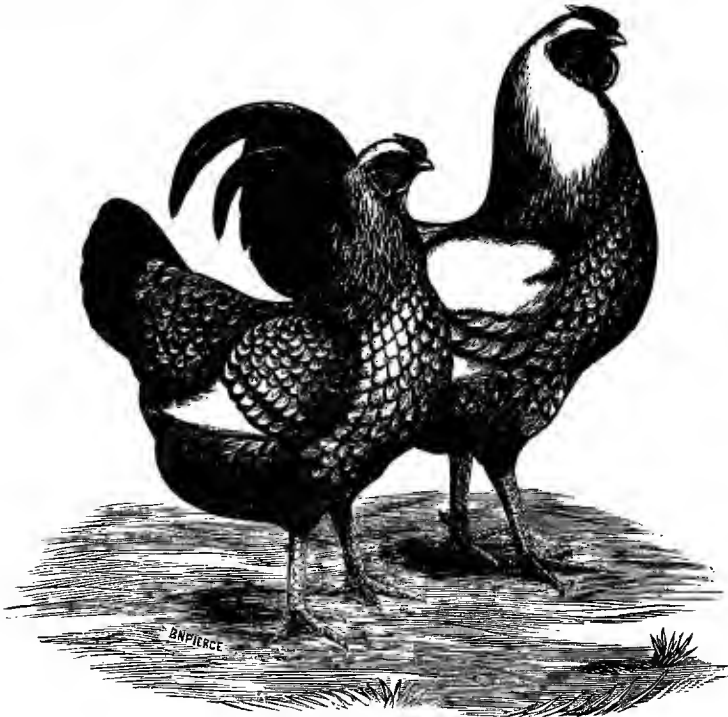
“I am now running a strain of Brown Leghorns, direct descendants of the W. F. B. S. crossed on natives, and find stamina much improved, and when I get them where I can rely on them, I will have a strain of Brown Leghorns that will not lose tail feathers in summer, nor give dark legs, but a type just to my own liking. I want lobes one-third surface white, no more. But by all means, Brother Burpee, insert in your book an open remonstrance against the wholesale slaughter of valuable points and desirable qualities, just to cater to the wants of a few fanciers like —, who had so much to do in compiling the standard, that he got in what has just ruined him, and I am glad of it. Last year, 1875, in August or September, he had not 25 hens or cocks but were disqualified, on account of white feathers. I know this to be true, and am heartily glad of it.”

The writer of the above is only too true to his statements. Much has been done to injure the fair fame of the Brown Leghorns, by advertising solid white ear lobes, and sending out birds with nearly red lobes. Raising, as we do, hundreds of Brown Leghorns, from the most carefully mated stock, we every year raise birds that are throughout free from any white tinge, with bright yellow legs and solid white lobes, but they are scarce. We consider the Brown Leghorns as difficult a breed to handle, with a view to exhibition purposes, as the Dark Brahmas, and requiring equally as much skill. Hens with pure white ear lobes are easily produced from good strains. The trouble is with the cocks. If the majority of the cocks have ear lobes two-thirds white and about ten per cent. pure white, with no corresponding defects, it is as good as can be expected at present. “Truth will out,” even if by letting it out we tread on some tender toes, yet it is our only true plan in writing for the poultry public. We regard the Brown Leghorns as too valuable a breed to be altered by crossing, or to be ruined in stamina and important excellencies by a mad rush after white ear lobes, “regardless of cost.” In mating, always keep in view the one great quality that endears this breed to the people—the eggs.

**BLACK LEGHORNS.**—These are solid black in plumage, with pure white ear lobes and erect combs. They, like all black fowls, usually have dark

legs. They are the smallest of the Leghorns, and although good layers, are no better than the others. They look too much like degenerated black Spanish, and it is our opinion that, unless improved, they will soon sink into oblivion, as a variety not worthy of distinct cultivation.

**DOMINIQUE LEGHORNS.**—These fowls are certainly very pretty, being of the uniform Dominique color, contrasting nicely with white ear lobes. The finest fowls we raised in 1876, and exhibited at the Centennial, were perfect as regards Leghorn characteristics and color, but had a few black spots over the yellow legs. We have had birds of this breed with pure yellow legs, but they were faulty in the ear lobes. This variety can never compete in popularity with the Brown and White Leghorns. Some breeders claim that they are the largest of all Leghorns, and we have purchased birds of such stock which were very large, too large for pure Leghorns, and plainly showing a cross, also having nearly or quite red ear lobes. We have consequently discontinued breeding them.



PAIR OF NEW WYANDOTTES.

**WYANDOTTES.**

This new breed have so many good points to recommend them, both to the fancier and farmer, that they will surely become very popular. Their

plumage is white, heavily laced with black; the tail alone being solid black; the lacing on the breast is peculiarly handsome. They have a small rose comb, close-fitting; face and ear lobes bright red. Their legs are free from feathers, and are of a rich yellow color. In shape they bear more resemblance to the Dorkings than any other breed. Hens weigh six to seven pounds, and cocks seven to eight pounds each. They are very hardy, mature early, and are ready to market at any age. Their flesh is very fine flavored and close grained, which, with their yellow skin, model shape and fine, plump appearance, particularly adapts them for market. They are extraordinary layers, surprising every breeder at the quantity of eggs they produce. If allowed to sit, they make most careful mothers, are content anywhere, and will not attempt to fly over a fence four feet high. Their great beauty and good qualities will make for them a host of friends wherever the breed is introduced.

#### BLACK SPANISH.

The White Face Black Spanish are one of the oldest pure breeds. They are everlasting layers of very large eggs, of excellent flavor. The yolk of the egg is not larger than of ordinary eggs, the white or albumen predominating. They are very hardy if properly bred, the only danger being from their large, erect, single combs, which will become frozen in very severe weather. They are very high in body, with fine, stylish carriage. Their legs of a lead color, becoming lighter with age. Breeding in-and-in also produces pale legs, and then a cross should be made with a very bluish-black-legged cock of fresh blood. Their white face and long serrated comb extending out almost to the end of the bill are well depicted in the accompanying cut. They are very poor table fowls, but their fine eggs entitle them to a high rank among the breeds of domestic poultry.

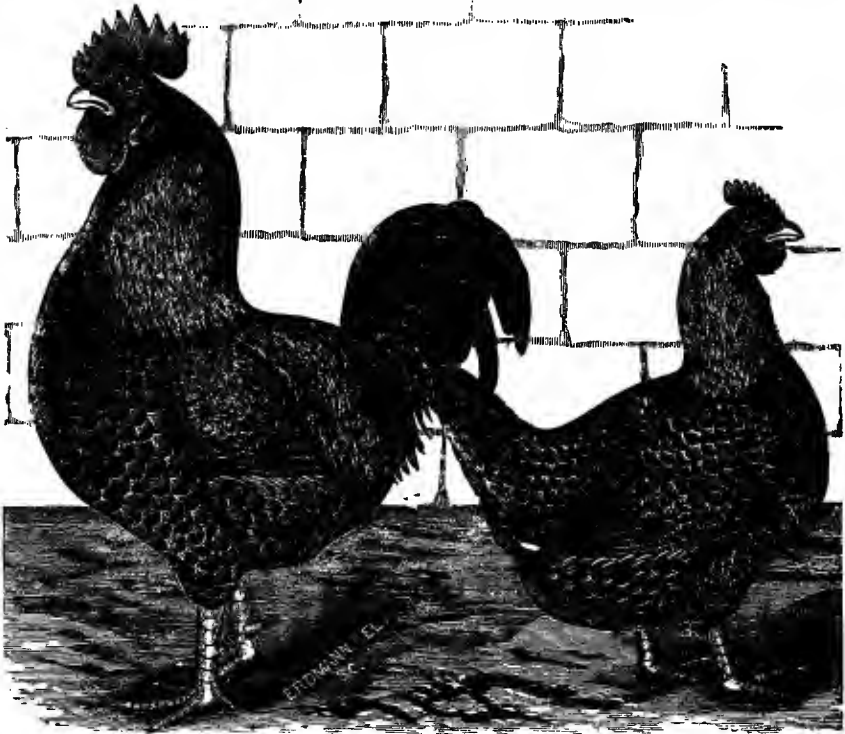


W. F. BLACK SPANISH.

#### PLYMOUTH ROCKS.

Plymouth Rocks, for a "general purpose breed," are unsurpassed, desirable alike for eggs and early market chicks; while they neither lay as many eggs as the non-sitting breeds, nor attain the great size of the Asiatics, yet they most nearly combine the excellencies of each of these classes of fowls, and where one breed alone is kept, it would be hard to make a more suitable selection. Their origin is generally believed to have been from a cross of the Black Java and American Dominique. Certain it is that they possess the good qualities of the latter, with increased size. Their plumage is an even Dominique color throughout, the cockerels being several

shades lighter than the pullets, and both having single combs. For exhibition it is necessary that the cocks and hens should assimilate as nearly as possible in colors and markings. It is, however, disastrous to mate a dark cock with light hens for breeding, as some black chicks will result from such a mating. Plymouth Rocks are first-class layers and good mothers, but not inveterate sitters. They probably lay more eggs than any other large breed that hatches and rears its own young. They are of large size and mature very early. For spring chickens, "this breed, as soon as it gets disseminated, will undoubtedly be one of the most profitable." They



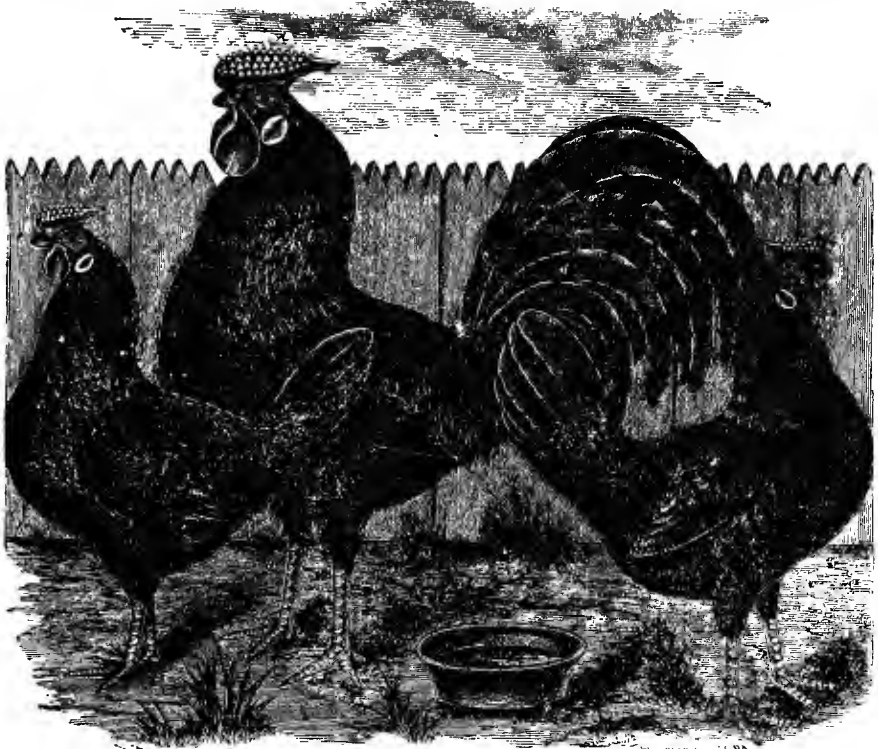
STANDARD PLYMOUTH ROCKS, AS BRED BY W. ATLEE BURPEE & CO.

have bright yellow legs, and are first-rate table fowls. Their many good points can scarcely be over estimated. They are a "general purpose" breed, and are the best farmer's fowl, take them all in all, yet produced. They are remarkably hardy and healthy, excellent foragers, and are not highflyers. The cocks weigh nine to eleven pounds, and hens seven to nine pounds. Their plain, Quaker-like attire is a suitable every-day work dress, and even farmers, who have an inborn dislike to "fancy chickens," cannot but admit that the pure bred Plymouth Rocks are far ahead of any cross for farm stock. Every farmer will find a trio of the

fowls a profitable investment, while fanciers will find no breed of fowls in so great demand.

#### HAMBURGS.

Hamburgs are a very popular breed of non-sitting fowls. They are unrivaled in variety and beauty of plumage. Our illustration (prepared



BLACK HAMBURGS.

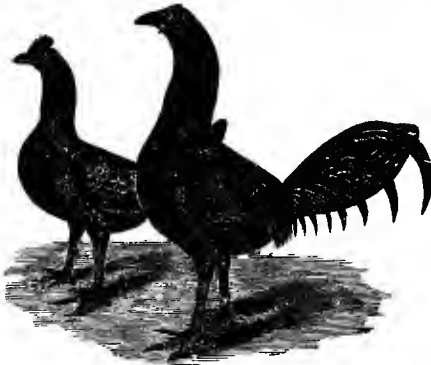
expressly for *THE POULTRY YARD*) well represents an imported trio of the Black Hamburgs, bred by the Rev. W. Sergeantson, the most celebrated English exhibitor of this variety.

All Hamburgs possess the same general characteristics. Stylish and active in carriage, slender, rather short, blue or slaty-blue legs, with deep red rose combs and close-fitting, pure white ear lobes. They require free range, and are then easily kept, as they are excellent foragers. They will lay upwards of 200 eggs in a year. While their eggs are not so large as those of the Leghorns, yet, as long as eggs are sold by the dozen this makes little material difference in supplying the market. Mr. A. Beldou says of their early maturity, he has found that pullets of the penciled varieties lay at five months; the spangled not quite so early. The varieties of Hamburgs are the silver and golden penciled, the spangled and the solid black.

The Blacks are the largest of all, and lay the largest eggs. They are also considered the most hardy. A great fault with many Black Hamburgs is a tendency to white on the face. This should never be tolerated. The face must be one rich, deep red, like the wattles, contrasting strikingly with the pure white ear lobes. We have also seen fowls awarded a premium as Black Hamburgs that showed very plainly the carriage and form of the Black Spanish.

#### GAMES.

Games are generally familiar to every one, and are by many considered *the* fowls. Even those who rightly disapprove of the pit and its uses, admire a really *Dead Game* Cock. No breed can equal them in true symmetry, elegance and style, with fearless expression. They are light-feathered and all muscle. A game fowl will weigh much heavier than it



SUMATRA GAMES.

appears. Cocks of good size will weigh  $6\frac{1}{2}$  pounds, and hens 5 to  $5\frac{1}{2}$  pounds. Their flesh is unsurpassed, being the finest flavored of any breed of fowls. They are excellent layers of fine, rich eggs, much esteemed. The hens are the very best mothers, and will faithfully protect their young broods. They are easily reared, and are undoubtedly a very profitable breed for economic purposes—the only drawback for domestic use being their fighting qualities. But these latter adding so to their beauty and elegance, besides the extra quality of their flesh, surely warrant a little extra trouble with the young stags. When the young stags are troublesome in fighting each other, they can be penned in small coops, arranged in tiers, and each one left out occasionally in a small yard, to exercise. There is always a lively demand for pure games of fine strains, at very satisfactory prices, and they are consequently one of the most profitable fancy breeds. The varieties of Games are numerous; our limited space does not permit a description of each. The most prominent are the Black-Breasted Red, Brown-Breasted Red, Duckwings, Derby, Piles, Sumatra, White and Henny Games.

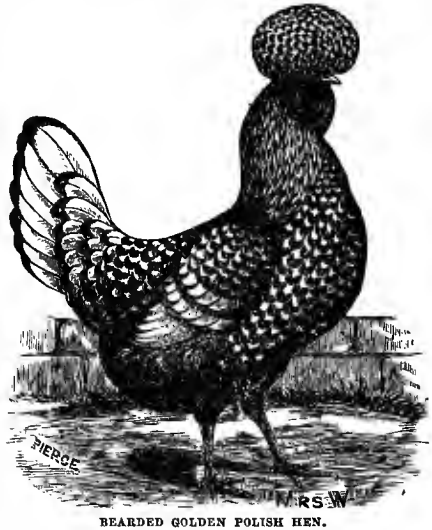
#### POLISH.

The Polish Fowls belong to the non-sitting breeds, and are excellent layers. Their flesh is very fine, tender and juicy. They are reasonably hardy, if kept free from wet and dampness, which they cannot stand. They bear confinement well, better than any others of the laying breeds, and can be bred successfully in very small quarters. They are very tame.



As an ornamental fowl they are *ne plus ultra*, and combining as they do so many good qualities are excellent for a gentleman's park, while for farm use they cannot equal the Leghorns. The general form and markings are well depicted in the accompanying cut of a Bearded Golden Polish hen. The varieties of Polish are, the White-Crested Black, pure White, Golden, Silver; the three latter being both plain and bearded.

For a gentleman's hennery, where a plentiful supply of fresh, rich eggs is desired, we know no more ornamental or "striking" variety of fowls than the White Crested Black Polish. These fowls are entirely black in color, of a rich glossy shade, excepting the crest, which is pure white with only a few black feathers at the base in front. They are proud and stylish in carriage, and ever active, being peculiarly wide awake. Of late years they have become exceedingly popular, and we have even been surprised at the great demand for first-class stock and eggs; but we can scarcely wonder, when we consider that they are the most attractive variety of a very beautiful and useful breed of fowls. As old breeders know, most Polish are subject to the vertigo, but we have never had a case of this among our White Crested Black Polish, they seeming to possess unusual vitality and strength of constitution.



#### DORKINGS.

The Dorking is held in high repute in England, and is well deserving of general cultivation by the farmers and fanciers of America. In perfecting this fowl, John Bull—true to his old-time reputation—has admirably catered to the tastes of an epicure. As a table fowl the Dorking is unsurpassed; affording an extra portion of very fine meat, remarkably abundant in the points most esteemed—the breast and wings and all of the very richest quality. They are a heavy-bodied fowl, well put up, with long, broad back, and close feathered. Altogether, they are one of the very best breeds for the "general purpose" of both table fowls and eggs. The varieties are the Pure White, the Silver Gray and the Colored Dorkings, the latter not being bred to any special standard of color. The Silver Grays embrace two varieties, the Rose Combed and the Single Comb, the latter being the most generally bred. They are so handsome that they have many admirers. The White Dorkings, as their name indicates, are spotless white

in plumage, contrasting nicely on a green sward. The Whites must all possess rose combs, square in front, firm and close-fitting, terminating in a point behind. All pure Dorkings should have a supernumerary fifth toe. We will conclude with the following remarks from the pen of a well-known English breeder:—

“This good old-fashioned breed is so well known, and everywhere so appreciated, that we need say but very little about it. They have one fault, however, which detracts from their value, viz., that they will not thrive well where ducks are largely kept, whether from the fact that the damp soil which suits ducks is prejudicial to their health, or from other unexplained reasons. We have, ourselves, certainly proved that ducks are ‘death’ to Dorkings, and are compelled to keep them away from ground which is tainted by waterfowl. They lay a large white egg, are great favorites for table purposes, owing to their fine meaty breasts and the whiteness of their flesh.”

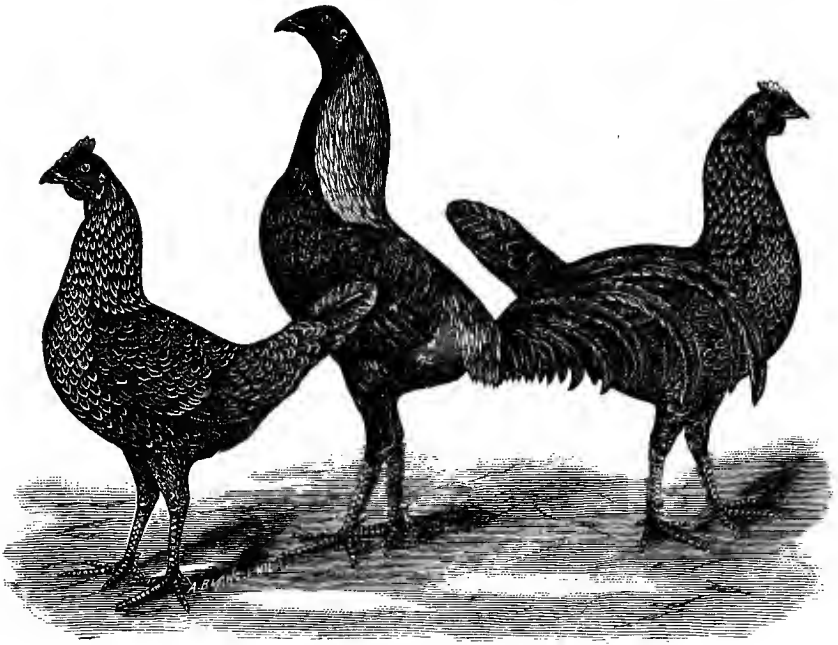
#### HOUDANS.

Houdans, with their fine, well-formed bodies, covered with a beautiful plumage of black and white intermixed, piuky legs, and their heads almost hidden by the large crest, muffs and beards, and triple, antler-like comb, and supernumerary toe, cannot fail to attract attention everywhere. They are the best and most hardy of any of the French breeds, and are a fine farmer’s fowl. They also bear confinement well and are easily reared. As a table fowl they are well entitled to the cognomen of “The French Dorking.” They are excellent layers of fine eggs of unusually large size. The cocks are very vigorous and can serve a large number of hens. The chickens usually hatch some hours before their time, and it is a rare occurrence to find an unfertile egg. They are non-sitters. Houdans make excellent crosses on common fowls, or on the Asiatics.

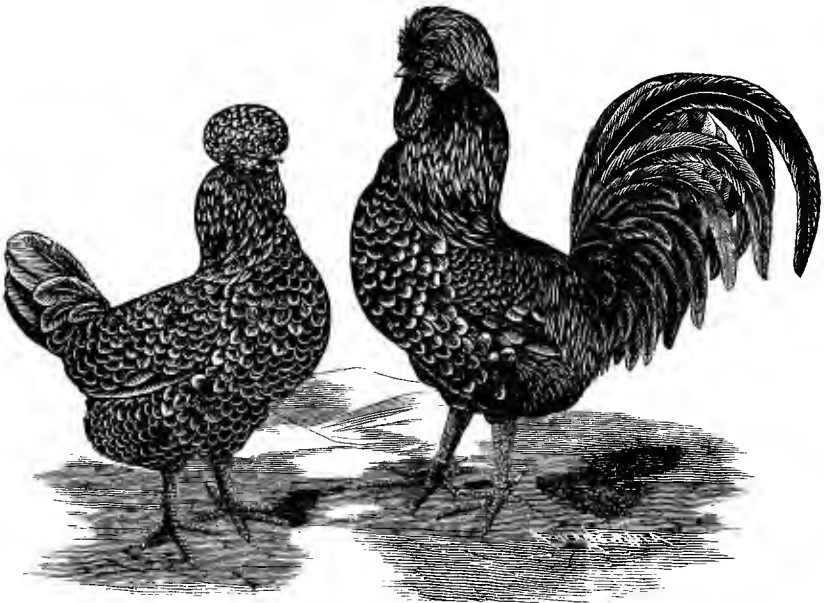
La Fleché and Creveçœurs are also French breeds of poultry, bred to a small extent in this country, but on account of their delicate constitutions are not valued for farmers’ use. All the French breeds, it is believed, originated from a cross of the Polish and the Creveçœurs, and are, in fact, a Polish fowl, to all intents and purposes, but increased in size; the same ancestry is shown by the delicate constitution which characterizes nearly all the varieties.

#### AMERICAN DOMINIQUES.

These fowls are like the Plymouth Rocks in plumage and bright yellow legs. But unlike the Plymouth Rocks, they are an old established variety, and breed very true to color; the cocks, however, are lighter colored than the hens. They have neat rose combs, are excellent table fowls, good layers, free breeders, very hardy, and one of the most valuable breeds for the general farmer. They are not quite as large as the Plymouth Rocks.



TRIO OF BLACK-BREADED RED GAMES.



PAIR OF HOUDAN FOWLS.

## BLACK MINORCAS.

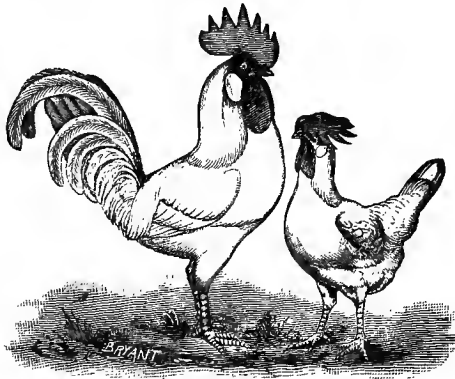
Although of very recent introduction into America, the Black Minorcas are a very old Spanish breed of fowls, somewhat resembling the Black Leghorn or White-Face Black Spanish, but differing in face, which is coral red, with white ear lobes, while they are also much larger in size and more prolific layers. They are a very stylish breed, having a majestic carriage, close, compact bodies, low, well-set legs, and are much stouter than either of the aforesaid varieties. The plumage is a rich, glossy black throughout; color of legs, dark slate or nearly black. They lay a very large egg, equal to if not larger than a Cochin or Brahma egg. As to their laying qualities, they are considered far superior to any fowls known. Weight of cocks, 6 to 9 pounds; hens,  $4\frac{1}{2}$  to 7 pounds, but some fine specimens run 7 to  $8\frac{1}{2}$  pounds each.



BLACK MINORCAS.

## WHITE MINORCAS.

The difference between the White and Black Minorcas is in color, the White having a red face and white ear lobes, as in the Black, which it also resembles in shape, carriage, size and symmetry. The plumage is a glossy snow-white, and should be without a single stain. The origin is not definitely known, but is supposed to be a sport from the Black, as most black birds occasionally throw white chicks. They are very hardy, and bear confinement as well as any breed. Of four imported White Minorcas received at our yards March 25th, we



WHITE MINORCAS.

gathered 240 eggs to June 25th, confined in a small yard—an average of  $22\frac{1}{2}$  a month, and they would have done much better if at liberty or on a good grass run. The eggs were very large, weighing from  $2\frac{1}{2}$  to 3 ozs. each.

WHITE WYANDOTTES AND WHITE PLYMOUTH ROCKS are two new breeds, each differing from the older breeds of the same name principally in color, which in both of these is pure white. On this account they are, of course, more easily bred to standard.

## BANTAMS.

There are several distinct breeds of Bantams; the Games, Silver and Golden Sebrights and Black African, being the most important. All are cultivated almost solely as pets, and hence it is not in our province to speak of them here. Bantams can, however, be bred in so small a yard (five or six feet square) that they can be kept by many who have no better facilities. They also will produce as many eggs, although of small size, as larger fowls. Nothing can exceed their eggs in delicacy of flavor. Small Bantams can be run in the same yard with large Asiatics or Plymouth Rocks, without danger of mixing.

## HOW TO RAISE GOOD TURKEYS.

No farm stock pays higher or surer return for the capital and time invested than turkeys, yet they are often very poorly managed, and the profits are consequently meagre. We are convinced this neglect is frequently due to want of a proper knowledge of how to breed and manage them, and hence we shall give full and explicit directions on this subject. Turkey hens attain maturity much earlier than the gobblers. At two years old the hens will be full grown; they very seldom become larger after that time; while gobblers are not nearly matured at that age, but continue to grow until four or five years old. They are, however, in their prime breeding condition at three years old. Gobblers of this age mated to hens two years old will produce the finest, largest and earliest matured young turkeys. The only objection to gobblers of this age is, that on account of their heavy size they will sometimes injure the hens. For this reason the gobblers, although of *large frame*, should not be allowed to lay on fat and become heavy during the breeding season.

As a necessary preventive of injury to the hens, the spurs and toe nails of the gobbler should be cut off. After the operation, the best and most speedy way to stop the bleeding is to saturate a rag with *Monsell's Liquid Solution of Iron* (which can be procured from any druggist), and tie over the bleeding parts for a day or two. It will immediately stop the blood. A yearling gobbler of large size, mated to two-year old hens, will also produce fine and large offspring. Great care must always be taken in the selection of the breeding birds. It is very "penny wise and pound foolish" to slaughter the largest young turkeys because they will bring a few more cents in market. Those that grow the fastest and largest, and are of the most perfect form, should be retained for breeders. In a few years the increase in the average size and value of the flock will be so apparent as to convince the farmer that this is beyond all doubt the only right way, and by far the most profitable. We cannot too strongly urge this upon our readers. Turkeys are as sure of being improved or degenerated by the

manner in which they are bred and selected as are pigs. It will pay every one who raises turkeys to pay eight or ten dollars for a good thoroughbred gobbler to breed from. The gobbler should not be akin to the hens. In selecting birds for breeding, care must be taken that they possess no deformities. Crooked breast, which means what meat there is all developed on one side of the breast bone, is often caused by narrow roosting perches. A rail slit in half makes an excellent roost. The roosts should not be too high, if in a house, as the turkeys, not having room to take a long fly in descending, are seriously hurt. The roosts need not be all on the same level, but can slant in the form of gradually ascending steps. The largest and heaviest old gobblers will often prefer the lowest roost. It is useless to attempt to keep turkeys in the same house with hens. While they will generally thrive well roosting out in the trees, etc., yet, for evident reasons, it is always best to have a special house for them. This need only be a shed facing the south and open in front; roof sloping from about nine to seven feet. Turkeys must have liberty and freedom to range at will. They will then pick up much of their food, but should always be fed regularly, every morning and evening. They will then always roost around home, and will be kept constantly in fine growing condition. A friend informs us that by actual experiment he has found that if the soft food (such as meal, etc.) should be mixed with *milk* instead of water, the turkeys when killed will be much more delicate, and the flesh of a far superior quality to those fed on a mixture made with water. Cottage cheese is an excellent mess for them. Turkey hens after three years old are unprofitable as breeders, often laying soft shelled eggs. The same thing will happen if the turkey hens have not been set during the season. A turkey will lay eighteen or twenty eggs. The eggs of the first laying can be given to hens and the second laying will then be had earlier, when she should be allowed to sit herself, but should be given only so many eggs as she will cover satisfactorily. They begin to lay about April, and unless closely watched will make their nests in the field or among the shrubbery, where their eggs may be lost. If a hen is discovered in some such place after she has begun to sit, it will be well to afford all the protection possible by placing a cover or inverted box, with one side out, over the nest. The period of incubation is twenty-eight days.

It is an undoubted fact that one impregnation of the gobbler fecundates the entire laying of the turkey hen, and yet it is advisable to keep the gobbler constantly with the hens.

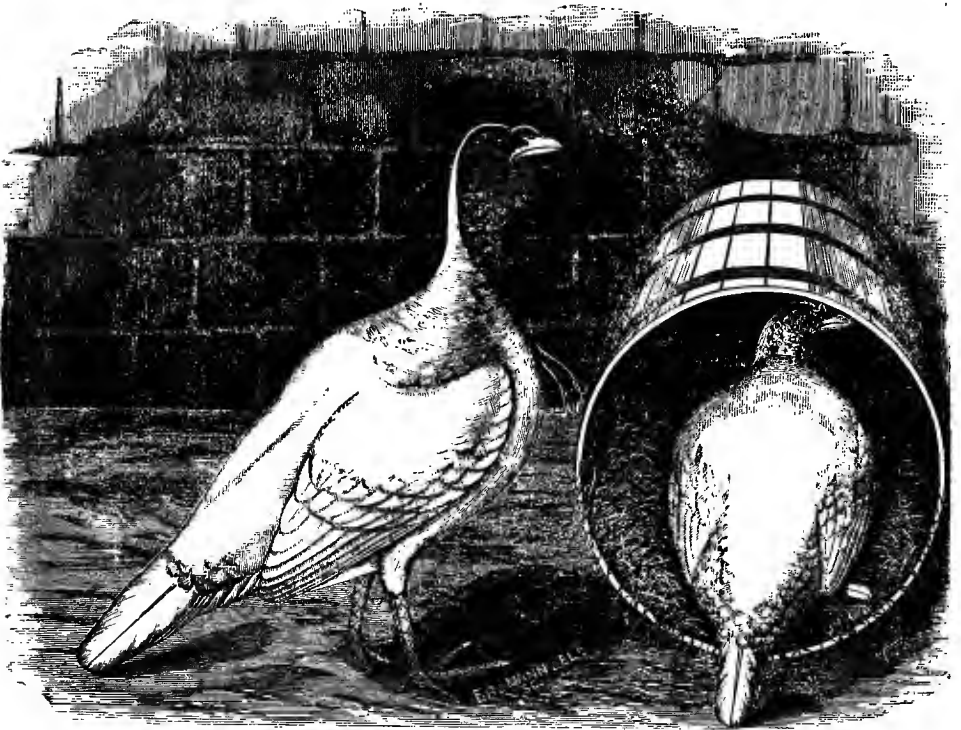
Turkey hens are persistent sitters; they frequently have to be compelled to leave the nest for food and water. The French, who are always such studious economists, avail themselves of this propensity to a very good profit in the hatching of chicks. A turkey hen will sit steadily for three

months. By giving a little brandy the hen will sit still longer. One great merit is, that they will during all this while keep in such good condition that they can easily be fattened and killed when their services are no longer needed. Turkeys are very tender when young, until they finish "shooting the red." When the chicks are all hatched the mother turkey should be confined in a small coop placed in an enclosure of about six feet square, surrounded by a board twelve or fifteen inches high. After a while the hen can be allowed her freedom. She will guard her chicks carefully, and will stay in the enclosure with them, or near by. The young Turkeys must not be subjected to dampness nor allowed to run in wet grass. When about three weeks old they can be allowed their liberty with the hen on fine days. They must be fed "little and often," and allowed to get no "backsets." At first feed bread thoroughly soaked in milk, and give new milk to drink. Give hard-boiled eggs mashed up and mixed with the bread and milk. Feed at least four or five times a day, giving each time just so much as they eat up clean. After a week or two give them curds, and continue until five or six weeks old. At this age feed scalded Indian meal mixed with curd; also, at another time in the day, give scalded Indian, wheat middlings and bran mixed, the mixture to be three-fourths bran. Turkeys must be liberally fed, and after they are safely through the critical period of their lives, will gain in size very rapidly. They should be fed on stimulating food during the moulting season, on account of the great rapidity of shedding and the wonderful change they then undergo. From being stark naked they will be entirely feathered in a few weeks. They are at this time, of course, lighter in weight. A curious fact, and one worthy of notice, is, that the hens will not moult until they are through sitting. Hence, if from any cause they are set very late, the moulting is correspondingly later. We have known a hen to be entirely bare at Christmas. This must by all means be avoided, or the hens will likely not be able to withstand the trying ordeal. It has been observed that turkeys show a great fondness for dandelion leaves, in preference to all other greens. From the well-known medicinal properties of this plant, it will be well to sow a few seeds in some waste spot near the turkey house, so that they can have a constant supply.

Varieties of Turkeys are the Mammoth Bronze, White Holland, Black, Blue and Buff Turkeys. The BRONZE TURKEYS are generally considered the largest. Adult gobblers will weigh 40 and 45 pounds each, hens 15 to 20. Young turkey gobblers, at eight months old, will weigh from 20 to 25 pounds each, and hens from 12 to 15 pounds. These are fair average weights. They will gain about one pound in two weeks. But occasionally, and also when birds are especially well fed, they will exceed these weights. For breeding stock, however, it is not well to force them too

much. Further north, where the snow is on the ground for a longer period, and where, consequently, the Turkeys are fed more corn, they will weigh heavier. The new American standard only recognizes the light-tipped turkeys, while the dark bronze are really the more beautiful, and by many breeders preferred. Both colors can be bred from the same flock if they are so mated, but some of this offspring will be of a mixed bronze plumage. The silver tips, however, are generally purer bred. The dark bronze will often throw buff or cinnamon birds, showing that they have been crossed with that variety to secure the desired color. Pure bronze turkeys are believed to have originated from a cross of the wild turkey and the gray Narragansetts.

The **WHITE HOLLAND TURKEYS** are a very handsome and showy



WHITE HOLLAND TURKEYS. ACCURATELY DRAWN FROM LIFE.

variety. The rich red beads and the intense glossy black beard of the male contrasting beautifully with a plumage of snowy whiteness. For a lawn, a finer or more aristocratic ornament could not be desired. They are not only "a thing of beauty," but are also a very valuable breed. They are very much larger than the common white turkey, and also, unlike them, are very hardy. Their flesh is much esteemed as of a superior delicacy.



They are especially valued on account of their superior laying qualities and early mating. While their eggs are not quite as large as the bronze, they are produced more abundantly.

BLACK TURKEYS are distinguished by an intense deep black color throughout, and are of large size.

BLUE TURKEYS, sometimes called slate turkeys, should be of an even slaty color throughout. The best stock of this breed was imported from France. They are much esteemed on account of their prolificacy, early maturity, large size and rich flavor of their flesh, being, in many cases, fully equal in size to the Bronze. This breed is well worthy of more general cultivation.

BUFF TURKEYS are, as their name indicates, of a pure buff color throughout. They are comparatively but little bred. In no stock is the importance of a good male so fully evinced, and every farmer should, each year or two, as already hinted, procure a good thoroughbred gobbler, of either the Bronze, White Holland, or Blue varieties.

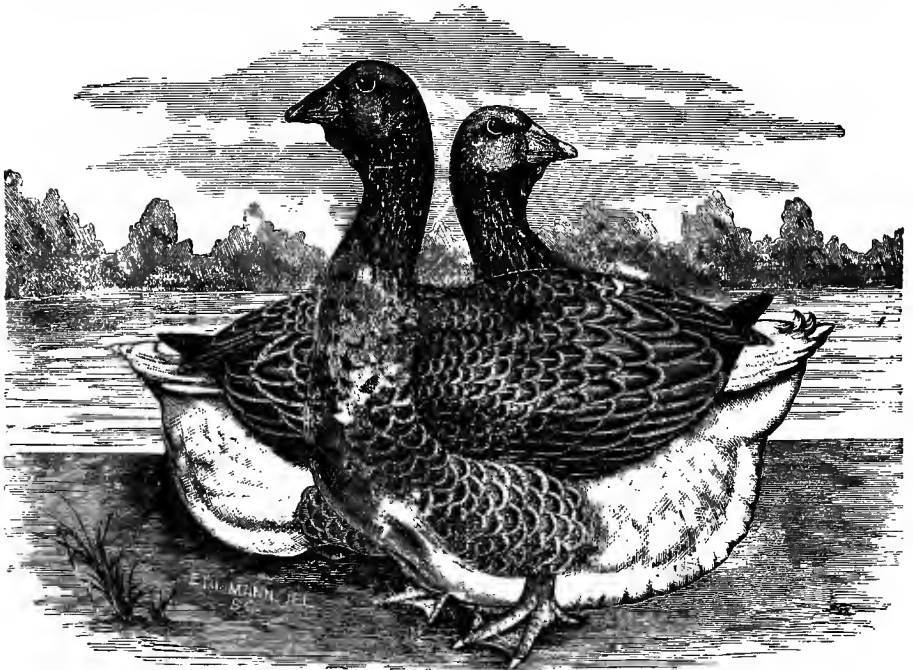
#### RAISING GEESE.

No land or water fowls can be so easily or cheaply raised as Geese. They will thrive well on pasture alone. It is of the first importance to breed from large matured specimens, and when once mated, the same birds can be retained as breeders for many years. The gander, however, is apt to get cross with age, and hence has to be changed. Two or three geese, or sometimes four, can be mated to one gander. The goose will lay 13 to 15 eggs. When ready for setting, she should only have 13 eggs. She is a splendid sitter, and should not be disturbed. When leaving the nest, to feed, she covers her eggs, like the duck, although not so well. The period of incubation is thirty days. They usually commence laying in February. Large, common hens, Cochins or Brahmas, can be used as sitters, giving each hen three or four eggs. Turkeys will also hatch the eggs well. On account of the thick shells of the eggs and the long period of incubation, it is recommended to make the nest on the ground or moist earth, and during the last ten days or two weeks to sprinkle the eggs with tepid water. The gander will frequently assist his favorite mate in the labors of incubation, and after the goslings are hatched, is very vigilant in his care of them. At first, the goslings should be kept warm, and fed "little and often," with hard-boiled eggs, bread crumbs, or scalded meal, not neglecting a plentiful supply of greens and grass. They are soon ready to turn out to graze, and will pick all their food, mostly grass, in the fields. They require no other food so long as this lasts, and they can be marketed in fine condition, called in

England "green geese." After the supply of grass is cut off by winter, the geese can be put up to fatten, if so desired. This should be done in a dark place, and they should be well fed, on oats, meal or barley meal, or a mixture. A bunch of sweet hay should be tied up within their reach.

Geese can be raised profitably with very little water, only plenty to drink and a large tub full for bathing. One valuable peculiarity of geese is that they always give notice of hen-roost robbers, whether biped or quadruped, by their shrill cries, and hence are excellent "watch dogs."

The VARIETIES OF THOROUGHbred GEESSE are the Toulouse, Embden and China. The value of thoroughbreds is here fully illustrated ; for while



*TOULOUSE GEESSE.—Winners of Several First Prizes—Accurately Engraved from Life.*

the first cross pure Embden geese with a Toulouse gander make the very finest and largest goslings for the market, yet these, if bred together, will rapidly deteriorate.

The TOULOUSE GEESSE are of an even shade of gray, with white on the belly. In size, the Toulouse generally are the largest, although sometimes equaled by the Embden. The prize Toulouse geese at the Birmingham show weighed as high as 60 pounds per pair, and goslings forty-eight and a half pounds. This is counted the heaviest weight ever attained. They mature early, are very hardy, and produce an abundance of feathers.

EMBDEN, or BREMEN Geese are of a pure white plumage, with dark flesh-colored bills, orange legs and bright blue eyes. They should be very tall and of erect carriage, with large, square bodies. Mr. J. K. Fowler gives the following weights of his prize geese:—the gander (three years old) weighed just thirty-two and a half pounds, and his mate (a goose of the same age) pulled down very nearly twenty-six pounds; the goslings weighed twenty-seven and a half pounds and twenty-four pounds. They are kept and bred largely in Saxony, and are celebrated for the delicacy of their meat. They are good layers and easily raised. The feathers (a very important “crop” if geese are bred in quantities) are more valuable than those of the Toulouse or any other gray geese.

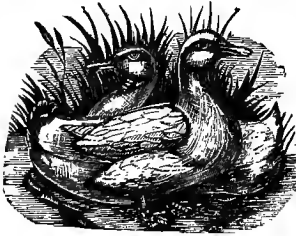
The CHINA OR HONG KONG GEESSE are not so large, but are unusually prolific layers. The goose will lay as many as thirty eggs before offering to sit, and will lay three or even four litters in a season. Their flesh is very superior; they mature early, are easily raised and are readily fattened. Their eggs are not as large by about one-third as the two preceding breeds, but the greatly increased quantity more than compensates. They are, besides, very ornamental, having a large protuberance at the base of the bill, and they should receive more attention from poultry breeders. In color, they are both brown (like the Toulouse) and pure snowy white. In concluding our remarks on Geese, we would strongly urge breeders and farmers everywhere to pay more attention to the breeding of this valued domestic fowl. We are glad to notice a good demand for thoroughbred geese, and trust that breeders will soon perceive the value of paying these fowls the attention they so well deserve.

#### RAISING DUCKS.

Farmers generally neglect the breeding of Ducks, from an idea that they “eat their heads off.” There is no farm poultry, if well managed, more profitable. It has been proved by actual trial that ducks often lay more eggs than hens. Their eggs, besides being much larger, and more valuable, also contain less waste. Ducks, if marketed at the right season, always bring good prices. They can be raised very easily. The eggs can be set under hens, and as many as forty or fifty young ducklings can be mothered by one hen. They require much the same food as fowls, and if intended for the market should be liberally fed. In Aylesbury, England, where thousands of ducks are marketed every week, it is estimated that the cost of producing a couple of ducklings of nearly four pounds weight at eight weeks old, is two shillings each. They fetch in the Loudon market, during March, seventeen to nineteen shillings a couple. One great point in their favor is that they are remarkably exempt from the ravages of fatal diseases

that so often depopulate a barnyard of fowls. Ducks will almost earn their living by the vast quantities of grubs and insects they destroy. Two or three ducks can be given to one drake.

The PEKIN DUCK, although only introduced from China in 1873, has already acquired great fame. They are by far the largest ducks in appear-



ance, but like all Asiatic fowls, are not so large as they look, having a loose, fluffy plumage. Although sometimes equaled in weight by the Rouens, yet, as a rule, we believe they are the heaviest. They mature very early, and are excellent layers. In 1875 one duck produced 108 eggs, which were sold for sitting, and after we were done shipping the eggs she was not done

supplying them. That was a profitable duck, producing 108 eggs at \$4.00 per dozen. Pekins can be raised successfully with only sufficient water for drinking; they can be confined by a very low fence, and are very domestic. There is one drawback to them, with which we have had some trouble. We have found that some males fail to impregnate the eggs. This, we have reason to think, is owing to their broad, clumsy bodies. They are clad in a beautiful coat of creamy whiteness, with yellow bills and orange legs. A single duck has been known to lay 200 eggs in one season. For breeding for sale, as a fancy fowl, Pekin Ducks are undoubtedly in great demand, and at the most satisfactory prices. For the first year or two the ducks sold for \$20 per pair, and eggs \$10 per dozen, and were eagerly sought at these figures. But now, from the increase of the stock, they can be had at half these prices.

AYLESBURY DUCKS are snowy white in plumage, with flesh-colored bills and orange legs. They are long and graceful in shape of body, and comely in appearance. They are especially celebrated as prolific layers; they will commence in March and continue till June or July. They mature early, are very hardy and easily raised. Extra specimens have attained the extreme weights of 18 and 19 pounds per pair; but 12 to 14 pounds are good weights. These are the ducks that are so celebrated in England, and raised in such immense quantities in the district from which they derive their name. An Aylesbury drake will make a very marked improvement if crossed on the common stock.

ROUEN DUCKS are without a rival in beauty and elegance of plumage. They resemble the wild mallards. Choice strains are very large. There are many degenerated specimens of this variety in the country that are of small size. They mature early and are excellent table fowls. While not

as prolific as the Aylesbury, we have known them to lay very well; laying in the fall as well as the spring. Their eggs are not so large as the Aylesbury.

CAYUGA DUCKS are of American origin, and are of one solid metallic black plumage throughout. They are of large size, good layers and easily raised.

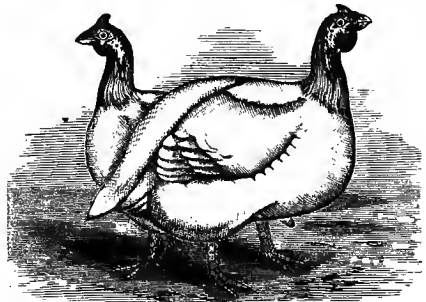
MUSCOVY DUCKS are very odd. They are distinctly a "dry land" duck, and never quack. The drakes are the largest of all, but the ducks are rather small. They are five weeks hatching. They are both pure white and white and black splashed. Drakes will weigh ten and twelve pounds each. The mules between this breed and the water ducks make a very good table fowl, celebrated for early maturity.

CRESTED WHITE DUCKS are very attractive. They are pure white, with large topknots. They are of good size, mature early and lay well.

CALL DUCKS are small and chiefly esteemed as ornamental water fowls. They are both brown and white in plumage, the former resembling the wild mallards.

#### GUINEA FOWLS.

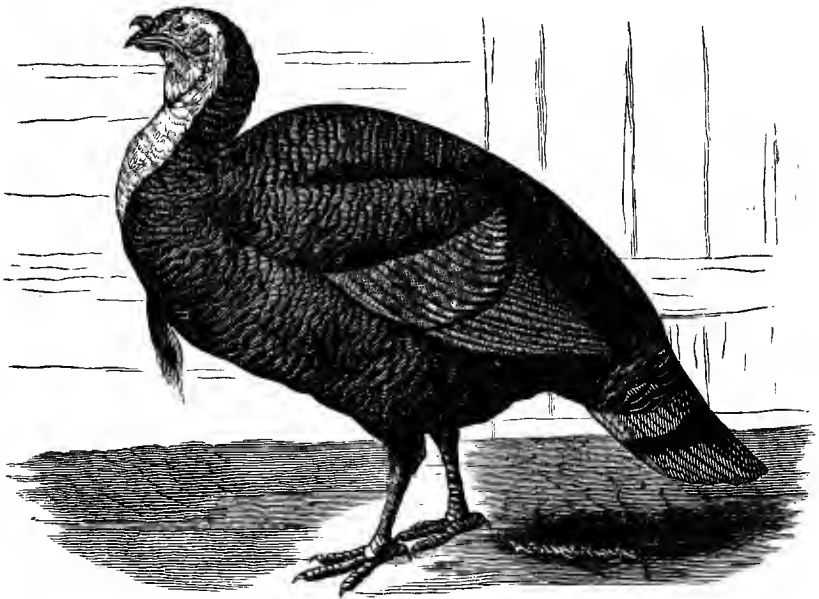
Guineas lay a large number of eggs, which are of a very rich flavor. Their flesh is very choice and game-like. They have, however, their drawbacks, which are their inherent nature of cruelty to other poultry, and also their great propensity to wander away from home. Both these objections to them can, however, to a great degree, be overcome; the former by kind and goodly treatment of them; the latter, by furnishing secluded nests, and also not disturbing them. If a guinea hen's nest is robbed of a number of eggs at once, she will forsake it and seek a more secluded one. Hence the eggs should be gathered every day, one egg being left in the nest. They do not generally sit until late. For this reason, and also because the young guineas will be more domestic, the eggs should be set under hens. The young chicks have very small crops, and hence must have them filled very frequently, with the same food as



WHITE GUINEAS.

recommended for chicks. In a natural state guineas mate in pairs, but under domestication one male will readily serve a couple of hens. It is

very difficult to distinguish the sexes. This can be done by watching their actions, by the hen's peculiar cry, and also from the fact that the cock is more cruel to other fowls. Guineas will generally roost in the trees around their home, and are the best of "watch dogs," giving ample notice of the approach of any person in the neighborhood. The ordinary Pearl Guinea Fowl (so called from the resemblance of the spots to pearls), are very uniformly marked with white spots in a ground color of gray purple. Most of the common guineas have patches of white, or white feathers in the wings, and are not nearly so pretty. Pure white guineas are rather rare, and are very attractive ornaments on a green lawn.



MAMMOTH BRONZE TURKEY GOBBLER.

## PLANS FOR POULTRY HOUSES.

For this chapter, which, with that on "The Farm and Garden Incubator," will add much to the value of this little treatise, we would express our indebtedness to the publishers of THE FARM AND GARDEN, Philadelphia, by whose permission they are published, and who have kindly supplied us with the illustrations. In this connection, we have pleasure in recommending THE FARM AND GARDEN as a very wide-awake semi-monthly agricultural journal, devoting much attention to poultry breeding, and published at the low price of fifty cents a year.

## THE POULTRY HOUSE.

The main point to be observed, when constructing a poultry house, is to secure as much space on the *floor* as possible, and to avoid too broad a roof. The object is to save expense, as the roof is the most costly part of a house, while the real value depends upon the area on the floor in proportion to total cost. Hundreds of designs of poultry houses have been illustrated and published, but, unfortunately, each individual has certain preferences which prevent perfect unanimity in constructing them on the most favorable plans. It is as easy to have all agree upon one common plan of a dwelling house for humans as for fowls. The climate, soil, breed, and space are all to be considered when making the design.

No matter what kind of a poultry house may be prepared, the fact must not be overlooked that during a great portion of the winter, when the snow is on the ground, the fowls must be kept confined in the house. The greater the space, especially on the floor, therefore, the better they will be enabled to exercise and keep in proper condition, and as *yards* are often of no consequence during a severe season, success may depend upon the investment of a few dollars more than the amount originally intended, and it often happens that loss occurs simply for want of room on the floor. If the area on the floor is limited to a small proportion for each hen, and the house cannot be conveniently enlarged, then the stock must be reduced, in order to give those remaining more room.

It will not do to feed the hens and then have them sit idly about doing nothing. They then become addicted to feather-pulling and other vices, while the food tends to fatten them by reason of their inactivity. The house should have plenty of sunlight, so as to become warm and also light. The light is the most important thing of all. Fowls have the greatest aversion to gloomy surroundings. They will be perfectly satisfied with well-lighted, comfortable apartments, but prefer the bleak outside to a house that is but dimly lighted. During the day the house should be kept open as much as possible, provided the birds are not exposed to draughts or chilling blasts, so as to purify and ventilate it, but during the night, in cold

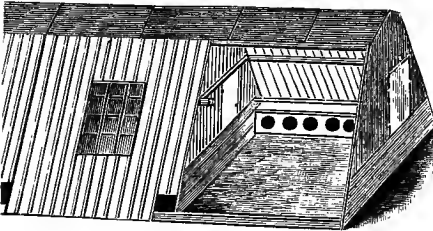
weather, the house should be warm and close, as plenty of cold air will get in without the use of ventilators.

The object should be to have the number in the flock only large enough to utilize the space on the floor to advantage. If too crowded they will not lay, as is well known by many who are aware that sometimes their neighbors get more eggs from a small flock than they do from large flocks, and the secret is that they have plenty of room for exercise. The floor should be large enough to permit of places for scratching, dusting, roosting, and laying. Just how much space may be required depends upon the size of the flock. We think a house 10 x 10 feet none too large for ten fowls, or ten square feet for each hen.

#### THE CHEAPEST POULTRY HOUSE THAT CAN BE BUILT.

We give a design of the poultry house of Mr. J. L. Harris, of New Jersey, which, though not as convenient and as well arranged as some houses, can be built at the least cost in proportion to the greatest available space. The roof is always the most expensive part of a house. The studding and

FIG. 1.



CHEAP POULTRY HOUSE.

rafters are also expensive items. We propose to get rid of much of both the roof and the studding, which will be noticed by reference to Fig. 2.

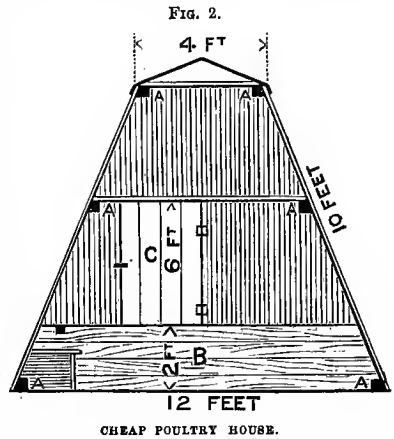
Before beginning the description, we will state that although we give the size shown here, yet the house may be of any length desired, while boards 8, 10, 12, 14, or 16 feet may be used,

according to preference, but we will use, for convenience, boards 10 feet long and one inch thick, which are nailed straight up and down, the joints covered with strips two inches wide. We would suggest that before putting on the strips, the boards be covered with building paper (price one-half cent per square foot), and painted with linseed oil; or cheap tarred paper may be used, as the strips will hold the paper on firmly, and the house will then be water-tight and frost-proof.

No posts are required, as the boards are nailed to six stringers (2 x 3 or 3 x 4) running lengthwise the building, the ends of which are shown at A A A A A A, Fig. 2. The roof is made by fastening boards to cross pieces, and tarred paper placed over the boards. The cross pieces are simply boards four feet long and one inch thick, and nine inches wide, slightly rounded. The partitions are made by nailing two boards (each one foot wide) at the bottom, with lath running straight up and down. The bottom boards and top cross pieces tie the building together. A few strips, running crosswise, may be needed for fastening the lath partitions.



For a building 12 feet on the floor, 4 feet on the roof, and 10 feet on the sides, the cost will be about as follows: Boards, 2000 feet for sides (less space taken up by the windows), at \$20 per thousand, \$40; roof, 400 feet, \$8; ends, 200 feet, \$4; partitions, bottom boards, 250 feet, \$5; doors, etc., 200 feet, \$4; studding (lengthwise), 600 feet, at \$20 per thousand, \$12; for partitions, etc., 400 feet, \$8; total for lumber, \$81. Tarred paper for roof will be, for paper, paint, etc., \$12, while paper for sides, and also strips, will be about \$15; while hardware and incidentals will add about \$10 more, making a total of \$128 for a house 100 feet long and 12 feet wide, for *material*. This estimate is a rough one, and may not be correct, but it will convey some idea of the cost. The labor will be extra, but the house is very simple in construction, and can be easily built. Windows will be extra, of course.



The labor will be extra, but the house is very simple in construction, and can be easily built. Windows will be extra, of course.

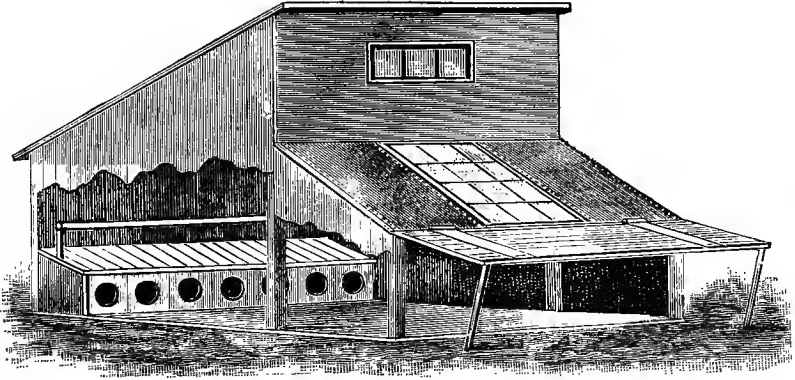
The advantages of this house are: 1. Its cheap cost. 2. Its form braces it firmly. 3. No posts or uprights are required, except for doors. 4. The roof may be nearly flat, and of cheap material. 5. It gives the greatest available space on the floor for the least money. 6. On opening the doors, the two foot boards prevent birds from passing by you, nor can they see each other from adjoining apartments, when on the floor. 7. It is a covered shed in bad weather, as a flock of a dozen hens may have a space 10 x 12 feet. 8. It can be built of 16-foot boards, if preferred, and the upper part used as a pigeon loft. 9. A carpenter is not required to build it, as the plan is simple. 10. It may have a board floor, if preferred. 11. The sides cheapen the cost of the roof. 12. The windows may be of any width or size.

#### HOUSE FOR TWENTY FOWLS.

Illustration on p. 52 shows a house 10 feet wide and 10 feet long, with projection in front. The back wall is 6 feet high, and the front 8 feet. The roost is over a raised platform, which catches the droppings, with the nests under the platform. The object is to give plenty of room on the ground. Though the roof will be only 12 feet wide, yet it will be noticed that the projection, which has a window in the centre, allows 4 feet more, making the floor 10 x 14 feet, or 140 square feet. A small window is higher up, to give more light, while the door is at the end, next to the projection. For 20 birds there should be two roosts over the platform. The platform should be two feet wide (if one roost), or three feet wide if two roosts.

Observe that in front is a hinged door, which may be raised up during the day, or let down at night, which not only allows plenty of ventilation during the day, but also more covered space when raised up, as well as serving for a shady resort in summer. The roof may be of tarred paper, while the inside may be lined with sheathing paper.

FIG. 3.



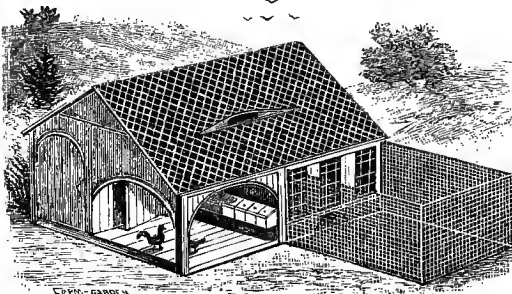
A HOUSE FOR TWENTY FOWLS.

Better still than the tarred paper is the patent protecting cloth, made by the U. S. Waterproofing Fibre Co., 56 South St., New York. Though intended to take the place of glass for greenhouse purposes, it should also be widely used by poultrymen. We recommend it also for a covering for coops of young chicks.

#### POULTRY HOUSE AND OPEN SHED.

The poultry house given in the illustration is 11 feet wide, 16 feet 6 inches long, 5 feet high from ground to front plate, 6 feet to rear plate, 9 feet to centre, making rear roof-board 5 feet 6 inches long, front roof-board 8 feet long, projecting 6 inches, in each case, over plate, ends projecting same, sills 3 x 4, uprights and cross pieces 2 x 3, entrance passage 4 x 8. In passage there are four feed boxes 1 foot deep and 15 inches wide, 2 feet 6

FIG. 4.



POULTRY HOUSE AND OPEN SHED.

inches high from ground, with covers, which will hold quite a quantity of grain of different kinds. In centre a door opens into the room marked 6 x 8, which in elevation is the open corner. In the same room are the nest-boxes, six in number, with covers, 1 foot wide and 15 inches deep, and the same

height from ground as feed boxes. Division walls are four feet high, of tight boards, and the rest, to roof, of wire netting. Main room for fowls is 8 x 10, drop board, as indicated by black line on curve, 2 feet from ground and 21 inches wide, roost pole in centre, three windows 2 feet wide by 3 feet 3 inches high, six inches apart, hinged to open in summer; inside netting, 15 inches from ground under centre window, exit; under nest boxes exit for corner room. In roof, ventilation window 12 inches wide by 18 inches long, on centre pivot, opened by cord. Roof shingled, sides battened. Cost complete, \$50.00; material, \$35.00; labor, \$15.00.

The house was designed for 20 hens the year round, to stay in space 8 x 10 feet, and yard as much as can be given, the more the better. In the elevation, the open corner is intended to have wire netting in summer and early spring, and sash in winter. The room is designed for a hatching-room, and as a warm, dry place for young chickens on the ground, and in wet and very hot days in summer for fowls from the main room to congregate, and in the winter months a fine place to keep the hens busy scratching, and gives so much more room.

The nest boxes are raised from the ground high enough to admit of extra boxes for setting hens. They can come off and go back at liberty. The covers to nest-boxes are slanted so the fowls cannot roost on them, and you are not obliged to go into the main house for eggs.

The grain bins are compact and out of the way. The narrow line in front of boxes is a board 6 inches wide by 7 feet long, intended for the hens to fly up on to enter nests, and it also serves as a cover for soft-feed trough underneath. The drinking fountain hangs on an upright, represented on drop board as dots, which is under same and out of the way.

The price named is what it would cost in this locality, but by battening the roof it would cost some less; and West, perhaps very much less. It, of course, depends some on locality and way of getting at it.

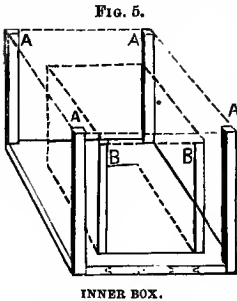
## THE FARM AND GARDEN INCUBATOR.

In presenting this incubator we will state that it differs but little from one given in a previous issue, but we will attempt to make it plainer than before.

First, get good boards, 1 inch thick and 1 foot wide. Cut them 46 inches long for your floor, and have the floor 42 inches wide. Place four posts, which are 24 inches high, at each corner (Fig. 5) marked *A A A A*, and two posts (*B B*) in front, the two front posts to be 18 inches high. Make posts of 2 x 3 strips and nail them securely to the floor. Fasten the floor boards together by strips underneath, using as many as preferred. The four corner posts are for your

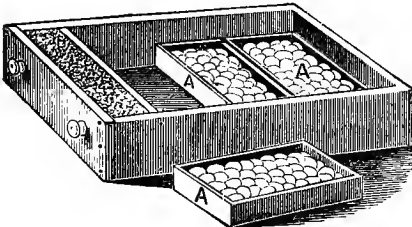
## OUTER BOX.

This box, when finished, is 4 feet long and 44 inches wide, outside, provided it is made of boards one inch thick. Including its tops and floor, it is 26 inches high. Nail on your side boards. Let rear and front end boards cover ends of side boards. After the tank is in, and the top of the *inner box* is on, cover inner box with sawdust, and nail down the top of the outer box. Tongued and grooved boards should be used for every part of the incubator except the floor, which should be of heavy boards. All the measurements given here, however, are for boards one inch thick, but three-quarter stuff may be used if desired.



INNER BOX.

FIG. 6.

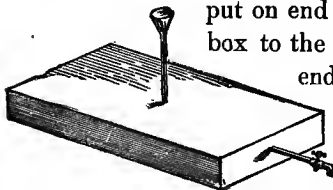


EGG DRAWER.

## INNER BOX.

This holds, or rather comprises, ventilator, egg drawer, and tank. It is 40 inches long and 32 inches wide, outside measurement, and must hold a tank 30 x 36. The side boards are nailed to the posts *B B* (Fig. 5) and front boards of outer box, and fastened at the rear end by the rear boards

being nailed to the ends of the side boards. Cleats are put on end and sides (on the floor), to fasten the inner box to the floor. Nail the bottoms of the side and rear end boards to the cleats.



TANK.

To make the inner box, refer to Fig. 9, which has portions of the outer and inner boxes torn away, to show interior. *A* is the large or outer box; *B* is the inner box; *C C* are strips 1 inch wide and 1 inch thick, nailed to sides of inner



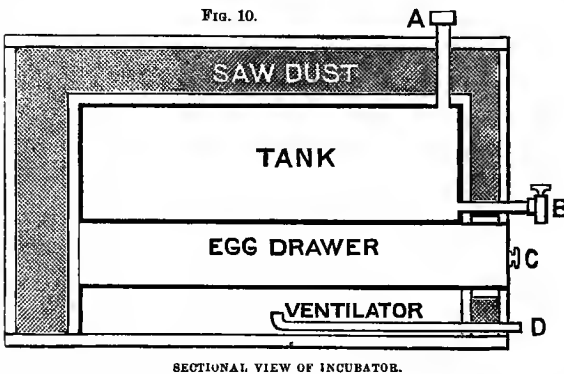
long, outside measurement (which includes the boxed-off portion in front of drawer), and is 30 inches wide. Three movable trays, each  $1\frac{1}{2}$  inches deep, are fitted in egg drawer. Nail strips one inch wide and five-eighths of an inch thick, one inch apart, the length of the egg drawer (but not under boxed-off portion), for the bottom. Mortice ends of strips in egg drawer, so as to have the bottom smooth. Tack a piece of muslin on these strips (thin muslin is best), and tack it on the *inside* of the drawer. Now nail strips to bottom of trays (use lath, if desired, cut to one inch width), but you need not mortice them. Simply nail them on the bottom, one inch apart, running lengthwise, and tack muslin on the bottom of the trays, *inside*, in the same way as for egg drawer. The inside of your drawer will be 3 inches deep. The sawdust in front of egg drawer (the boxed portion) fits in boxed front of incubator (see Fig. 8). Put a broad cap on outside of egg drawer, at front end, to exclude air.

#### THE TANK.

This is 30 x 36 inches, and is 7 inches deep. It is supported by the strips *C C*, and rods *F F F F* (Fig. 9). Being 36 inches long, it goes close up to the *back* boards of the inner box, the front being enclosed by a sliding board, secured with upright strips at each end of board, one inch in diameter (so as to remove tank when necessary), which leaves a small space in *front* of the sliding board to be filled with sawdust. Have the tank tube in front only long enough to extend through the sawdust in front, and have your faucet to screw into this tube, the tube being threaded. The tube on top of tank should be long enough to extend through the tops of *both* boxes (outer and inner, through the sawdust), and should, therefore, be 7 inches

high from top of tank, as is seen at Fig. 8. When the incubator is ready, we have Fig. 8, which shows the sawdust packing in front, by looking into the opening into which the egg drawer enters when filled with eggs.

Fig. 10 shows the incubator as if cut in



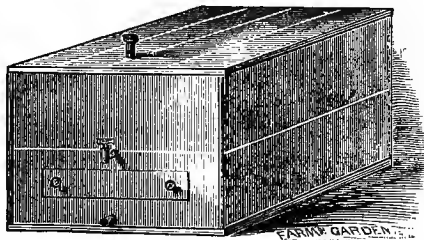
half lengthwise, and displays all the positions. What is meant by the "boxed-off" portion in front, is that portion filled with sawdust in front. The side boards of the inner box are joined, on their front ends, to the front boards of the outer box, being also nailed to the two short middle posts. Fill in between the boxes with sawdust, and if sawdust is scarce, use chaff, oats,

finely-cut hay (rammed down), or anything that will answer, but sawdust or chaff is best. In Fig. 10 *A* is the tube on top, *B* the faucet in front, *C* the opening for the egg drawer, and *D* the tube to admit air into the ventilator. This tin tube should be as close to the bottom of the ventilator as possible. When making incubator, do not forget to cut holes for tubes of tank and also for air tubes to come through, and then putty around them.

#### DIRECTIONS FOR OPERATING.

Each trays holds about 80 eggs, laid in promiscuously, the same as in a nest, making total number for incubator 240 eggs. First fill the tank with *boiling* water, but never allow it to remain in the tube on top, as it thus increases pressure; hence, when tank is full to top of the tube, draw off a gallon of water. Fill it 48 hours before putting eggs in, and have heat up to  $115^{\circ}$  before they are put in. As the eggs will cool down the heat, do not open the drawer for 6 hours, when the heat should be  $103^{\circ}$ , and kept as near to that degree as possible, until the end of the hatch. It is best to run it a few days without eggs, to learn it thoroughly. Place incubator in a place where the temperature does not fall below  $60^{\circ}$ . As the heat will come up slowly, it will also cool off slowly. Should the heat be difficult to bring up, or the eggs be too cool, you can raise or lower the trays, using small strips under them. You can also stop up or open the air tube in the front opening of the ventilator whenever you desire. When the eggs are put in, the drawer will cool down some. All that is required then is to add about a bucket or so of water once or twice a day, in the morning and at night, but be careful about endeavoring to get up heat suddenly, as the heat does not rise for five hours after the additional bucket of water is added. The cool air comes from the ventilator pipe, passing through the muslin bottom of the egg drawer frequently, as it allows too much escape of heat, and be careful not to open when chicks are hatching, unless compelled, as it causes loss of heat and moisture at a critical time. *Cold draughts* on the chicks at that time are fatal. Do not oblige visitors. *Be sure your thermometer records correctly*, as half the failures are due to incorrect thermometers, and not one in twenty is correct. Place the bulb of the thermometer even with the top of the eggs—that is, when the thermometer is lying down in the drawer—with the upper end slightly raised, so as to allow the mercury to rise, but the bulb and eggs should be of the same heat, as the figures record the heat in the *bulb*, and not in the tube.

FIG. 11.



INCUBATOR COMPLETE.

Turn the eggs twice a day at regular intervals—six o'clock in the morn-

ing and six o'clock at night. Do not let them cool lower than 70°. Turn them by taking a row of eggs from the end of the tray and placing them at the other end, turning the eggs by rolling them over with your hand. By removing only one row you can roll all the rest easily. Give no moisture the first week, very little the second, and plenty the third week. Do not sprinkle the eggs. For moisture, put a wet sponge, the size of an egg (placed in a flat cup), in each tray the second week, and two sponges in each tray the third week. Do not put in sponges until you are about to shut up the drawer, after turning. Wet the sponges by dipping in *hot* water. After the first ten days the animal heat of the chicks will partially assist in keeping the temperature. Be careful, as heat always drops when chicks are taken out. You can have a small glass door in front of egg drawer, to observe thermometer, if desired. Always change position of trays when eggs are turned, putting the front one at the rear.

#### HOW TO RAISE DUCKS WITHOUT WATER, HOW TO MAKE THEM ATTAIN GREAT WEIGHTS, AND WHERE THE PROFIT LIES.

It was once supposed that ducks could not be raised without ponds of water, but they are now kept in brooders 5 x 7 feet, with yards 5 x 16 feet (100 in each yard), until they are eight or ten weeks old, when they are then ready for market. Ducks are profitable if sold as soon as they reach four pounds weight, or five at the highest, as they will return rapid growth and increase for all the food they may consume up to that age. After that time they do not pay except to keep a few, unless they have a pond and grass run. June is the best month for selling, and July next, as young ducks bring from 25 to 30 cents per pound, according to quality, in the New York markets. A pair of Pekin, Rouen, or Aylesbury ducks ought to weigh, with heavy feeding, ten pounds per pair the day they are ten weeks old.

If raised under hens, keep the hen and young ducks in little coops and runs, away from water. In fact, until the ducks are feathered, they should be given drinking water in a manner only to allow of their getting their beaks wet; for, contrary to the old saying that "wet weather is splendid for young ducks," nothing is so fatal to them as dampness. Very cold drinking water will cause them to have cramps, hence it should be tepid.

Feed them, after they are 24 hours old, on a mixture of mashed potatoes, which may be thickened with ground grain (composed of equal parts of corn meal, ground oats and middlings), and give them all the milk they can drink. Scald all the food the first two weeks. After they are three days old, give them meat, chopped fine (or ground meat), mixed in their food three times a week. Chopped grass, cabbage, vegetable tops, clover hay chopped and steeped in water, or any kind of green food may be given liberally. After the second week cooked turnips and ground grain will answer, with a little ground meat. Feed four times a day until they go to market.



They are subject to but few diseases. Cramps occur from cold water. Leg weakness comes from damp quarters at night. Apoplexy attacks grown ducks when they are very fat, and they are also subject to vertigo. If attacked by the large, gray body lice on the heads, they will appear apparently well, and suddenly turn over on their backs and die. The floor upon which they sleep must be of boards, and should be kept very clean and dry. As we stated, dampness is fatal to young ducks.

If raised in incubators feed them in little troughs, to avoid fouling the food. They require plenty of heat in the brooder at first, but after they are four weeks old, can do well without it. Give them plenty of drinking water always, and let it be clean.

Young ducks are usually marketed dressed, leaving on heads and legs, but some markets require the entrails to be drawn, while others do not. Old ducks seldom bring over twelve cents per pound. The best breeds are Pekins, Rouens and Aylesburys; or those breeds may be crossed on each other with advantage. The best time to hatch them is in April and May, so as to get them in market in June and July.

A duck of the improved breeds will lay from 120 to 160 eggs per year, and usually begins in February. If kept in the house until about eight o'clock in the morning, they will lay in the house, as they lay early in the morning, but if turned out too soon they sometimes deposit their eggs in other places, and even on ponds. One drake to six ducks will be sufficient, and if young females are used, it is best to have a two-year old drake, though sometimes the eggs hatch well from parents of the same age on both sides, and less than a year old; but they should not be kept too fat, or the eggs will not hatch well. At Hammonton, N. J., this season, several thousand ducks were raised in brooders that had no water, except to drink, and the same is done annually by Mr. James Rankin, of South Easton, Mass., who raises as many as 4000 a year. The great desiderata are good care, regular feeding and dry quarters.

Compared with broilers, the prices, as reported in the New York markets, show that early in the season broilers bring as high as 65 cents per pound, though at that period no ducklings are sent to market.

For the years 1886 and 1887 the prices of young ducks and chicks, dressed, compared, were as follows:—

	1886.		1887.	
	DUCKS.	CHICKS.	DUCKS.	CHICKS.
May 28th.....	28	50	20	22
June 4th.....	25	45	22	25
June 18th.....	18	30	23	24
June 28th.....	16	28	28	30

It will be observed the chicks are in the lead in the prices, but ducklings are sold when they weigh from *three* to *four* pounds each, while chicks must weigh, for the late months, over two pounds each, but it requires, on an average, three months for the chick to reach two pounds, while the duck arrives at that weight (averaging a number) in less than half that time, and is ready for market (weighing three pounds) in seven weeks, thus giving really a larger profit.

Of the breeds, a cross between the Pekin drake and Rouen female makes the best duckling, as it is white in color, like the Pekin, and has the hardiness of the Rouen. Both breeds are very large, and grow rapidly. The white color avoids pin feathers showing when the ducklings are dressed. They are never sold alive, as is the case with the adults. The Aylesbury is also an excellent white duck, and nearly as large as the Pekin, the two white breeds making an excellent cross. Always use males of the Pekin, Rouen, or Aylesbury when grading up a common flock. The White Muscovy drake and Pekin female is an excellent cross, giving a very compact carcass. Compared with chicks, the growth *forced* on high feeding, with a lot of ten ducklings and chicks, for experiment, with the same amount of food for producing one pound of flesh (usually a cost of five cents for each pound of carcass), we present the following:—

	DUCKLING.		CHICK.	
	POUNDS.	OUNCES.	POUNDS.	OUNCES.
1 week old.....	0	4	0	2
2 weeks old.....	0	9	0	4
3 " ".....	1	0	0	6½
4 " ".....	1	9	0	10
5 " ".....	2	2	0	14
6 " ".....	2	11	1	2½
7 " ".....	3	5	1	7½
8 " ".....	4	0	1	12
9 " ".....	4	8	2	0

As they approach maturity (after the eighth week) the ratio of gain begins to become proportionately less, while some were heavier than others. The ducks were kept in a small coop, and fed to demonstrate the highest point they could be made to attain, the pure-bred Pekins being used for experiment. The weight of chicks is taken from our May number.—  
*From The Farm and Garden.*

## PRACTICAL AND PITHY PARAGRAPHS ON POULTRY.

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Selected from THE FARM AND GARDEN FOR 1887.

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## SUPERVISION.

It has been demonstrated, by repeated failures, that no one can delegate the duty of attending to poultry, but must do it himself. To secure a competent man to manage a large poultry farm is no easy matter, and a really competent assistant or manager will want something more than the ordinary monthly wages and board. Nearly all failures result from incompetency. To get together a large flock of hens, and put "a man" over them who is not only an inexperienced person, but below the average in intelligence, is ruinous to the prospects. It requires knowledge and intelligence to manage a large poultry farm, and quite a salary is required to secure the right kind of a manager, for they are scarce. Any person engaging in the poultry business must be sure and be on the ground at all times. He may have an assistant, and even a foreman and other help, but a single mistake may change a prospective profit to a loss, and hence the careful and watchful eye of the owner must be over the work, and he will even then find that no one can do what is required so well as himself; for disasters have been the results of many ventures.

## QUARANTINE THE NEW COMERS.

Never bring a fowl from another yard and place it in your flock until you have kept it in quarantine. Provide a coop for that purpose, and place it at some distance from the yards, keeping the new birds confined long enough to know if they are healthy. The strictest precautions are necessary, or you will bring roup or cholera into your yards before you are aware of it. And, what is more, even if there is no disease, quarantine for fear of *lice*. Always be on the watch against lice, for should a lousy bird get into the yard it will soon stock the whole.

## GETTING EGGS WHEN PRICES ARE HIGH.

We know well that in all branches of business there are those who take advantage of opportunities and seek the benefit of a rise in prices. In selling eggs or in procuring them, the matter of cost must be considered only in relation to the price. We can better afford to incur an expense of two dollars in place of one, where the chances for profit are twice as great, than not to derive any profit at all. When eggs are well up in price, commanding over thirty cents per dozen, we may, by feeding properly, secure them. We can point to a poultryman who paid twelve cents a pound for fresh beef for his hens, when eggs were forty cents a dozen, and it paid him well. Just here, we will say to those who complain of receiving no eggs, to change the food by giving a goodly supply of meat once a day. A pound

will supply twelve fowls, and, if they are kept warm, they will nearly always lay under a meat diet. A better plan is to chop a pound of meat, and add it to a quart of beans (after the beans have been cooked till they are soft), and thicken the mass with ground oats till it is of the consistency of dough. Feed this once a day to twenty-five hens, with whole grain at night, and the chances are they will lay in the coldest weather.

#### ARE ROOSTERS ALWAYS NECESSARY?

The general supposition is that there must always be a rooster in the flock, but this is not necessary unless the eggs are required for hatching purposes. An Illinois correspondent wants an opinion on the subject, and says:—

Does it make any difference whether you keep roosters with hens if the hens are only wanted for eggs alone? Some inform me that the hens will not lay as many eggs, while others say it makes no difference. I would like your opinion, or hear from your readers thereon.

Laying is involuntary, and the hen has no control over it. If she is in the proper condition she will lay, and cannot avoid it. The male has no influence on the number of eggs, his functions being independent of the natural development of the eggs. Of course, eggs will not hatch if no males are with the hens, but there will be just as many eggs laid when there is no male in the yards as when he is present. It is really an advantage to dispense with the males if eggs are to be kept any length of time. Eggs from hens not with males will keep three times as long as will those that have been fertilized.

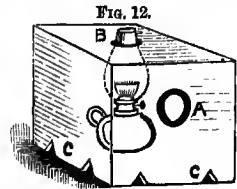
#### HOW TO JUDGE OF FRESH EGGS.

A fresh egg is very clear when held up to a strong light, and the air cell at the large end is very small. In fact, the smaller the air cell, the fresher the egg, as the cell expands as the egg becomes stale. A fresh egg has a somewhat rough shell, while the shell of a stale egg is very smooth. When cooked, the contents of a fresh egg stick to the shell, and must be removed with the spoon, but a stale egg, when boiled hard, permits the shell to be peeled off like the skin of an orange. It takes a longer time to boil a fresh egg hard than it does for a stale egg, and fresh eggs are more easily beaten into a froth than stale ones.

#### AN EGG TESTER.

Make a box about one foot square and the same in height, or, rather, about high enough for an inch of the globe of a lamp to come through the top, as shown at *B*, in the illustration. *A* is a hole the size of an egg, over which a piece of black cloth is fastened, and the hole also cut into the cloth, so as to fit snugly around the edges of the egg. *C C C C* are holes to let air into the lamp. Any kind of boards, or even pasteboard, will answer for making the tester. All that is necessary is to place the box

over the lamp, as the box should have no bottom. Be careful to allow no light to show except at the opening where the egg is held. If preferred, a bull's-eye lantern may be used instead of a lamp, as it magnifies the light. Hold the egg close to the opening, the large end up; look through it at the light, and after the eggs have been in the incubator or under the hen a week. Clear eggs are infertile; dark eggs contain chicks, unless rotten. Turn the eggs around from left to right, or *vice versa*, and the examination will be easier.



#### EGGS FOR HATCHING PURPOSES.

It is claimed that the influence of the union of the cock and hen remains until five days after separation, but it is safer to estimate for ten days. That is, if a cock is removed from a yard, and one of another breed substituted, the eggs, after ten days have elapsed, will produce chicks from the latest cock. If eggs are to be kept for a length of time, in order to wait until a hen wishes to sit, they will last over a month (and sometimes for two months) if they are kept in a cool place and turned half over once a day. It is the settling of the yolk to the sides of the shell that injures them. Never use eggs from fat hens, or eggs that are double yolked, irregular in shape, or very small. Uniformity in the shape and size will ensure a larger percentage of chicks.

#### THE BEST BREED FOR ALL PURPOSES.

A reader, who signs himself "Q," desires information on several points which may also interest others. Our correspondent writes:—

Will you please inform me which is the best variety of fowls for a man to keep who has only three acres of land, most all of it in lawn—say half an acre in garden, with no fence around it? He wants both fowl and eggs for table use.

The *best* breed has never been decided upon, as the best breed depends upon certain conditions. Each breed is best in its particular sphere. But let us look over our correspondent's letter, and see if we can assist him. First, what are the conditions? He has three acres of ground, mostly lawn, hence he has plenty of forage space; but the garden has *no fence* around it. Fowls and a garden cannot be managed together. A fence is necessary, or the hens may destroy the garden. Next, he desires a fowl with market qualities (large), and which lays well. If he had wished to know which was the best breed for carcass and eggs, with the fence low, and but a small space for foraging, we would have recommended the Brahma, and if he had desired eggs, without regard to market qualities, we should have recommended the Leghorns or Minorcas as the best; but as he desires a good market fowl that lays well, and that forages over a wide space, we can safely say that either the Plymouth Rock or Wyandotte is the best, as there is but little difference between them in that respect.

## CROSS-BRED FOWLS.

We believe there would be a good field for cross-bred birds if they were advertised. For instance, a cross of Minorcas with any of the large hens of the Asiatic breeds would be just what many want, as the pure Minorcas are high, and the cross is not easily obtained. Advertising cross-bred fowls is a common practice in England, and we see no reason why it should not be adopted here. A cross of Minorca and Brahma for eggs, or Dorking and Cochin or Brahma for chicks, with eggs sold by the hundred, would no doubt be acceptable to many.

## A FEW HENS FOR FAMILY USE.

Every family has a few scraps to throw away daily, which the prowling dogs and cats secure. If such refuse be fed to hens, some return may be secured. If ten hens are expensive, reduce to five. Even a pair of hens will pay for themselves by giving a few eggs. With a family, the keeping of a few hens is almost costless, and it is not so much for the actual value of the eggs as to the securing of strictly *fresh* eggs that we recommend this practice. A large box, a corner in the cellar or woodhouse, or a small coop at the end of the yard, will entail but a small expense, and answer well for a family flock.

## RATION FOR A FLOCK.

One quart of corn, or its equivalent, is estimated as the allowance for ten hens per day, but this quantity should be diminished when bulky food is fed. The estimate, however, will be no guide in feeding, as some hens will eat more and some less, but it is about the average quantity to be allowed. No person should attempt to feed fowls by any rule of measurement of the grain. The proper method is to feed very sparingly during the day, in order to keep them hungry enough to scratch, but at night feed them until they walk away satisfied, but feed carefully, so as to leave none, or but very little, on the ground. By so doing every hen will secure her share, as the stronger, or domineering, hens will keep the weaker ones back, but as soon as the stronger hens are satisfied they will leave, and the others can then eat all they wish. It will be found that on some days less food will be required than on others, and the quantity will be regulated by the breed. A dozen Brahma hens will eat more than the same number of Leghorns, while laying hens will eat more than those not producing eggs. Everything depends upon condition, shelter, breed, and kind of food given.

## BUCKWHEAT AS FOOD.

Buckwheat is an excellent egg-producing food, but it is not always easy to obtain. Though more expensive than some kind of grains, per bushel, yet it is cheap, considering its value as an egg-producing food. The best way to feed it is to mix it with other grain food, or to feed it separately three times a week. Never give any kind of grain exclusively. If certain days

could be given to corn, oats, wheat and buckwheat, the hens would be better satisfied, and give results in laying that would surprise many who feed on one kind exclusively.

#### THE QUICK-GROWING BREEDS,

Do not hatch your Leghorns or Hamburgs until April. They will thrive much better than when hatched very early, and will have plenty of time to grow from April to November. If they are hatched in January, there is a possibility that they will moult late in the season, and thus lose time. But with the large breeds, hatching should be done as early as may be desired, as they require from eight to ten months to fully mature and be ready for laying by next fall. Now is the time to look out for next season's layers, especially for eggs in winter, as the early pullet begins early.

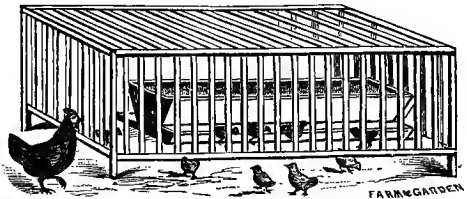
#### HOW TO USE GROUND MEAT AND BONE.

For growing chicks the best mode of feeding ground meat and bone is to fill up a little trough and place it where the chicks can go to it and eat whenever they so desire. The easiest way to raise chicks, and save labor, is to make a small coop of lath, just close enough to allow the chicks to run under, but which will prevent the adult fowls from getting at the food. The meat and bones, with plenty of wheat and cracked corn, may be placed under it. All that will then be necessary is to give the chicks a warm mess of soft food twice a day. This is intended for chicks that are large enough to be separated from the hen.

#### ARRANGEMENT FOR FEEDING CHICKS.

Make a coop four feet square, of lath or wire, and if preferred, it may be covered. Leave an opening at the lower part so chicks can run in and out, and keep a feed hopper full of feed in the coop all the time. The object is to have feed where the chicks can reach it at any time, but beyond the hens. It is an excellent contrivance for the yards that contain both hens and chicks, as the chicks will be in no danger of being interfered with by the larger fowls.

FIG. 13.



#### FEED FOR YOUNG CHICKS.

To properly feed young chicks the food must be of a kind to promote not only growth of the body, but of feathers, which drain the system if the chick feathers out rapidly, and they often droop from that cause, which accounts for slow-feathering chicks, such as young Brahmas, being hardier than other kinds. An excellent food for young chicks is to take one pound *each* of cornmeal, ground oats, bran, ship stuff, and ground meat, four ounces ground bone, two ounces salt, two ounces bread soda, and half a pound

of buckwheat meal. Mix with milk and bake as bread. If milk is not convenient, use curds, buttermilk or warm water. Let it become cold, or stale, and crumble it for them. Feed the chicks five times daily. After they are ten days old, keep cracked corn and screenings before them all the time. Keep the chicks warm and dry. Give them free access to water, but put it in vessels that do not cause the chicks to get wet, not even on the feet. See that they are carefully housed for the night before leaving them.

#### NO WATER FOR CHICKS.

The "no water for chicks" theory arose from the giving of chicks water to drink in vessels that caused them to get wet, and hence the claim was that the giving of water to young chicks is injurious, when, in fact, it was the dampness of the floor and the wetting of the down of the chicks that did the damage. Give chicks all the water they will drink, but give it in vessels so arranged that they can only get their beaks in the water.

#### DAMP RUNS.

Cut drains from the poultry yards and allow the surplus water to flow off, if you wish to avoid roup in your flock. Cold is, no doubt, very severe on flocks, but cold and dampness combined make it very difficult to keep the flock in health and laying condition. If the yards cannot be kept perfectly dry, they should at least be freed of the surplus water, which causes frosted feet and other ailments to the hens.

#### THE VALUE OF CLEANLINESS.

One-half the difficulties of poultry keeping may be avoided by cleanliness. Mr. Benjamin Alden, of Lawtey, Florida, writing on this subject, says: "We have occupied our present premises for almost three years. So far, we have found, by actual experience, that the only thing needful to keep poultry free from vermin of all descriptions is to keep the poultry house clean. The droppings are removed every morning as soon as the feeding is done—that is, they are swept through a trap door on the raised platform over which the fowls roost. They are received in a box beneath, outside the coop, and once in two weeks removed altogether."

#### HOW MUCH CORN FOR 100 HENS?

We have been asked how much corn should be given 100 hens a day, if they are running at large. We do not favor corn as a food for laying hens, but if given, it should be only at night. The amount required depends upon how much food of some other kind the fowls receive. Here is the way the calculation is usually made. Give each hen four and a half pecks of grain (mixed) a year. Now, four and a half pecks are 36 quarts. Hence, if one hen will eat 36 quarts of food in 365 days, it is equivalent to *about* one quart of food for ten hens. We would therefore suggest that if the hens are running at large, they be given a pint of grain at night for ten hens, provided they received other food during the day.



**A CHEAP LICE DESTROYER.**

Get a bushel of lime, and let it air slake. Sift it in a fine sifter, so as to have it like dust. Take a quart of the dust and pour a gill of carbolic acid over it, working the two together until thoroughly mingled. Then mix the quart of lime and acid with the bulk of the lime. Carbolate of lime is formed by the mixture, and it is death to all insect life. Now dust the lime over the floor, on the walls, into the cracks, and *everywhere* that you can throw, dust, blow, or in any manner force it, and you will have a cheap and effective substance for preventing or driving off vermin.

**GEESE AND DUCKS.**

February is the month when ducks and geese begin to lay, but March is an excellent time to allow the geese to begin incubation, as the goslings will then come out in April. It is not advisable to hatch out young ducks until May, as July is the time they usually reach the market; but for those that are to reach a large size, April should be the month. There is no difficulty in raising young ducks or goslings, provided they are kept *dry*, and not allowed near the water until they are well feathered. The feed should consist of bulky matter, such as cooked turnips, potatoes, or carrots, to which a small quantity of bran and meal is added. Cut clover, steeped in hot water, is also excellent. Do not feed too much corn meal. A mixture of equal parts of bran, meal, ground oats, and shorts, is better than any other ground food, and as they need animal food, do not omit meat at least three times per week.

**BULKY FOOD FOR GEESE.**

Geese will eat turnips if they are chopped into small pieces and placed in a trough of water, but it is more economical to cook the turnips, add a lot of chopped hay and ground grain, and feed warm. If coarse, bulky food could be provided for all classes of fowls, it would not only lessen the expense, but greatly assist in promoting their health and laying qualities.

**DO WE PRODUCE TOO MUCH?**

It is claimed that over 20,000 carloads of live and dressed poultry are sold in New York City annually, and also 25,000,000 dozen eggs. As 5,000,000 people buy in New York City, and the population of the United States is 50,000,000, we can form some idea of the consumption of poultry and eggs, which would be about 200,000 carloads of poultry and 250,000,000 dozen eggs. Estimating the value of the eggs at ten cents per dozen, we have a product of \$25,000,000 from eggs, and if each freight car carried 10,000 pounds, we have the great weight of 2,000,000,000 pounds, which, at five cents per pound, is \$100,000,000, or a total of \$125,000,000 as the product of poultry and eggs for the whole country, which is, in all probability, under the true figures as they would exist if a true census could be taken, which is, however, an impossibility.

## BREEDING BY THE STANDARD.

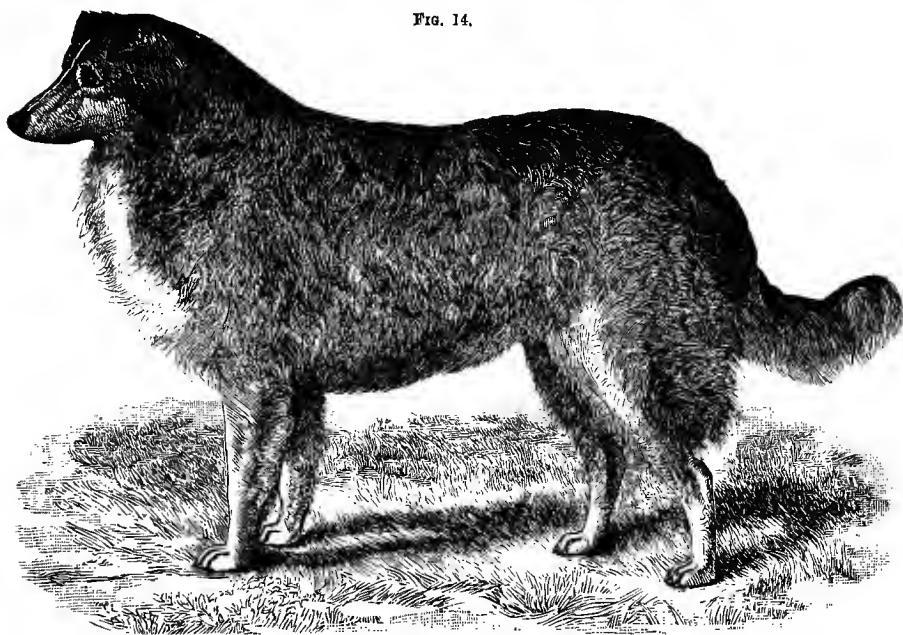
All the established breeds of poultry are bred to a "standard," each breed being allowed a possible 100 points. These points differ according to the breed, but encourage beauty of plumage and form rather than utility. The "standard," however, has preserved each breed in its purity by compelling the breeders to adhere closely to every little detail, but the choicest and most perfect birds may prove inferior layers, the "standard" recognizing the exterior qualifications only. It, however, encourages the development of prominence to the breast, breadth of back, and gives preference to weight in some breeds. But for the "standard," however, the Brahma would be absorbed in the Cochins, and the Langshan would lose its identity in a few years, while the other breeds would suffer correspondingly, due to the fact that all the breeds of poultry are subject to the constant crossing and in-breeding practiced so extensively by nearly all who keep fowls.

But the "standard," as in the case of the Leghorns, gives nearly one-third of the 100 points to the head, face, and legs of the birds (which are really the useless parts in a utilitarian sense), and devotes but a few to elevating the characteristics of the breed. The highest scoring fowls, therefore, may be only ornamental, yet it is in keeping close to the requirements of the "standard" that we have so many excellent breeds. The inherent and meritorious qualities of the majority of the breeds, such as the non-sitting peculiarity of the Leghorns, were fixed by careful selection, before the "standard" was adopted. With the exception of a few poultry exhibitions, no premiums are offered for the encouragement of the production of carcass or eggs, nor for particular records of individual hens. This is due partially to the fact that but few farmers take an interest in the shows, or seek to encourage the breeding of the best varieties. The breeders of strictly pure breeds have, by rigidly adhering to the standard, prevented the destruction of some of the best varieties, and should be given credit for their work. For crossing the farmer needs no standard, but if he is going to use the pure breeds he should endeavor to secure standard birds, in order to make sure that they are all that he desires.

## THE COLLY DOG.

It may safely be said, that among the most intelligent of the canine race are the Collies. Whether their cleverness is hereditary, or the result of training, remains a question; but all who have their faith in the transmission of good or bad qualities from parents, may safely take for their examples the three varieties of sheep dogs. There are many reasons why Collies and the old English bob-tailed specimens hold such a prominent place among dogs; first and foremost being, that more than one writer on the subject has designated to them the origin of the various canine species which are now cultivated all over the world; secondly, on account

FIG. 14.



ROUGH-COATED SCOTCH COLLY SHEPHERD DOG.

of the intelligence displayed in their natural avocation of minding sheep; and, thirdly, for the elegance of their structure, which renders them attractive companions of man.

Both the above are very hardy dogs, capable of any amount of work, and always doing the work allotted to them with a thoroughness and willingness which entitles them to a foremost place in the canine race.

In the genuine Colly the pile, or coat proper, overlies an inner wooly coat of the closest and softest fibre, very much as in the hill-fox, and this enables him to face with impunity any amount of wet and cold, under which most other dogs would perish.

The rough-coated breed is generally preferred, partly because of his

superior strength and greater powers of endurance, but mainly, and more particularly, because of his wonderful firmness of pad (under part of foot), which is so thick and tough that he can work over the roughest ground without the slightest limp or other symptom of lameness, which is often seen in the smooth-coated and bob-tailed specimens.

Rev. Alexander Stewart, L.L.D., F.S.A., of Nether Lochaber, says:—  
 “It is believed that the Colly is of very ancient descent; probably these are the dogs so frequently referred to in the old ballads of the far Fingalian times in Ireland and the Scottish Highlands, which date back from as early as the eighth and ninth centuries, and in almost all of them dogs of a certain breed are mentioned as perhaps the most valuable possession owned by a people who lived mainly by the chase, and whose only weapons were the bow and arrows and light hunting-spear; and from the character and feats ascribed by the ancient Celtic balladists to these dogs, we believe they were nothing else but Collies, of which our modern rough-coated Colly is the direct descendant.”

No other dog exhibits, under all circumstances, so much true courage—courage that is combined with high intelligence and unfailing self-possession and caution.

“If desired, the Colly, with very little training, becomes also the most perfect of retrievers. In his keen scent, delicacy of mouth and unfailing *nous* are to be found all the essentials of a good land retriever. He is also valuable as a vermin killer. It has been known where he has, single-handed, attacked and killed the wild cat among the bowlders of a steep mountain gorge; nor will he turn his back on the pine-marten or polecat, animals of which most other dogs fight shy. He is always willing and ready to face either the badger or otter in the open; being too large to enter their dens, the fight is much more severe. A really good Colly can generally claim victory, even if he has to show severe wounds for it afterward.”

The Colly in our country is best known as a sheep and cattle dog; his marvelous sagacity, and readiness to act or refrain from acting at his master's slightest nod, makes him the fittest dog in the world. What a good Colly can do with sheep, almost every one knows; and well-authenticated stories of his sagacity, patience and unconquerable endurance would fill volumes. In this connection we reprint the following from *The Live Stock Journal*, of London, England:—

“To watch a Sheep-dog at work is a most interesting sight, especially in the Lake country or the Highlands of Scotland. The careful way in which he will gather in all the sheep, even though widely scattered, the gentle yet firm control he has of them, and the readiness with which sign from or word uttered by his master is obeyed is remarkable. It is no uncommon thing for dogs to be left alone with a flock for days, or to gather a flock

from a whole mountain side, not one to be missing. Shepherds can tell many tales of the sagacity of Collies. They will during the dipping season guard the undipped sheep, and separate one by one as rapidly as they are required until the whole have passed through the tub. And a recent writer tells how one of these dogs will gather into a certain hollow, only indicated by a slight wave of his master's crook, all the sheep scattered over hills and valleys for miles around. In one case when the *hirsels* of upwards of twelve hundred were counted, four only were missing, and the good dog on being directed to go instantly and find them, darted off, and was over the nearest ridge in a few minutes. Within half an hour his bark was heard from the top of a steep ridge to the left, and he was seen bringing the four to complete the tale.

“Of the faithfulness of the Colly much can be said. The *Ettrick* Shepherd tells how at one time he had several hundred lambs which he was taking to the fold. They scampered off over the hills in three separate divisions and in opposite directions, defying all efforts to find them. Night came, and the search had to be given up. But the dog remained at his task, and in the morning he was found in a gorge standing watch over all the lambs, whom he had gathered during the night. And the story of the drover's Colly, which, losing his master in crossing by a river ferry in the North of England, for nearly two years regularly went backward and forward on the ferry, seeking in vain for the lost shepherd, refusing all the blandishments of others, merely accepting the food given him, is but one proof more of the Colly's faithfulness. These could be multiplied indefinitely. Every shepherd could recount tales equally wonderful, and the exception would be to find among the true shepherd's dogs—not the show specimens, which may not be quite pure, as some have suggested—those who would fail to act as these have done. Of course, some dogs are endowed with more sagacity than others, but the more appears to predominate.”

For the benefit of those not acquainted with the Colly, we give below a description, which we trust will convey to the minds of our readers a true likeness of the Rough-Coated breed; It is a dog of medium size, standing 20 to 24 inches at the shoulder, very gracefully shaped. The head which resembles that of the fox, should be wide between the ears, tapering toward the eyes. The top of the head is flat, and there is little or no protuberance. The ears are small and pricked, but turn over at the top outward and slightly forward. The shoulders muscular, chest moderately wide and deep. The legs are all important, both behind and before; they must be straight in front and well bent behind, all being, of necessity, muscular.

The coat, as before mentioned, should be shaggy and very thick, so as to create some difficulty in seeing the skin when the hair is separated by the hands, the undergrowth being of a woolly nature. The undercoat is

almost always lighter in color than the upper. The color most commonly preferred is black and tan. In the best strains the black is seldom brilliant, showing the lighter color of the undercoat through more or less, and often itself tinged with tan. The face, spots over the eyes, breast, belly, and legs below the elbow and hocks are tan, which should be of a reddish fawn rather than deep-red tinge. There are also the sable, with white tips, solid sables, and fawn-colored Collies, which are numerous. The brush or tail is bushy, and should hang well down between the legs.

In symmetry the Colly is fully up to the average thoroughbred dog, or perhaps above it, and artistically he is much admired.

#### THE CARE OF DOGS.

The puppy should have plenty of exercise. It is always much better to give him the liberty of the yard than to keep him constantly chained. When this is necessary, use a wide collar, so as not to cut his neck when he plunges. The dog box should be raised at least six inches from the ground, so as to keep out dampness. Bed in winter with straw or pine shavings. In summer they do not require any bedding. Be very particular to keep the house perfectly clean, and thus prevent disease. Feed grown dogs twice every day—morning and evening; puppies require food oftener; they should not be weaned before they are five weeks old, and the bitch cannot be fed too well when suckling her pups. The pups should be fed bread and milk as soon as they can eat, and should never have the clear milk, which is too strong, and liable to make them sick. Put into the milk one quarter water, and all the bread they will eat. Avoid feeding meat. After puppies are three or four months old, a little meat once a week is beneficial. When dogs show a disposition to lie about, with no appetite, they require special treatment. Do not place before them large quantities of food, but give them a dainty morsel from your hand, and in almost every case they will rapidly devour it.

To keep them in good health, it is necessary to keep them perfectly clean, and this should be done by washing, say every ten days, with castile soap. After washing the dog, he should be thoroughly brushed and combed, to extract all the loose hair from his coat. Frequently owners of dogs are not careful enough in this respect, and we have seen many valuable dogs with canker in the ear, brought on by the hair behind the ear becoming matted.

#### BREEDING.

A bitch should be at least eighteen months old—and two years old is preferable—before she is allowed to breed, although we have had excellent results from younger bitches, but this is liable to stunt the mother, and the puppies are not so healthy. The dog may be a little larger than the bitch, but the difference should not be too great. One complete connection with

the male dog is sufficient, and should take place about the middle of the bitch's heat (ninth day). She should then be secluded from other dogs, and kept perfectly quiet for a few weeks. As the time for parturition arrives, the bitch should be feed on sloppy food, and gently exercised. If labor is difficult, a warm bath and a dose of castor oil may be given. Should there be great difficulty, a surgeon's assistance will be advisable.

#### TRAINING.

It is almost useless to commence training the pup until it is six months old, except to teach it obedience, and this can be done at two to four months old. It should be practiced at a certain hour every morning, before eating its meal, that it may understand it has a task to be done. Feed immediately after, that it may soon learn to look upon it as a reward for doing that task. Never allow any one to be with you during the lesson, that he may concentrate his dog intellect upon the work in hand. *He positively must never be struck a cruel blow* during the training, or his attention will be drawn to the whip instead of the lesson. Use the whip to motion with. Remember, if you break the will of the puppy by harsh or cruel treatment, it will be useless. The first few lessons may be blank failures; the puppy may lie down and refuse to do what you desire of him, but the chances are he is a very sensible dog; your preparations have impressed his mind, and he fears evil; he is on the alert, and awaits developments, on the defensive; whereas, a less wide-awake pup is too dumb to comprehend the situation. To strike your puppy at such a time would take months to overcome, and would be downright cruelty. The only course to pursue is, to change the lesson to play. In one or two mornings his fears are dispelled, and he is ready to be handled.

One master, and only one, must a pup have; all the other members of the family should be strictly forbidden to give him orders or cultivate his affections. He must be taught obedience, and to obey your commands implicitly, before attempting to work him on stock. You can do this by using some word of command when feeding, and you alone doing this. Your orders should be at all times given in a quiet, easy tone, never allowing yourself to become angry. The very best trained dogs need reproof at times; but he must be made to come up a hundred times to be petted and rewarded, where he comes up once to be punished. Never allow him to be with the stock unless you are with him, as he may contract bad or wayward habits, hard to break. When first (for a few times) taking him with the stock, do not allow him to work at all, but do the work yourself, and keep him close to you, to accustom him to the stock, and the stock to him. In case he is inclined to run all over the field, use a chain and keep him with you. Make the first lesson short, and be sure he learns one thing

thoroughly before entering upon another task. He must never, on any account, be allowed to go straight toward the sheep; it is a very difficult thing to prevent; but if he does it, he must be called back and compelled to circle out wide. The old saying, "a barking dog never bites," is just what you want in a dog driving sheep or cattle; indeed, a dog which pursues the latter course must be restrained and punished. Young dogs are very apt to nip the heels of the sheep. They must be taught to confine themselves to barking alone. If held back by a rope, and a great noise and hubbub is made, he will get to barking, and once this is accomplished, the way will be easier thenceforth. In speaking to the dog *always use the same words of command and gestures*, as "Go fetch 'em up!" "Head away!" "Get out wide!" "Hold!" etc., etc. Use the hand or whip in making gestures. The foregoing are the principal points in training, and other items will develop as training progresses.

There is one principal idea we would like to impress on the minds of those interested. You must not expect an old head on young shoulders; have patience, and success is sure to follow.

#### DISEASES OF DOGS.

It is almost impossible to enumerate every disease to which a dog is liable. We give a brief outline of the principal ones, with remedies, for which we are indebted to the works of "Stonehenge" and Mr. Wm. E. Sterling.

**DISTEMPER** is highly contagious; it first shows itself in the form of a nasal catarrh. The ordinary symptoms are, sudden loss of appetite, discharge from both nose and eyes, a dullness, accompanied with fever, a husky cough, inflammation and dullness of eyes. The animal rapidly loses flesh, and the discharge from the nose will stick about the nostrils. Should fits come on at this stage, the animal is almost certain to be lost. Give tartar emetic, 1 grain; calomel, 1 grain. To be given in a little beef tea. Should there be constipation, a dose of three drachms of sulphate of magnesia will be useful. Good nursing is as valuable as medicine.

**CHOREA.**—A singular spasmodic, jerking action of the muscles. It sometimes appears in one limb, and oftentimes pervades the entire system. It is a nervous affection similar to that known as St. Vitus' Dance.

It is often the result of distemper or mange, but worms or a severe blow may produce it. If the case is neglected, and the dog is in a debilitated state, this spasmodic action steals over the whole frame, and he lies extended, with every limb in constant and spasmodic motion; this slowly destroys the animal, and he dies a mere skeleton.

The following treatment will be found of great value in the early stages. Give one-sixth of a grain of strychnine twice a day after feeding, also a



teaspoonful of cod-liver oil three times a day. If no improvement takes place in a few days, apply a blister to the back of the neck, composed of—

Liquid ammonia,	}	Equal parts.
Spirits camphor,		

Remove the hair and apply with a sponge from five to fifteen minutes. *Do not repeat in same place.* Give the strychnine either in the form of a pill or mixed with water, which is to be preferred. Give the dog *gentle* exercise in the open air. For a small dog give only half the dose of strychnine, or one-twelfth of a grain. *Remember, a dose of one grain of strychnine will kill a dog instantly.*

**FITS.**—Any unusual excitement, sudden exposure to cold or wet, suppressing the natural secretions, sudden fear or exertion after feeding, worms, etc., or young dogs fed upon meat, are liable to fits. When the fit has seized the dog, he must be kept quiet, in a dark place. When the opportunity presents itself, use the following injection: Sulphuric ether, 3 drachms; laudanum, 6 scruples; cold water,  $4\frac{1}{2}$  ounces. *Never suppose a dog in a fit is mad; a rabid dog never froths at the mouth.*

**CATARRH.**—Similar to distemper in the commencement, having a greater secretion from the eyes and nose than that disease. It requires good nursing, and give: Spirits camphor, 1 ounce, ether nit., 2 ounces; spirits mindereri, 4 ounces. Teaspoonful twice a day.

**WORMS.**—There are several species of worms that inhabit the intestines of the dog. The presence of worms may be known by the voracious appetite, and the peculiar state of the bowels, which are alternately costive and peculiarly loose and griping. The emaciated look, fetid breath, starting coat and frequent fits are all indications which cannot be mistaken. In early stages, give 15 drops of turpentine, in milk, first fasting the dog twelve hours, then follow by giving 1 ounce of castor oil twelve hours afterward. For small dog, half the above is sufficient.

**MANGE.**—This is the result of unhealthy food and confined living. There are several kinds of mange, known as the red, common and scabby mange. They all readily yield to treatment, if taken in time, but, if neglected, mange is very obstinate; the skin breaks out in blotches, the dog becomes weak and emaciated, the belly hard and swollen, and death ensues. Simple eruptions will yield to a few doses of Epsom salts and a change of diet, which should consist of plenty of vegetables. If overfed, reduce in flesh by exercise. Use the following ointment: Whale oil, 8 ounces; sulphur, 8 ounces; oil tar,  $\frac{1}{2}$  ounce; blue ointment,  $\frac{1}{2}$  ounce. Well mixed.

The dog should be well washed with warm water and soap, and dried, the ointment then applied to the *actual skin*. Keep bowels open by proper food. In three days wash the dog, and, if necessary, repeat the operation.

**ENTERITIS.**—An inflammation of the intestines, and a disease to which dogs are very liable, as the intestines are peculiarly irritable and subject to inflammatory action. This tendency is often much increased by the artificial life which the animal leads. Its prevailing cause, however, is exposure to cold, especially after severe exercise, or lying on cold or wet ground and stones. In this complaint the dog refuses all food, but drinks frequently; his stomach is hot and tender, and painful to the touch. The animal attempts to reach his flanks with his mouth, and his cries are frequent and piteous. The dog should be placed in a warm bath and his stomach gently rubbed until the pains abate, after which the castor oil mixture may be given in small quantities, assisted by mild injections, especially if the animal is costive. Avoid, by all means, calomel or any irritating drugs. Feed light, nourishing food.

**FLEAS, LICE, ETC.**—These troublesome pests may be removed from small dogs by the common insect powder of the druggist, or by washing with carbolic or common soap, if a thick lather is made on the dog, and allowed to remain for a day; then wash off.

FOR A LARGE DOG.

Spirits of camphor.....	8 ounces,
Turpentine.....	4 ounces,
Carbolic acid.....	1 ounce.

A short ounce, added to a full pint of warm water, and well rubbed into the skin of the dog, will be found effectual.

**RETENTION OF THE URINE.**—Easily known by the attempt of the animal to void the urine, which is usually discharged drop by drop. Sometimes a complete stoppage occurs, the belly becomes hot, swelled, and tender to the touch; the dog becomes strangely irritable, shows great excitement and trembling of the hind limbs. The following remedy will be of value:—

Nitre.....	8 grains.
Foxglove.....	$\frac{1}{2}$ grain.
Ginger.....	3 grains.

Mix with linseed meal and water, for a large dog, or less, according to size.

REMEDIES.

FEVER POWDER.

Calomel.....	1 grain.
Nitre.....	5 grains.
Foxglove.....	1 grain.

Mix. Give twice a day as a pill.

For a more active one:—

Nitre.....	1 drachm,
Sweet spirits nitre.....	3 drachms,
Spirits mindereri.....	1 ounce,
Camphor water.....	$6\frac{1}{2}$ ounces.

Mix. Give two tablespoonfuls every six hours.

## TONIC.

Disulphate of quinine.....	8 scruples,
Sulphate of iron.....	8 scruples,
Extract gentian.....	6 drachms,
Extract quassia.....	2 drachms.

Make twenty pills. Give three daily.

Or give—

Sulphate of quinine.....	8 grains,
Extract hemlock.....	2 grains,
Ginger.....	2 grains.

Mix. Give above dose twice a day.

## ALTERATIVES.

Iodide of potassium.....	4 grains,
Liquid extract of sarsaparilla.....	1 drachm.

Mix in a little water. Give twice a day.

Or—

Cod liver oil.

Tablespoonful twice a day.

## INJECTION FOR SPASM OR COLIC.

Laudanum.....	2 drachms,
Sulphuric ether.....	2 drachms,
Turpentine.....	2 drachms,
Gruel.....	8 ounces.

Inject with a syringe.

Or—

Turpentine.....	$\frac{1}{2}$ ounce,
Castor oil.....	1 ounce,
Laudanum.....	2 drachms,
Gruel.....	1 pint.

Inject as above.

## STRONG PURGATIVE INJECTION FOR COSTIVENESS.

Castor oil.....	$\frac{1}{2}$ ounce,
Turpentine.....	3 drachms,
Common salt.....	$\frac{1}{2}$ ounce,
Gruel.....	8 ounces.

Mix and inject.

Warm soap and water will answer in light cases.

## INJECTIONS FOR FITS.

Sulphuric ether.....	3 drachms,
Laudanum.....	6 scruples,
Water (cold).....	4 ounces.

Use freely.

## COUGH BOLUS.

Powdered ipecacuanha.....	$1\frac{1}{2}$ grains,
Powdered rhubarb.....	2 grains,
Powdered opium.....	$1\frac{1}{2}$ grains,
Compound squill pill.....	2 grains.

Dose. Give morning and night.

## TO RELIEVE COLIC OR DIARRHŒEA.

Laudanum .....	1 drachm,
Sulphuric ether.....	1 drachm,
Camphor water.....	1 ounce.

Dose, all or part.

Or—

Castor oil.....	1 tablespoonful,
Laudanum.....	2 drachms.

Dose. Give as above.

## CASTOR OIL MIXTURE.

Castor oil.....	3 ounces,
Syrup of huckthorn.....	2 ounces,
Syrup of white poppy.....	1 ounce.

Dose, a tablespoonful.

[*Note*.—Where buckthorn cannot be obtained, syrup of senna may be substituted.]

## EMETIC.

Tarter emetic.....	1 grain,
Calomel .....	1 grain.

To be given in beef tea.

Or—

Table salt.....	1 teaspoonful,
Mustard.....	$\frac{1}{2}$ teaspoonful,
Warm water .....	$\frac{1}{2}$ pint.

Give as a drench.

[*Note*.—All doses mentioned are on the basis of a thirty-pound dog. For smaller dogs give less in proportion.]

## HOW TO ADMINISTER MEDICINE.

If it is a small dog, simply grasp him by the muzzle with the left hand, covering his teeth with his upper lip, which will prevent the animal from biting; be firm, and as the dog opens his mouth, quickly drop the pill or liquid past the roots of the tongue with the right hand; keep the head elevated till you are satisfied it is swallowed, allowing the animal to close his mouth to assist in the operation. One person is generally sufficient if judgment is exercised; otherwise, a second may assist to hold the medicine. Sometimes liquid may be given by making a pouch of the side of the face, between the cheek and teeth, and inserting the neck of a strong bottle containing the fluid. Give only a swallow at a time, that the dog may not choke. In the large dogs pills may be covered with tissue paper and inserted into a piece of raw meat or liver, giving the dog an unprepared piece first to throw him off his guard. Many of the tasteless medicines may be given in beef tea, etc. Do not prepare your medicine in sight of the dog, as he will become suspicious and perhaps resist. When all is ready, give it as gently and quickly as possible, that the dog may not be alarmed. Young puppies will readily take castor oil, etc., in their milk.

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### VEGETABLE AND FLOWER SEEDS FOR HOME USE AND EXPORT.

A blaze of fiery color seen from the car windows is evidence enough that we are passing the Fordhook Farm of W. Atlee Burpee—a man who needs no introduction to anybody on the American continent who has a garden. Soon comes the Doylestown station, then a buckboard ride, and we are quickly winding along the roads, through the fields and over the hillsides of a fine old Bucks county farm, to a lookout from which we view a wide stretch of this magnificent rolling farming land of rich and fertile Pennsylvania. At our backs is a thrifty wood which well shelters the sunny slopes in front of and just below us, where the seed crops are growing. In the middle distance are seen flourishing market gardens in sheltered nooks and stock farms on the green hills. Far away stretch high elevations and woodlands that seem, and may be, forests.

At the entrance from the highway we had passed the splendid two-acre bed of scarlet *Salvia* which flashed its welcome while yet we rode with the iron horse. . . . Our hot climate is just suited to this flame-colored beauty, and our English, German and French brothers are all glad to buy *salvia* seed from Fordhook and three other American stocks. Just beyond was a gang of boys harvesting the fruit of an old boyhood favorite, the "cherry tomato" or *alkekengi*, lately "introduced" as "Improved Ground Cherry and Cape Gooseberry." It is a delicious thing any way and deserves a place among choice dessert fruits. . . .

. . . . Now long, bright bands across the fields of balsam and phlox dispute attention with plots of smart peppers and areas of tomatoes. And we are hurried on to the place of central interest.

This is the great trial ground, of which it is useless to attempt an account, for the vegetable trials alone number 2,386, to which we must add 2,097 of flowering plants, to make a bewildering array which are the constant study, throughout the season, of two or three trained observers, whose duty it is to carefully note and record every valuable characteristic and fault. Though description fails, yet the trial ground is the most important feature of the seed farm. For here are tried all the new introductions obtainable in any country, alleged new things, new seedlings, productions of the hybridizer's art, and discoveries from the fields and woods not before "introduced"

to cultivation. Secondly, the trial ground serves the purpose of detecting spurious "introductions" or reintroductions of old varieties under new names by ignorant or unscrupulous parties. Here also the various selections and strains of standard varieties from different sources are compared side by side. . . . By these trial-ground comparisons, one may know exactly the comparative merit of his own and other stocks of the same variety. This principle holds good for many varieties of largely cultivated vegetable and flowering plants and fruits.

Thirdly, and not least in importance, are the yearly tests here for vigor, quality and trueness to name and type, of all the varieties of seeds offered for sale by the house of which the seed farm is a part. This includes different parallel tests of the stocks of each variety from different sources, and also tests of surplus seeds left over from the previous year's sales. Apart from, but in close relation and recorded with this trial-ground work, are the yearly tests of all seeds for vitality, conducted in special germinating pans, or in earth in the greenhouse. In these means it is seen that the careful seedsman has, in fact, a laboratory and balance wheel for the proper guidance of his business on the sound basis of honesty, fact and high quality.\*

In passing through the long lanes of the trial ground we may notice a few interesting things which the early September storms did not destroy. *Lupinus subcarnosus* (Texas Lupin) is a pretty introduction from Texas. . . . *Cyclanthera pedata* is a graceful and attractive, though less known, sister of *C. esculentus*. . . . *Rumex roseus* is a strikingly handsome rosy-flowered sorrel. The dwarf, *Zinnia tenuifolia*,

\* As a matter of curious interest, we record the number of different plantings or trials of varieties, strains and stocks was this year 4,483, of which 2,386 were of vegetables, and 2,097 of flowering and ornamental plants, comprising in part, beans 214, borecole or kale 40, beets 51, cabbage 178, carrot 31, cauliflower 20, celery 44, sweet corn 72, cucumbers 83, herbs 34, lettuce 130, muskmelon 125, watermelon 203, onions 72, peas 105, pepper 45, potatoes 48, radishes 67. In flower seed, etc., amaranthus 17, asters 201, balsams 92 (not counting 28 growing for seed), calliopsis 19, campanula 28, candytuft 21, canna 15, celosias 15, centaurea 12, clarkia 15, annual chrysanthemums 18, convolvulus 10, dahlia 19, dianthus 57, gaillardia 38, godetia 21, hibiscus 12, ipomoeas 47, larkspur 43, sweet peas 52, other lathyrus 18, lobelia 20, lupins 32, lychnis 12, marigold 16, mirabilis 16, mignonette 16, pansy 66, petunia 52, poppies 46, phlox drummondii 42, solanum 19, tropæolum 28, verbena 18, violas 14, wallflower 11, zinnias 37, and many others in lesser numbers.

is evidently a desirable border plant, though hardly to be compared with the elegant Lilipt-flowered Zinnia, of which in another field Mr. Burpee has an acre or so in seed bearing; the lilipt plant is of medium size, while the flower is truly liliptian for a zinnia, only 1 to 2 inches in diameter, covering a wide range of color and very graceful and pretty. But we must pass on, only noting the worthy appearance of *Bidens ferulifolia*, *Dolichos atrosanguineus*, *Galactites tomentosa*, an ivy-leaved cypress vine, a luxuriant mass of cultivated pennyroyal demanding a trial for lawn use under trees, the scarce and valuable *Torenia Fournieri*, and scores of other things that now we have no space even to mention, for we must see more of the seed crops. . . . .

The soil is a heavy loam, well drained by nature and art, hence well adapted to its uses. Soil is of great importance in seed growing. . . . .

. . . . . Thus it is that Fordhook Farm can produce only a small portion of the seeds required for the trade of the house of Burpee. Here are grown chiefly the varieties that do best on this soil, and the original "stock seed" to be furnished to hundreds of skilled growers in other parts of this country and Europe.

Among vegetables those which thrive best here are tomatoes and peppers, of which there are 8 acres of one and 6½ of the other, a few acres of new beans, a large area in new cucumbers and melons (this year a failure, from excessive rains). Ruby King, covering 3 acres, is Mr. Burpee's choicest pepper, now the leader on two continents, and favorably known for its mild, sweet flavor and excellence for salads and pickles. Golden Upright has a pretty yellow fruit, and here demands an acre to itself. Celestial is a beautiful plant with its small red and yellow fruits, the coloring depending on maturity. Coral Gem well sets off its ½-acre bed with gem-like fruits. Procopp's Giant is a monster pepper, often 6 inches long, thick in proportion and of irregular shape, borne on a small plant all out of proportion to its burden of fruit. Red Etna is a distinct new pepper; fruit of medium size, erect on its stem, sweet and mild; plant compact and of medium size. . . . .

Tomatoes develop in perfection here. Of all the large sorts, Matchless and Ignotum are placed at the head for smoothness, solidity (often nearly minus a seed cavity) and quality, though not so rich flavored as Turner's Hybrid (Mikado), which is also the most profuse bearer and very healthy.

Advance, in spite of the great rivalry in so-called early varieties, at Fordhook is still the earliest good tomato, full as early as Prelude and twice its size. Lorillard succeeds well outdoors and is remarkably solid. The unequalled Peach

tomato has been a joy on our own table, keeps up its beauty and fine character in this large field culture. It is highly prolific, seems perfectly healthy, never even specks, and has a decidedly beautiful peach-like appearance.

A white cucumber is an interesting novelty. It came from Palestine, where it is said that children are sent off to school each with three small cucumbers and a piece of bread for luncheon. The White Pearl is a pure white when of table quality; the flesh is crisp, mild and pleasant. Curiously enough, the fruit clusters around the "hill" so closely that some rest on top of others; unfortunately, or otherwise, it seeds so poorly that it can be only a fancy variety for home gardens. Now we must skip the fleshy bean that is sliced for use like a cucumber, the Alpine strawberries, the Mammoth onions and a pretty red-stalked corn, to pass on to the most remarkable of new vegetables.

This is a true large-seeded dwarf lima bean, a type that gardeners and seedsmen have been striving for these many years. Of the three types of lima beans—large lima, Dreer's lima and Sieva—dwarfs of both the two last named have been produced heretofore, but careful examination of the plants, the seeds and the growing crops puts beyond dispute the fact of this being of the true large lima type. The plants grow 18 to 24 inches high, are stocky, well branched and well loaded with their burden of the big pods so familiar on the climbing variety. Our picture is a careful drawing of one of the plants which bore over 50 pods. Mr. Burpee is to be congratulated on being the introducer of so valuable a new vegetable to American gardens. There has been nothing to equal it in vegetables since the early days of the Hubbard squash and Fottler's Brunswick cabbage.

Now is a good time to stop this recital, after the excitement of that lima bean. We can only spare a pleasant memory for the seven acres of phloxes in 26 colors; the five and a half acres of balsams in 28 varieties, some of them superb sorts, excellent even as florists' cut flowers; the long-named *Petunia hybrida grandiflora superbissima*, seed of which costs fifty dollars an ounce to produce; the nearly three acres of poppies, including the gorgeous Shirley, long-enduring Fairy Blush and the handsome California Golden Gate; the acre and a half of Japanese nest egg gourds, and scores of other interesting things. The distant green houses even were skipped in the programme, the seed-cleaning methods were hastily viewed, the hospitable home and the musketry-like parting salute from half a hundred collie dogs in their kennels as the visit was ended—these all swell the regrets and pleasant impressions of too short a day at Fordhook Farm. ' E. H. L.

PHILADELPHIA, March 24th, 1890.

# ANNOUNCEMENT.



In this new edition for 1890 we have added the pages from

Burpee's Farm Annual for 1890,

descriptive of our FORDHOOK FARM and of THE THOROUGHbred STOCK and FANCY POULTRY, bred and constantly for sale by us. These additional pages, while in the nature of an advertisement, will thus be permanently preserved and serve to show the ruling prices for first-class breeding stock at this date.

In conclusion, we would state that we are always pleased to mail our annual ILLUSTRATED CATALOGUE upon application, and to answer any questions by letter. *All letters should be addressed to Philadelphia.*


W. ATLEE BURPEE & CO.,

SEED WAREHOUSES: { 475 & 477 North Fifth Street,  
476 & 478 York Avenue,

FORDHOOK FARM:  
DOYLESTOWN, PA.

PHILADELPHIA.





# BURPEE'S

## THOROUGHbred STOCK

PHILADELPHIA, March 1st, 1890.

### TO FARMERS AND BREEDERS:

For many years we have been extensively engaged in the breeding of choice THOROUGHbred SWINE, SHEEP, SCOTCH COLLIE DOGS AND FANCY POULTRY. In the following pages we have endeavored to give concise and correct descriptions of the different breeds, of all of which we have first-class stock for sale. Wherever possible, we are always glad to have purchasers inspect the stock and make their own selections, but as many of our customers live at too great a distance to make personal selection, we use our best judgment in the choice of such animals and fowls as the purchaser desires.

In the many thousands of shipments we have made the past seventeen years we have had but very few complaints. We make it an invariable rule never to send out any but first-class stock, fully worth the price charged, and which we would be willing to receive ourselves at the price, were the situation of buyer and seller reversed. WE GUARANTEE all stock sold by us to be THOROUGHbred and AS REPRESENTED IN EVERY PARTICULAR, in so far that should there be any cause for dissatisfaction, the purchaser is at full liberty to immediately return the stock to us, transportation charges paid, and we will cheerfully refund the purchase money. As we breed and handle first-class stock only, we cannot compete in prices with many breeders who are less particular as to the quality of their stock. The prices named in this catalogue are very reasonable for the quality of the stock we supply, and as it costs no more to raise good stock than poor, purchasers should always secure the best—the returns will more than pay the greater cost of the original investment.

**SHIPMENTS OF LIVE STOCK** can be made safely at all seasons of the year, and we invariably guarantee safe arrival in good condition. All orders are immediately acknowledged, and, except in special cases, are promptly filled, notice being given by mail of the shipment. If the purchaser lives at a distance from the station, it is well to give us the address of some friend who can be on hand at the Express Office to take charge of the stock upon its arrival. Customers residing near ports on the Atlantic coast, as well as in South America and the West Indies, can have their stock shipped from Philadelphia or New York by steamer, at low rates of transportation.

**HOW TO REMIT.** Cash accompanying the order can be sent at our risk, by P. O. money order, draft, express, or small sums in registered letter. If desired, we will send Thoroughbred Live Stock and Seeds by express, C. O. D., to points east of the Mississippi, provided the purchaser, if a stranger to us, gives satisfactory reference in Philadelphia; or in place of this, remits 25 per cent. of the order, as a guaranty of good faith. C. O. D. shipments involve extra expense to the purchaser, and give us more trouble. Every one can easily assure themselves of our responsibility; therefore there is scarcely any need to ship in this manner. Live stock ordered by freight or vessel cannot be sent C. O. D., neither can seeds when ordered by freight or mail.

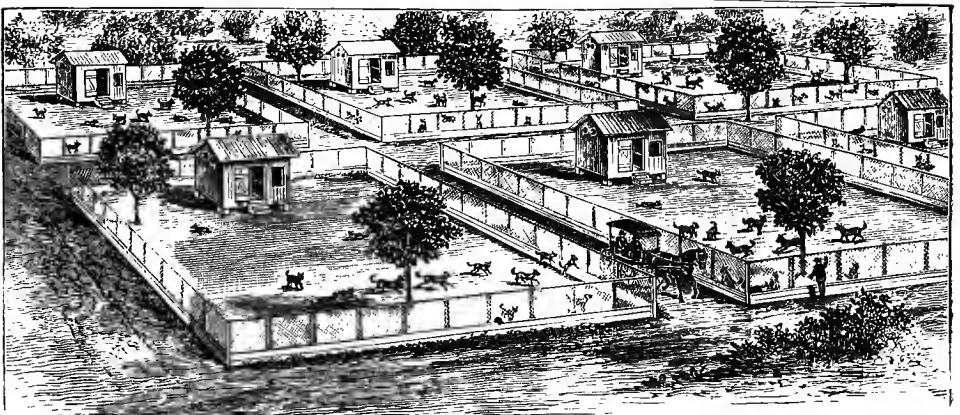
We would remind our old customers that we can at all times furnish stock of fresh blood, *not akin* to that which they have previously purchased from us. We regret that our catalogue is so crowded that we have not space to print many of the thousands of testimonials we have received from customers in all parts of America, as well as from foreign countries, to whom we have sent thoroughbred animals and fowls. The fact that the same patrons are retained year after year is the best guarantee of the good quality of our stock. Any further information will be cheerfully given by correspondence.

## W. ATLEE BURPEE & CO.,

FORDHOOK FARM,  
DOYLESTOWN, PA.

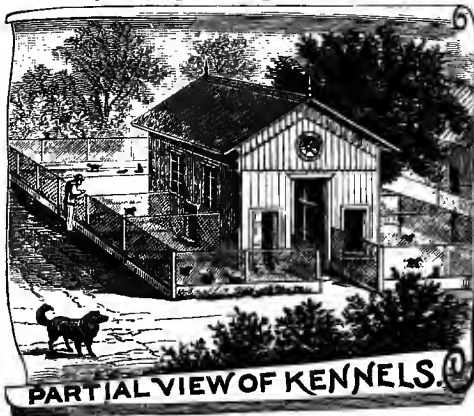
475 and 477 North Fifth Street,  
476 and 478 York Avenue, } PHILADELPHIA.

Please address all correspondence to PHILADELPHIA.



## FORDHOOK KENNELS.

In the illustration above is shown a portion of the Kennels at FORDHOOK FARM devoted to the breeding of **ROUGH-COATED SCOTCH COLLIES**. While not elaborate in structure, these Kennels have been built with a view to maintaining the best health and condition of the dogs; it will be noticed that each is separated from the other by a wide road way. The building and yards shown at the bottom of the illustration are devoted to young puppies when first whelped, which afterward, when weaned, are removed to larger runs, not shown in the engraving. Having, in connection with the Kennels, a large area for exercising, the dogs are kept in the best possible condition and the puppies are strong and well developed.



PARTIAL VIEW OF KENNELS.

The steady increase in our sales of **SCOTCH COLLIES** has urged the necessity of making greater preparations than ever for an increased demand the coming spring. Besides importing a number of fine dogs last year, we have recently added new breeding stock, embracing the combined blood of the great winners, *Robin Adair*, *Bendigo* (who sold in New York for \$1500), *Gilford* and *Excel*. **SCOTCH COLLIES** of better breeding cannot be found anywhere than at **FORDHOOK KENNELS**, as will be noticed by the abridged pedigrees published on page 4. Stud cards mailed free on application. Cabinet photographs of Imported *Clifton Chief* and *Fordhook Squire* for sale at 25 cts. each.

**ABOUT PRICES.** We are always pleased, wherever possible, to have customers visit our Kennels (cards of admission can be obtained at our Philadelphia Office) and make selection personally, but rarely fail to suit purchasers when the selection is left entirely to us. Our price for first-class thoroughbred Puppies, 2 months old, full pedigreed and entitled to registry in American Kennel Club Stud Book, is \$15.00 each for males, \$12.00 for females, or \$25.00 per pair, mated not akin. While these Puppies are first-class and give entire satisfaction to the purchasers, yet for *extra choice* puppies, bred direct from our finest imported stock, we charge \$20.00 and \$25.00 each, or \$40.00 to \$50.00 per pair. Every puppy sold is accompanied by a full and authentic pedigree, which entitles it to registry. Those of our customers who desire to have the puppies registered should remit \$1.00 extra, and we will attend to same and return certificate signed by the Secretary and giving stud book number of the dog. Older dogs will be a matter of special correspondence.

## ROUGH-COATED SCOTCH COLLIES.

THE MOST FAITHFUL, MOST INTELLIGENT AND MOST USEFUL OF DOGS.

Descriptive of these popular dogs, which we are breeding extensively, we cannot do better than republish the following, condensed from an article on THE COLLIE, in *The Century*, August, 1885, written by Mr. T. H. Terry:—


"The outer coat is long and rough, expanding into a frill or ruff about the neck, while a second or under coat is soft and wooly, very warm, and, like seal-skin, impervious to moisture. The coat is weather-resisting; for the Collie's duties compel him to be out on the windy moors and bleak hillsides in all sorts of rough weather. The head is long and sharp, not domed in

## BURPEE'S ROUGH-COATED COLLIES.



skull or snipy in muzzle; ears small and semi-erect; chest deep, with plenty of lung room; back broad and muscular; fore-legs well under him, and should be strong and straight, not heavy; hind-legs well bent; tail bushy and carried low; in general form lithe, symmetrical and graceful, and fairly light, giving one the idea of great pace; altogether a handsome dog—one that poets have celebrated in their verse and artists loved to paint. His carriage is dainty and natty, as that of a fox; nor does the likeness end there. Take the human-like intelligence ascribed to the hero of the old romance of 'Reynard the Fox,' let the craft and duplicity be refined and transmuted into devotion to his master, and you have the characteristics of the Collie's nature. Beauty, intelligence and usefulness are all to be counted in the highest degree to his credit. In sagacity he excels all others of the dog family. His is not the intelligence of the trick dog: one look into his 'guy wyse' eyes will tell you that for antics and pranks like those of the showman's 'troupe of canine artists' your Collie has the supremest contempt; a dog's life is to him quite too serious to be wasted in such frivolities; his mission is hard work; he has duties to perform, as had generations of his ancestors before him. His one particular task is to care for flocks of sheep, and because he does this and does it so well, he may take rank as the most useful of all dogs. . . . . A well-trained and experienced Collie appears to rule a flock of sheep by the force of his dominant nature, just as a good horseman controls a horse. He is often equally successful in managing unruly cattle, and sometimes exercises the same supremacy over other dogs. . . . . Of late years the Collie has been brought into public notice by the sheep-dog trials held in various parts of Great Britain. In such competitions the best working dogs have been entered to exhibit their skill in herding and folding sheep, and their wonderful displays of sagacity have been witnessed by many thousands of spectators who would never have the opportunity to see the dog in his native home.

"The natural and direct result of this making his merits known is that the Collie has been taken up by society as a pet: he has exchanged the pasture for the parlor, and where once he had kicks now finds caresses; his lines have fallen in pleasanter places, and with all his good fortune his coat is growing more glossy, and his disposition sweeter. His amiable traits make him especially fitted to be a companion for ladies and children. The Collie is to-day, perhaps, the most fashionable dog in England. Americans are prone to follow their British cousins in such affairs, and the Collie is fast becoming fashionable in this country, and is now often to be seen on the lawn or sedately promenading the city avenues. . . . . If the American farmer had a better understanding of the Collie's usefulness as a protector of his property, gentle, affectionate and faithful guardian and playmate for his children, and assistant in the care of his stock, I am persuaded that many a worthless, sheep-worrying cur of uncertain breed would speedily end his days, to give place to the worthier shepherd dog."

 For Scotch Collie Pedigrees see next page.

## SCOTCH COLLIE — PEDIGREES.

The purchaser of a fine dog naturally desires to know in advance something of his pedigree, therefore we furnish below a brief outline of some of the pedigrees of our Scotch Collies, and with every pup and dog sold we forward full pedigree, which entitles it to be registered in the *American Kennel Club Stud-Book*, for which stand the letters A. K. C. S. B., used below, and to which most of the numbers refer. Of stud dogs at **FORDHOOK KENNELS**, we name:—

**IMPORTED CLIFTON CHIEF**, A. K. C. S. B. Book, 10,445, litter brother to *Characterac*, pronounced the best Collie living, and for whom \$500 has been refused. **Clifton Chief** is by "CREMORNER," K. C. S. Book, 21,010, by Champion "Rutland," 13,896, ex "Patience," 14,340, by "Clydesdale," 11,833, by "Old Cockie," 2847, ex "Maude," by "Old Cockie," 2847.

DAM "BARRY ROSE," by "Cliftonian," 18,702, by "Staffa," 10,762, ex "Gazelle," 21,093, by "Champagne," 11,835, ex "Brenda II," 10,781.

"Clifton Chief" is a large, dark sable dog, with long head and semi-erect ears. He has an enormous coat, with very dense undercoat, good legs and feet, and a beautiful mane and frill. A glance is sufficient proof of his speed and working qualities. Weight in condition, 63 pounds. Height, 24 inches, and he is well broken.

**IMPORTED FORDHOOK SQUIRE**, A. K. C. S. B., 10,454. A grand, golden sable dog, with small ears, well carried, splendid head of good length, very heavy outer coat, abundant undercoat, and a perfect brush. A CABINET PHOTOGRAPH (from which the engraving on preceding page was made) will be mailed upon receipt of 25 cts. His sire is one of the most noted Champion dogs of England, having repeatedly won the sixty guinea trophy, and his dam is full sister to Champion "Miss Posey."

SIRE, Champion "THE SQUIRE" E. 15,767, by Champion "Charlemagne," 10,491, ex Champion "Flurry." DAM, "WANDA," by Champion "Donald," 13,879, ex Miss Fox," by "Trevor," ex "Old Meg," by "Trefoil."

**IMPORTED BOBBIE**, A. K. C. S. B. Book, 5911. Black, with rich golden-tan markings; with white on breast and feet. Bobbie has particularly fine symmetry, good head and brush, and a very dense coat. He was winner of the first prize Silver Medal at Philadelphia, 1885. There were thirty-seven Collies on exhibition, among which was the justly celebrated Bruce of the Fyde, but Bobbie took the blue ribbon. His sire was Napier, bred by Mr. Robert Wilson, of Sheriffside, Haddington, Scotland. His dam was Fly. Napier was got by Mr. Wannop's dog Tyke, winner of first prize at Haddington show, 1880.

**THE BARD OF FORDHOOK**, A. K. C. S. B. 11,631. Imported *in utero*; rich dark sable with white markings, and an excellent coat of good texture. Winner of third prize the Collie Club Futurity and Produce Stakes, 1889. SIRE, "CHAMPION SMUGGLER," 18,560, by Tramp II, 12,972. DAM, "WHIRLPOOL," 10,517.

**FORDHOOK SCOT**, A. K. C. S. B. 11,599. Imported *in utero*; color rich golden sable, while his coat, mane, frill and brush are very abundant. SIRE, "CHAMPION HOPSCOTCH," 21,025. DAM, FRISK, 11,656.

We have space only to allude briefly to a few of the many choice brood bitches at **FORDHOOK KENNELS**:—

**IMPORTED "Whirlpool"**, A. K. C. S. B. 10,517. Rich dark sable. She has a very long and finely-shaped head, good, heavy coat, very long brush, small and semi-erect ears. SIRE, "LANCAIRE HERO," winner of first prize Cardiff and second prize Birmingham. DAM, "DAPHNE II," by "Banker," ex "Daphne," by Mac, ex "Frisk."

**IMPORTED "Miss Constance"**, A. K. C. S. B. 10,504. A beautiful orange, fawn and white. SIRE, "WELLSBOURNE WONDER" (Litter brother to *Metulch Wonder*), by Selton E, 18,704, ex "Minnie," by "Loafer," 13,637, ex "Catrin," by "Bonnie Laddie." DAM, "SWEET PHILLIS," by Champion "The Squire," 15,767.

**Fordhook Cypress**, 14,546. A rich golden sable, with white markings. SIRE, Imported "GILFORD," 5932, DAM, "HEATHER BELLE," 6000.

**IMPORTED "Frisk"**, winner of third prize, K. C. Show, at Barnes, June, 1883, and dam of *Sir Noel*, first prize at same show. A grand sable-and-white bitch. SIRE, "ROMULUS" E. 15,621, winner of twelve prizes, by Champion "Wolf," 9448, ex "Hazel," 12,883, by Champion "Charlemagne." DAM, BLYTH, by Scott, ex "Floss" (Litter sister to Champion "Lorna Doon").

**Lady Scott**, A. K. C. S. B. 6101. H. C., at Pittsburgh, Pa., 1886; she was exhibited when only nine months old, competing against dogs eighteen months old. SIRE, Champion BRUCE OF THE FYLDE, A. K. R. 145, winner of 25 prizes in England and America. DAM, Champion ZULU PRINCESS, 896, winner of many cups, medals and prizes, by Champion Marcus, 7526.

**Daisy Dean**, A. K. C. S. B. 5987. A grand, lofty bitch, with an unusually heavy coat; color, rich dark sable. Winner of three first prizes, as follows: Boston, puppy Class; Boston, open class, and New York; the only times exhibited. SIRE, Champion "ROBIN ADAIR," 5953. DAM, Imported "SHEILA," 6040.

**Fordhook Pearl**, 14,543. This bitch, although young, possesses grand points as well as the true blood, and is the making of a winner. SIRE, "BENDIGO," 6808, the dog that sold in New York for \$1500, and whose sire, *The Squire*, is the sire also of our *Fordhook Squire*. DAM, "LADY ELLIS," 6009, winner of three firsts and special prizes in America.

**Fordhook Celosia**, 14,029. A beautiful black and tan bitch, with white markings. SIRE, Imported RIFON, 12,522, by Champion Dublin Scot, 5924, ex Rubin, 18,421. DAM, LADY HAIG, 7416, by scotland YET.

Among others of our brood bitches (our space not allowing us to give pedigrees here) we would mention *Heather Belle*, 6000; *Fordhook Marigold*, 14,544; *Fordhook Abulion*, 14,945; *Fordhook Muse*, 14,028; *Sable Beauty*, 6521; *HIGHLAND MARY* II, 2601; *Merry Made*, 2719; *Sweet Nancy*, 2731; *Fordhook Jane*, 13,288; *Fordhook Rose*, 13,287; *Fordhook Aster*, 13,271; *Pershshire Lassie*, 4249; *Lady Haig*, 7416; *Fordhook Fleet*, 10,493; *Fordhook Flossie*, 11,654; *Sybil*, 9687; *Nancy*, 9679; *Meg*, 9677. All of these and others can be seen at our kennels.

### A FEW TESTIMONIALS.

FRANK A. ELWELL, 152 Pearl St., Portland, Maine, April 17th, 1889, writes:—I received my Collie Kite all right, and it was just what I wanted. Am greatly pleased.

W. H. PERKINS, Waterbury, Conn., June 13th, 1889, writes:—I received the Collie June 11th, and was very much pleased with it and prize it highly. There are lots of Collies here, but I can beat them all.

WM. STILLZ, Louisville, Ky., Dec. 5th, 1888, writes:—The Collie came to hand all O. K. Am greatly pleased with her, and could not have picked one to suit me better in color had I selected her myself.

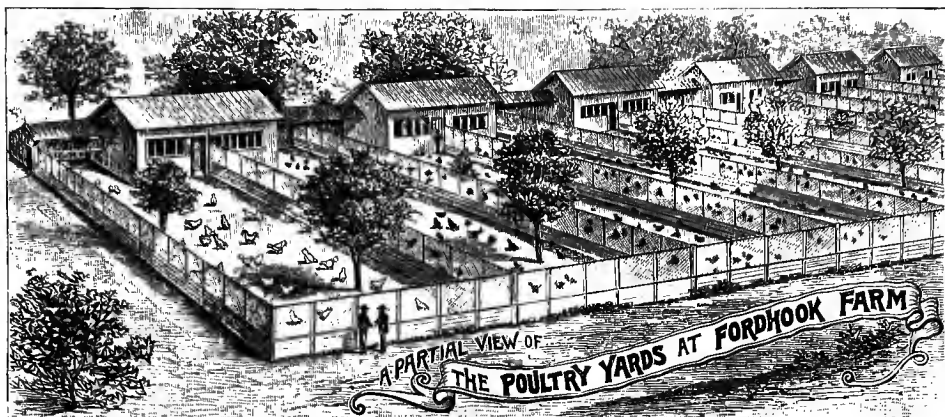
E. H. DIMICK, Little Shasta, Cal., March 8th, 1889, writes:—I received my Collie pups in fine order. I would not take twice the amount I paid for them. Everybody comes in to see the great pups.

Mrs. JOHN AKERS, Akersville, Pa., Dec. 24th, 1888, writes:—The Collie pups I got of you are beauties. They could be no better. I would not take one hundred dollars for them. They can let down bars, open gates, take cattle, sheep and horses to the fields as good as any person. They drive so gentle, so good for rats and mice, so watchful. No strange dog dare come inside of the yard.

JULIAN N. BANTA, DeLand, Fla., October 15th, 1889, writes:—Gentlemen: The pair of Collies, Fordhook Louise and Fordhook Belmont, came by express last night. They are exceedingly nice puppies. I was equally surprised to find them so large and a month older than I had bargained for. Please accept my thanks. I have been fairly and most generously dealt with.

E. C. GROSSKOPF, Milwaukee, Wis., June 12th, 1889, writes:—The Collie dog came all O. K. and I am entirely satisfied; could not have made a better selection had I been there in person. I propose to exhibit this stock at the coming State fair. The Collie has made many friends already, and is admired greatly.

T. H. BURGONNE, Cummings, Cal., Nov. 1st, 1888, writes:—The pair of Collie pups came duly to hand. They were received in very fine condition, considering their long journey, bright as larks and as brisk as bees. To say that I am exceedingly pleased with them is only a mild way to express my complete satisfaction. It is only two years since I left Scotland for this country, hence I know something of the Collie of the old country. The male dog in all points is certainly the finest-bred animal I have seen for many a year.



## THOROUGHbred FANCY POULTRY.

For many years we have been extensively engaged in the breeding of high-class land and water fowls, beginning from a natural fancy for fine poultry. We have aimed ever to keep abreast of the times, and to spare no expense to have the very finest stock of each breed, while we have lately adopted several new breeds of fowls described in the following pages, which are sure to become very popular. Besides our large poultry yards and runs on our FORDHOOK FARM, where we are always pleased to see our customers, we also employ several other farms in the breeding of the different breeds, all of which are carefully mated, and of the very choicest stock of each variety. We keep several distinct yards of each variety, so that we can send out stock not akin and suitably mated. As the fowls are all raised in the country, with large grass runs and often with full liberty, they are of much stronger constitutions and much healthier than stock kept in small enclosures in towns. The prices given are for first-class breeding fowls from the very best strains and properly mated. High-scoring exhibition birds will be a matter for special correspondence. We guarantee entire satisfaction in every instance, and if any bird shipped does not suit the purchaser, it can be returned (express paid) and the money will be immediately refunded.

**EGGS FOR HATCHING.** With the present moderate prices of Eggs for hatching, from the finest thoroughbred stock, there is no excuse for the continued existence of so many comparatively profitless barnyard fowls. We guarantee all eggs fresh, true to name and from first-class stock. Frequently chicks of black breeds have some white feathers when hatched—this does not denote impurity, as they will throw them in moulting, and their plumage then becomes solid black. We can ship eggs **only by express**, to any State or Territory. We guarantee that all eggs shipped by us shall arrive at their destination in good order and not broken. We use the utmost care in this particular, having experienced packers. We cannot guarantee any certain number to hatch, as this depends on so many causes over which we have no control; although we have shipped eggs to England, and had eleven out of thirteen hatch, and in one case they were on the road four weeks.

**HOW TO TREAT EGGS FOR HATCHING.** After receiving the eggs, do not put them immediately under a hen, but allow them to remain quietly for twenty-four hours, so as to permit all the fertile germs to recover their natural position, as the constant jarring on the cars is apt to strain the fine fibres. By adhering closely to this, we believe, from repeated experiments, you will get a much better hatch. *We send no eggs C. O. D.*

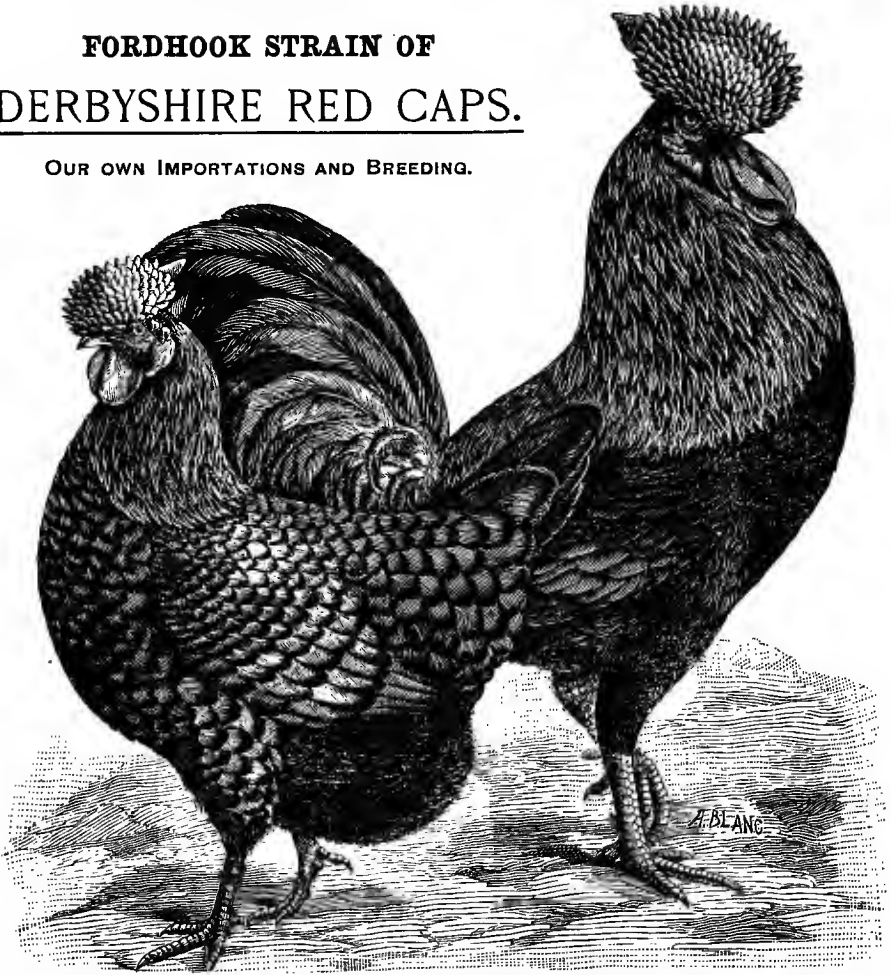
## NEW MAMMOTH WHITE TURKEYS.

This distinct new breed, which is now for the first time offered for sale and exclusively introduced by us, originated as a sport from the Mammoth Bronze Turkeys in a similar manner as most white fowls have come as sports from the darker varieties. The breeder has spent a number of years in perfecting them, and they now throw only an occasional dark poult. They have the general characteristics of the Bronze variety except that they are even handsomer, mature earlier and are rather more domestic in their habits. The plumage is pure white throughout, the heads and wattles bright red, and shanks pinkish or flesh color. *They equal in size the Mammoth Bronze Turkeys* and are certainly a great acquisition as the first and only breed of pure white Turkeys that are both hardy and of large size. They are very ornamental and will doubtless become popular throughout the United States as soon as there is sufficient stock to supply the demand. We can only spare a few birds this year at \$30.00 per pair or \$45.00 per trio, but we will furnish EGGS FOR HATCHING, of the pure stock carefully mated, at the rate of \$5.00 for 6 eggs or \$9.00 for 13 eggs. Considering the amount of labor and expense necessary to establish this breed the price at which the eggs for hatching are offered, in this the first year of introduction, is quite moderate.



## FORDHOOK STRAIN OF DERBYSHIRE RED CAPS.

OUR OWN IMPORTATIONS AND BREEDING.



From their hardiness and wonderful prolificacy as *egg producers*, the Red Caps deserve all that has been said in their favor. Until recently the Red Caps were almost entirely confined to Yorkshire and Derbyshire, England, where they have been prized as a favorite breed for many years. Since our first importations, they have been steadily gaining in popular favor, until at present there is scarcely a show held without a class for Red Caps. They are non-sitters, and as *layers* are unsurpassed by any other pure breed. The eggs are white or tinted, of medium size, averaging two ounces, and are noted for being very rich-flavored. Good hens will frequently lay upward of 200 eggs in a year.

Five years ago our imported fowls were procured of the best stock in England; some of them were prize winners, and from our original importations we have worked up a fine stock of this breed. In the fall of 1888 we imported two more pens, including *Mr. Wragg's first prize winners in Derbyshire*. Although known for a long time in England, the Red Caps are the "*newest*" of all breeds in America, and one of the most valuable ever introduced, both to the farmer and fancier. From five years' experience we can recommend them most thoroughly, both as excellent layers and splendid table fowls. So strong are the claims of this distinct breed as "*The fowl for the Million*" that many of the most prominent fanciers of France, Belgium and Germany are adopting the breed, and England has awakened to the fact that foreigners have been more ready to appreciate one of her native breeds of poultry than the English themselves. The interest taken in America in this new breed of such recent introduction is shown by the fact that a Red Cap Club has already been organized. The Red Caps have just been admitted to the Standard, and for some years to come will be in large demand, until the stock gets generally disseminated.

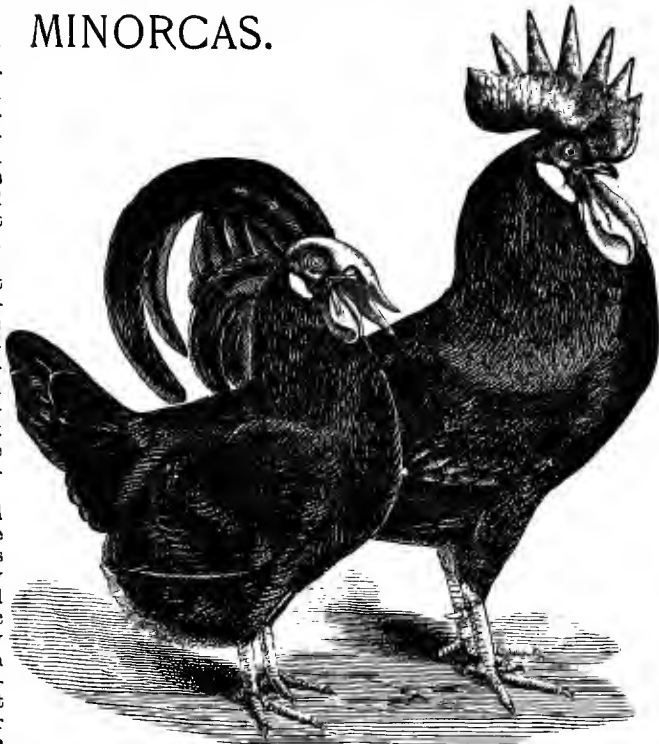
Below we publish a clipping from a recent number of *THE FANCIERS' GAZETTE*, of London, by which our customers can see the stock from which we are breeding:—

"We understand that Mr. B. WADDINGTON, of Chesterfield, has just shipped for Mr. BURPEE, of Philadelphia, ten Red Caps selected from the yards of Mr. WRAGG and other noted breeders; the consignment includes winners of first Derby and first Matlock."

Prices of birds bred direct from the *best imported stock* as follows: Single cockerel or cock, \$5.00 to \$10.00; pair, cock and hen, \$10.00 to \$15.00; trio, \$15.00 to \$20.00. Eggs for hatching, from our *best imported stock*, per 6 \$2.00; per clutch of 13 \$4.00, or 26 eggs for \$7.00.

## BLACK MINORCAS.

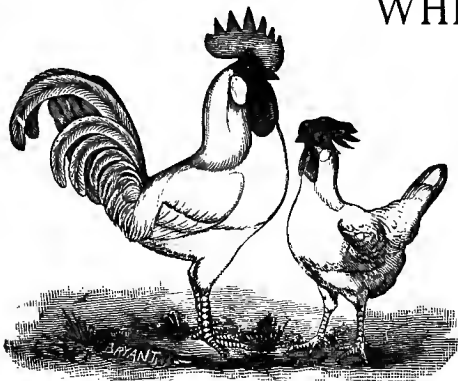
The handsome engraving herewith has been reproduced from a drawing made by MR. LUDLOW, the celebrated English artist, which is generally considered the finest illustration yet made of this stylish and distinct breed of fowls. Although of very recent introduction into America, the Black Minorca is quite an old and well-established breed of Spanish fowls. In general characteristics they somewhat resemble the Black Leghorn, or White-Face Black Spanish, but differing in face from the latter, which is coral red, and while they have the beautiful white ear lobes of the Leghorn, they grow larger in size, and are even more prolific layers. They are a very stylish breed, majestic in carriage, with close, compact bodies, low, well-set legs, and are much stouter in body. The plumage is of a very handsome, rich, glossy black throughout; the color of legs dark slate or nearly black.



PAIR OF BLACK MINORCA FOWLS.

They are wonderfully prolific layers, and their eggs are very large in size and of fine flavor. Mr. STEPHEN BEALE, the well-known English writer, places the Minorcas (including both Black and White) *first among all fowls* as layers, and says, "They will lay from 200 to 225 eggs a year." The chicks are extremely hardy, wet, damp weather seeming to have no injurious effect upon them. They grow quickly, mature rapidly, and are fit for broilers at from 10 to 12 weeks old. Full-grown cocks will weigh from 6 to 8½ lbs. each, and hens from 5 to 7 lbs. Their useful and profitable qualities combined with their handsome appearance must make them very popular. Price, single cockerel, \$4.00; pair mated for breeding, \$8.00; trio, cockerel and two pullets, \$12.00. Eggs for hatching, from our finest imported stock, \$3.00 per clutch of 13; \$5.00 per 26 eggs.

## WHITE MINORCAS.

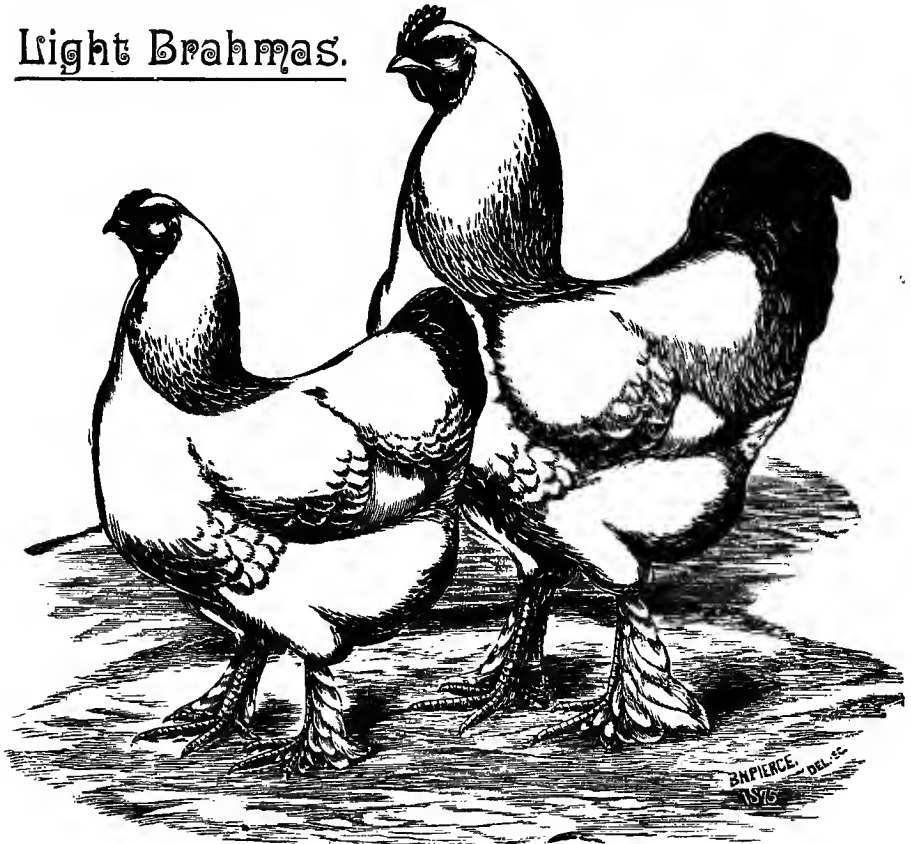


WHITE MINORCAS.

The difference between the White and Black Minorcas is in color, the white having a red face and white ear lobes, as in the Black, which it also resembles in shape, carriage, size and symmetry. The plumage is snow-white, and should be without a single stain. The origin is not definitely known, but it is supposed to be a sport from the Black, as most black breeds occasionally throw white chicks. They are very hardy, and bear confinement as well as any breed. Of four imported White Minorcas received at our yards March 25th, we gathered 240 eggs to June 25th, confined in a small yard—an average of 22½ a month. The eggs were very large, weighing from 2½ to 3 ozs. each. Price, cockerel, \$4.00; per pair \$8.00 trio, \$12.00. Eggs for hatching, \$3.00 per

13; 26 eggs for \$5.00. Strictly pure, Thoroughbred Minorcas, both White and Black, are as yet quite rare, and necessarily, rather high in price.

## Light Brahmas.



A TYPICAL PAIR OF LIGHT BRAHMAS.

**LIGHT BRAHMAS.** This noble fowl is as profitable as it is everywhere popular. Philadelphia has long been famous for its fine strains of Light Brahmas, and ours are as good as the best. They are splendid winter layers, producing the greatest abundance of fine, large eggs, when other breeds have "gone into winter quarters." No breed makes larger or better broilers at eight to ten weeks old. They do not fully develop, however, until eight months old, when cockerels will weigh nine to twelve pounds, and pullets seven to nine pounds each. They are very docile, bear confinement well, and are easily enclosed by a very low fence. Our stock is bred low and deep in the bodies, with shorter legs than the average, and of large size, well feathered, and very uniform in their markings. We can supply some very high-class exhibition birds, and others well mated for breeding. Besides the fine stock we have been breeding for years we have, by judicious crosses, recently included fresh blood of the "Autocrat" and other fine strains.

PRICES: Single cock or cockerel, \$4.00, \$5.00 and \$6.00. Pair, mated for breeding, \$7.00; trio, cock and two hens, suitably mated, \$10.00. Eggs for hatching, 6 for \$1.00, or \$2.00 per clutch of 13; \$3.75 for 26.

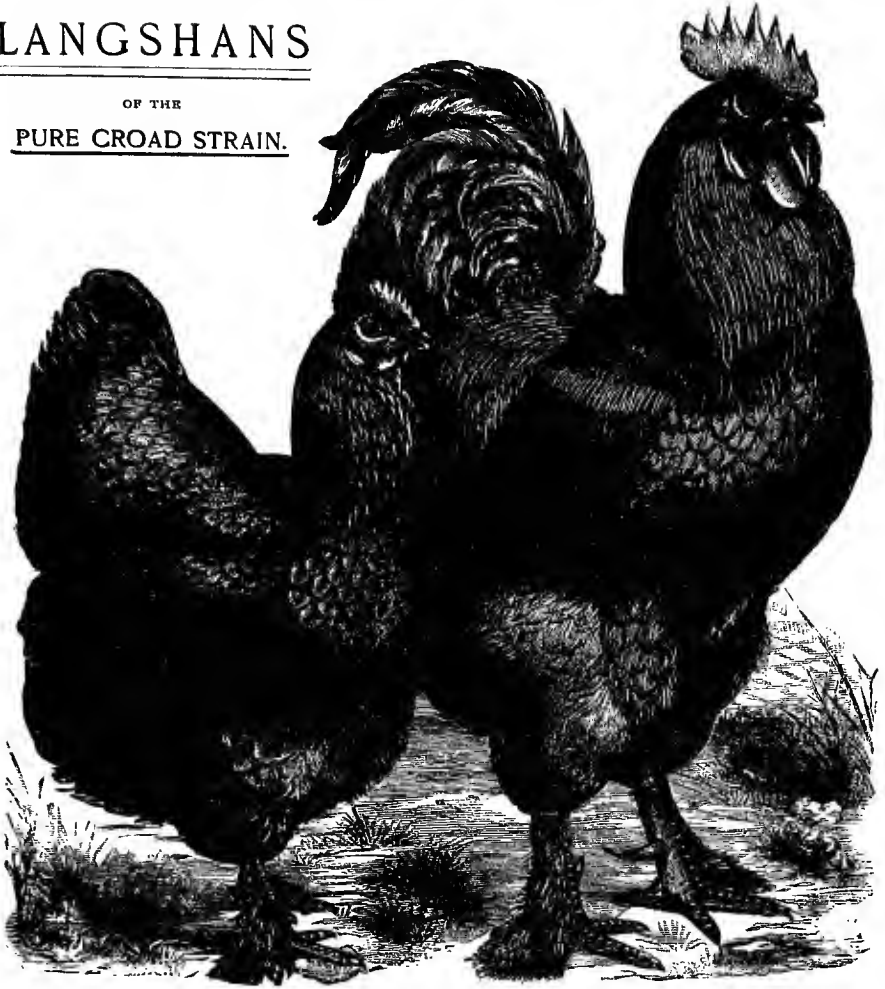
**DARK BRAHMAS.** In form they are very similar to the Light Brahma, being nearly as large and of same form, except that they are set lower. They are early layers in the winter, hardy, and the chicks mature rapidly, making excellent broilers at ten or twelve weeks. They have very beautiful dark plumage. The cock has a pea comb; red ear lobes; hackle silvery white; striped with black and white feathers on head; back almost white; the saddle feathers white striped with black; the tail feathers pure black; the breast is solid black. In the hen the hackle is striped with black; on the body each feather is closely penciled with dark, steel gray. Our birds are bred from the most celebrated strains. It is now conceded, by the best American breeders, that our home-bred strains of Dark Brahmas can no longer be improved by importations.

PRICES. single cock, \$5.00; pair, mated for breeding, \$7.00; trio, cock and two hens, \$10.00. Eggs for hatching, \$1.00 for 6; \$2.00 for 13; \$3.75 for 26.



# LANGSHANS

OF THE  
PURE CROAD STRAIN.



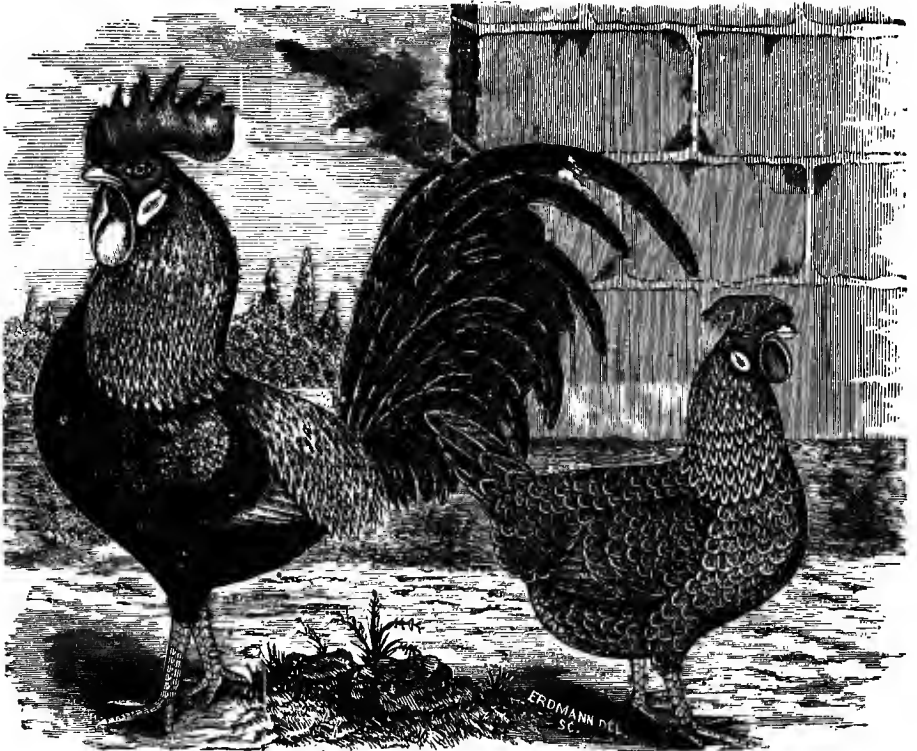
LANGSHANS—PURE CROAD STRAIN.

This breed was introduced into England by MAJOR CROAD, of the English Navy, about 1872, and at once was much sought after by the English fanciers, among whom controversy arose as to whether it was a distinct breed. This was, however, definitely proved and they were admitted to the English Standard. Americans, always on the alert for something new, were not slow in taking hold of them, and they were admitted to our Standard in 1883.

In color of plumage the Langshans are a rich metallic black, and resemble the Black Cochins, but are quite distinct. They are round and deep in body, with breast broad, full, and carried well forward. They attain maturity early and grow to a large size; a cockerel of 7 or 8 months old, fattened, will weigh 10 lbs., and pullet, same age, 8 lbs. Their meat and skin are white, and they are an excellent table fowl; the meat being of a delicate flavor. They are *first-rate layers* and *not inveterate sitters*; they lay better than any other Asiatics.

The laying qualities of the Langshans are certainly remarkable for so large a breed; none are better winter layers, and few so good the year round, and when their large size and quick growth are taken into consideration, the Langshans must certainly be acknowledged a most profitable breed. It is not too much to say that they lay as well as the best laying strains of Plymouth Rocks. Being a *new breed*, they will command a more ready sale than the older varieties, that are more generally disseminated; hence it will pay farmers and others to grow them, to sell surplus stock to neighbors. Their fine qualities, together with their handsome appearance and fine, stylish carriage, cannot fail to make this breed prove eminently satisfactory.

PRICES: Single cock or cockerel, \$4.00 to \$5.00 each. Pair, cock and hen, \$7.00; trio, cock and two hens, \$10.00; eggs from our extra fine stock, \$1.25 per 6; \$2.50 per clutch of 12; 26 eggs in one shipment for \$4.75.



PAIR OF PRIZE BROWN LEGHORNS, BRED BY W. ATLEE BURPEE, PHILADELPHIA.

**BROWN LEGHORNS.** THE BROWN LEGHORNS are well adapted to any place where freedom is assured, and while they do fairly well under confinement, yet they are "high flyers." The Leghorns are of Italian origin, but have been brought to their present perfection by American breeders. If you watch these fowls and note how constantly they feed on worms, grubs, and whatever they fancy, you will no longer wonder at their feats of egg-production. It is easy to understand that extraordinary production can only come from unusual forces, and that to lay twice as many eggs per year as a mongrel hen, the Leghorn must have plenty of exercise to maintain a healthy condition.

We have furnished many prominent breeders and exhibitors with single birds from our stock, at prices from \$25 to \$40 each, and have testimonials of the highest character. We have not exhibited since the Centennial, but in 1874-5 we won the first prizes at both the Fanciers' show and the Exhibition of Pennsylvania State Poultry Society, in Philadelphia, at the latter also winning special for best pair of Leghorns of any variety. The accompanying beautiful illustration, which is probably the best yet engraved of this breed, is no fancy sketch, but was accurately drawn from life, of the birds bred by us, which won the highest Centennial prize medal. Our fowls and chicks have large, solid, white ear lobes, correct combs and bright yellow legs, united with symmetry and elegance of form. Pullets are most delicately penciled, with beautiful maroon breasts, of that deep rich shade so highly esteemed and so difficult to attain. Cockerels have solid black breasts, and resemble the black-red game in plumage. In heavy few breeds can vie with the Brown Leghorn. As prolific layers (being non-sitters) few can equal them. Their eggs are of fair size, and pure white. They feather and mature wondrously early. The young cockerels begin to crow at six weeks old, and pullets to lay at four and a half months. They are very hardy, sure to live and thrive well anywhere, and being the best of foragers, will shift well for themselves.

We offer birds and eggs as follows: Single cock or cockerel, \$4.00 to \$5.00; pair, \$7.00; trio, \$10.00. Eggs for hatching, \$1.00 per 6; \$2.00 per 13; \$3.75 per 26.

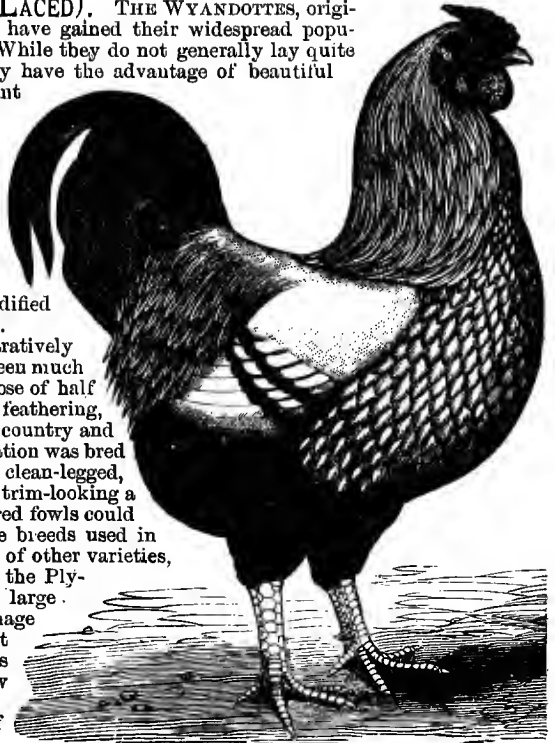
**WHITE LEGHORNS.** In general characteristics they are like the Browns, being equally good as "laying machines." They breed truer to feather, and our stock is remarkably fine, having been bred from the choicest stock in the country, with perfect white ear lobes, unblemished white plumage, correct combs, fine carriage, and bright yellow legs. They appear to great advantage in contrast with a green grass plot. For crossing on Brahmas, Cochins, or common Dughills, a Leghorn cock is invaluable, increasing the egg-producing qualities and early maturity, and fine form and good market qualities of the offspring. The contrast of their snowy-white plumage with their bright red comb and wattles is very effective. They have been great favorites for many years with the farmer and fancier. Our stock is unsurpassed, and we offer fowls from our best yards as follows: Single cock or cockerel, \$4.00; pair, mated for breeding, \$7.00; trio, \$10.00; eggs for hatching, per 6 \$1.00; per 13 \$2.00; per 26 \$3.75.

**WYANDOTTES (SILVER-LACED).** THE WYANDOTTES, originally known as *American Seabrights*, have gained their widespread popularity purely by their own merits. While they do not generally lay quite as many eggs as the Langshans, they have the advantage of beautiful yellow skin and legs, and this point will greatly tell in their favor as long as a prejudice exists against white-skinned birds and black-feathered legs. The origin of the Wyandotte is supposed to have been a cross of the Silver-Spangled Hamburg and Dark Brahma, with probably some blood from the Cochin family. They have almost the size and general outlines of the White Cochin, yet modified into a more sprightly and neater type.

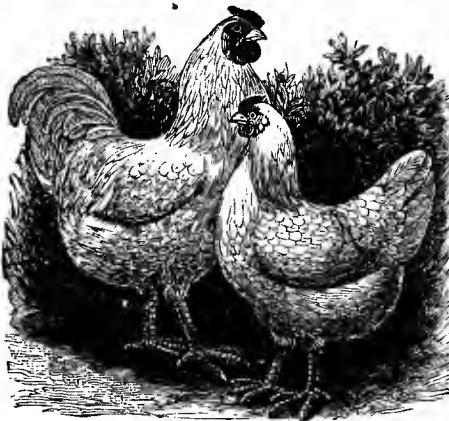
"The Wyandotte, though comparatively a new claimant for public favor, has been much improved in the past few years. Those of half a decade ago showed more or less leg feathering, but as they began to spread over the country and gain popularity every day, each generation was bred with greater care, until they became clean-legged, and as beautiful in plumage and as trim-looking a fowl as can be desired. Few cross-bred fowls could combine the valuable qualities of the breeds used in their 'make-up,' and the excellencies of other varieties, as the Wyandottes. They approach the Plymouth Rock in size; they excel the large varieties in beauty, markings of plumage and carriage; they are equal to the best in egg production and fine flesh, besides having the quality of clean yellow legs."

The Wyandottes lay a large, buff well-shaped egg, which is rich for culinary purposes. They are not inveterate sitters, being easily broken up, but are nevertheless good and kind mothers when allowed to sit and bring out chicks. They bear confinement well, are quiet and easily yarded, but still are good foragers when allowed liberty. With all these desirable qualities they are eminently a fancier's fowl as well as a farmer's fowl.

Our stock of WYANDOTTES cannot be surpassed, and our prices are as follows: Single cock or cockerel \$4.00 to \$5.00 each; pair, mated for breeding, \$7.00; trio, cock and 2 hens, \$10.00. Eggs from our best yards at \$1.00 per 6; \$2.00 per clutch of 13; two clutches, 26 eggs, in one shipment, for \$3.75.



SILVER-LACED WYANDOTTE COCK.



A PAIR OF WHITE WYANDOTTES.

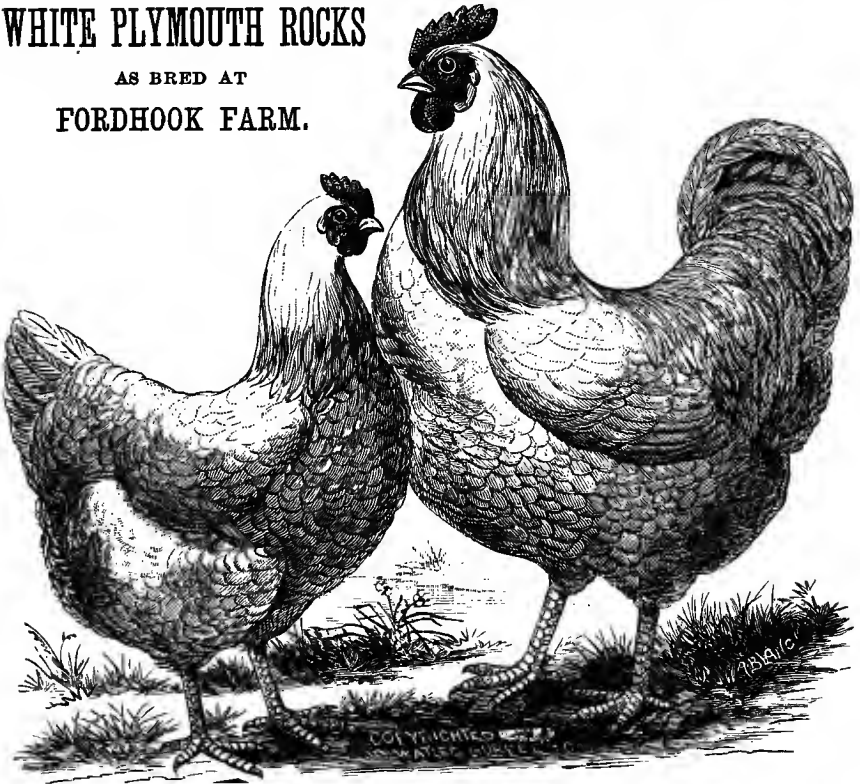
## WHITE WYANDOTTES.

The well-deserved and almost unparalleled popularity of the *Silver-Laced Wyandottes* promises to be fully equaled in this new candidate for public favor. Although of very recent origin the WHITE WYANDOTTES breed remarkably true. They resemble the Laced variety in form, shape and general characteristics, but in plumage are a *pure snow white*. The bright red faces and ear lobes and rich yellow legs contrasting with the fine form and white plumage make them a very handsome breed. They mature quickly, and their full-breasted, plump bodies, yellow skin and legs will make them valuable as table fowls, while as egg producers they are probably only excelled by the *Minorcas* and *Red Caps*. They make good mothers, being kind and gentle, and are also good foragers. Price, single cock or cockerel \$4.00; pair, mated for breeding \$7.00; trio, cock and 2 hens, \$10.00. Eggs

for hatching, from our very best stock, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

# WHITE PLYMOUTH ROCKS

AS BRED AT  
FORDHOOK FARM.



## WHITE PLYMOUTH ROCKS.

One could not conceive of a more handsome or appropriate companion for the well-known *Plymouth Rocks* than these "WHITE ROCKS." Competition ranges high between the new breeds—*White Rocks*, *White Wyandottes*, *White Langshans*, etc.,—quite a struggle being carried on by their special advocates as to which shall be the "cock of the walk." The WHITE PLYMOUTH ROCK is an offshoot or sport from the Barred variety and originated in Maine. They have advantages over their "colored consins" in the matter of mating and breeding; and these advantages will be a great help to the young fancier, and also to those who are contemplating embarking in the poultry business, but who have heretofore dreaded breeding fancy fowls for sale and exhibition, on account of the difficulties of judiciously mating them for such purposes. The "WHITE ROCKS" breed more true to color than any other of the new white varieties. Like their excellent progenitors, they are plump, compact, full-breasted-and-bodied fowls, vigorous and hardy; they are good layers and handsome in appearance and carriage, showing well on the lawn or in the exhibition coop. Their bright red combs and heads contrast agreeably with their snow-white plumage. Having so many good characteristics and essential points of an ideal breed, it will be but a short time until they become widely known. We have obtained the best blood of this variety that could be had, and offer choice cockerels at \$4.00 to \$5.00 each; pair, cockerel and hen, \$9.00; trio, cockerel and two hens, \$12.00; eggs for hatching, \$1.50 per 6; \$3.00 per 13; \$5.00 for 26.

### ROSE-COMB BROWN LEGHORNS.

This variety differs from the *Brown Leghorns* proper in comb only, the plumage and characteristics being the same. The objection to the single comb variety—the liability of their combs being frozen in winter—is overcome in the *Rose-Comb* variety. They mature early, are very hardy, and require less care in housing during the cold weather. Price, single cock or cockerel \$4.50; pair \$7.00; trio \$10.00. Eggs for hatching \$1.00 per 6; \$2.00 per 13; \$3.75 per 26.

### ROSE-COMB WHITE LEGHORNS.

This breed is identical with the single-comb variety, except that the comb resembles the comb of the Hamburg. Price, single cock or cockerel \$4.50; pair \$7.00; trio \$10.00. Eggs for hatching; \$1.00 per 6; \$2.00 per 13; \$3.75 per 26.

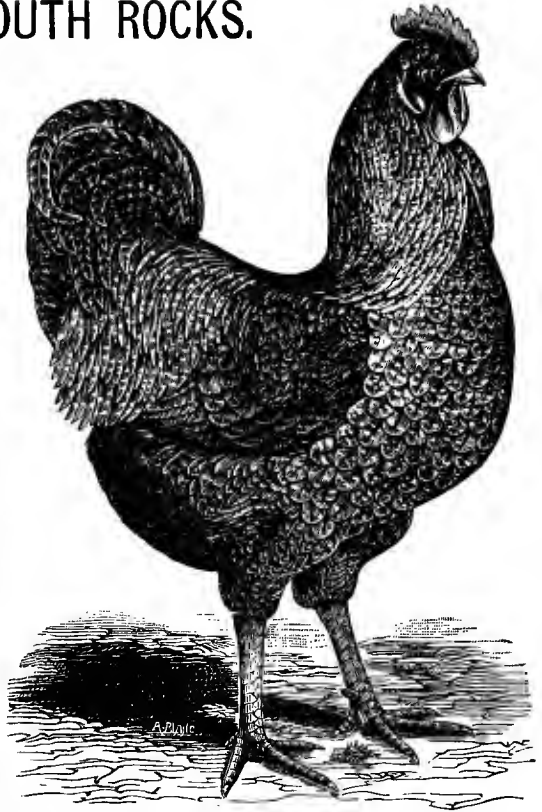
W. Y. McCONNELL, Windom, Texas, March 24th, 1889, writes:—I received, March 2d, a pair of Black-Breasted Red Games, as per my order. Can say I am well pleased with them. Think they are as fine as I ever saw, and everybody that has seen them is carried away with them.

## BARRED PLYMOUTH ROCKS.

The "BARRED ROCK," or "THE PLYMOUTH ROCK" proper, has a well-deserved world-wide reputation. The great demand for a fowl having a close-grained, yellow skin, clean legs, small bone, and average weight of from six to eight pounds when dressed, brought this breed to public notice as one eminently fitted to supply such requirements. Besides size and weight, they have the additional qualities of gaining flesh rapidly, laying a large number of good sized eggs, rich in flavor, and they are healthy, hardy and able to stand even extreme climates.

In general make-up THE PLYMOUTH ROCK is a fine-looking fowl; it is large in comparison to the European breeds. The general color may be described as grayish white barred with bluish black, each feather barred to the skin, and giving the effect of a bluish tinge to the plumage. Our stock has been made up of the best strains in the country, and has, by the *most judicious* breeding and mating, been so improved that the eggs now hatch chickens remarkable for their uniformity and regularity of coloring, together with fine form.

Price, single cock or cockerel, \$3.50 to \$4.50; pair, mated for breeding, \$6.00; trio, cock and two hens, \$9.00. Eggs for hatching, \$1.00 for 6; \$2.00 per clutch of 13; \$3.50 for 26 eggs.



### WHITE-FACED BLACK SPANISH.

The WHITE-FACED BLACK SPANISH are one of the oldest pure breeds. They are "ever lasting layers" of very large eggs of excellent flavor. The yolk of the egg is not larger than of ordinary eggs, the white or albumen predominating. They are very high in body, with fine, stylish carriage. Their legs, of a lead-color, becoming lighter with age. Breeding in and in also produces pale legs, and then a cross should be made with a very bluish-black-legged cock of fresh blood. Their white face and long serrated comb extending out almost to the end of the bill are well depicted in the accompanying cut. They are very poor table fowls, but their fine eggs entitle them to a high rank among the breeds of domestic poultry. Price, single cock or cockerel, \$5.00; pair, \$7.50; trio, \$10.00. Eggs, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.



### HOUDANS.

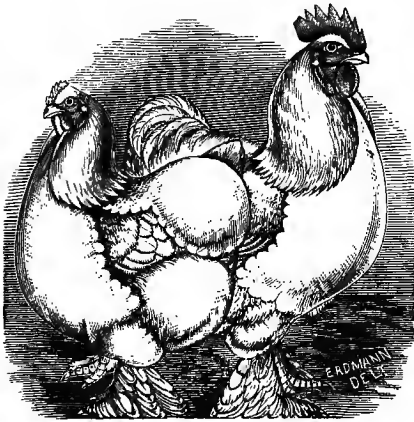
Houdans are very striking in appearance. Their plumage is black and white intermixed; crested and bearded with a triple comb of very peculiar formation. They also have a supernumerary toe, like the Dorkings. The cock will average from 7 to 8 lbs., and the hen from 6 to 7 lbs. weight. The young chicks are very precocious and are ready for the table at four months of age. They are excellent table fowls, and in England have gained the cognomen "The French Dorkings." They are prolific layers of large, rich eggs, remarkably fine in flavor. They are hardy and non sitters.

Price, single cock or cockerel, \$4.50; pair, \$7.00; trio, \$10.00. Eggs for hatching, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

E. MARSHALL, Gennoe, Fla., May 20th, 1889, writes:—The eggs which you sent me arrived safely, and nine out of the thirteen hatched. I am well pleased.

W. P. JOHNSON, Boston, Mass., May 21st, 1889, writes:—From the thirty-nine eggs, Red Caps, I received from you, twenty hatched, which is satisfactory; and they are alike as peas. For what can you sell me twenty White Wyandotte chicks?

A. W. HOPPER, Oakland, Bergen Co., N. J., May 16th, 1889, writes:—I received the Langshan and Plymouth Rock eggs all right, and had the pleasure of getting twelve Langshan and six Plymouth Rock chicks. They are doing finely, and I am well pleased.



PAIR OF WHITE COCHINS.

### WHITE COCHINS.

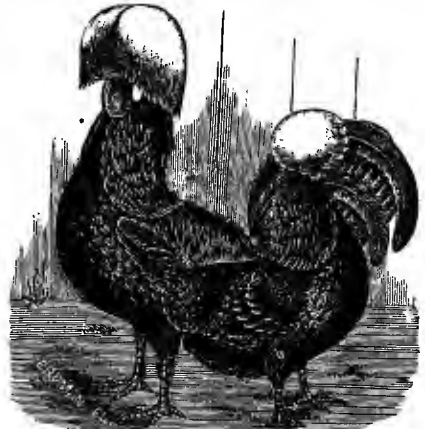
White Cochins are equal to other varieties of Cochins in all essential qualities. They are magnificent fowls, and worthy of a more general cultivation among American fanciers. Being pure white, they are much easier to breed true to color than a particolored variety. The plumage is white; wattles and ear lobes brilliant red; comb red and single; legs well feathered to outer toe. These fowls should have a shaded run in summer, or the glare of the sun day after day will give their plumage a yellowish appearance. They are among the hardiest of fowls, feather and mature extra early, and are good winter layers. Cocks weigh eleven pounds, hens nine pounds. Our stock of White Cochins cannot be surpassed, being bred from the finest selected birds. Price, single cock, \$5.00; pair, \$7.00; per trio, \$10.00. Eggs for hatching, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

### BUFF COCHINS.

The great fault which beset this breed originally (the constant appearance of dark feathers), has been overcome at last; by careful mating and breeding they have reached that state of perfection where the fancier has comparatively little trouble in breeding them to feather.

Their handsome golden buff color, fine form and stylish carriage win admiration everywhere. Their plumage is of a clear, beautiful shade throughout; the neck, saddle, hackle and tail-coverts being of a darker and richer shade in the cock, and the hackle of the hen being the same shade as the male bird. They are large, fine birds; the cock should weigh from 9 to 11 lbs. at one year. Both cock and hens should be loose feathered, and thus appear much larger than they really are. Hens should weigh from 8 to 9 lbs. at one year old. Cochins will thrive well in the smallest yards, and under such unfavorable circumstances as to preclude the successful rearing of other fancy breeds. They are good winter layers, and make careful mothers. Our stock is very fine.

Price, single cock or cockerel, \$5.00; pair, \$7.50; trio, \$10.00. Eggs for hatching, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.



PAIR OF WHITE-CRESTED BLACK POLISH FOWLS.

### WHITE-CRESTED BLACK POLISH.

The White-Crested Black Polish is very ornamental with its large white topknot, in contrast with the glossy black plumage. They are non-sitters, splendid layers, and are great favorites with those who know them. This variety is the most popular of all the Polish breeds. As shown in the illustration, they are exceedingly handsome; they are popular not only for their beauty, but also for their prolific laying character. Unlike other varieties of Polish, they possess strong, healthy constitutions, and also mature very rapidly. One feature, and a desirable one in breeding this variety of Polish, is that almost as soon as the chicks are dry from the shell the fancier can tell whether the birds will have the proper proportion of white in the crests or not. We are breeding from the best strains obtainable, and can sell as follows: Single cock or cockerel, \$4.00 to \$5.00; pair, \$7.00; trio, \$10.00. Eggs for hatching, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

### BLACK HAMBURGS.

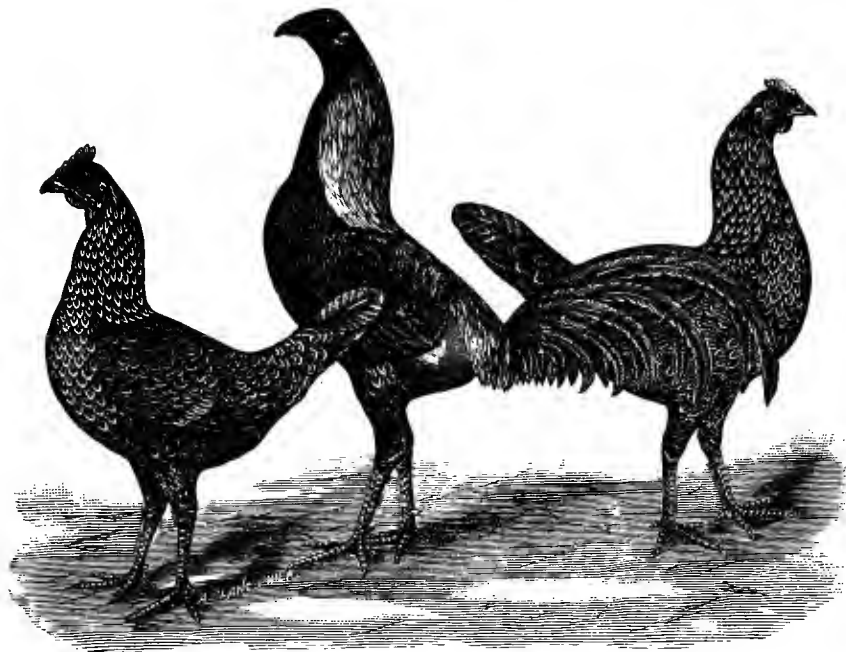
For beauty, eggs, and profit in proportion to cost of feeding, the BLACK HAMBURGS are hardly inferior to any of our breeds. The Blacks are the largest, hardiest and best of all the Hamburg family. Like the Leghorn, they begin to lay when only four or five months of age. The plumage is a jet black, each feather ending with a velvet-green spangle, which gives them a rich glossy appearance. The face must be rich, deep red like the wattles, contrasting strikingly with the pure white earlobes. They are non-sitters. Price, single cock or cockerel \$5.00; pair, \$7.50; trio, \$10.00. Eggs, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

W. H. HALL, Detroit, Mich., June 9th, 1889, writes:—Out of the twenty-six Partridge Cochins eggs I got from you I have twenty nice chicks. I am more than pleased.

T. D. THOMAS, Lehighton, Pa., June 1st, 1889, writes:—A few weeks ago you sent me thirteen eggs, White Minorca. I got twelve pullets from the thirteen eggs; a good average.

J. MACLURE, Nassau, N. P., Bahamas, April 27th, writes:—The fowls and eggs arrived in good condition, and I am very much pleased with them.

H. W. D. LANGSTON, Devon Farm, Rossville, Texas, March 26th, 1888, writes:—The Wyandotte Cockerel came to hand safely; am much pleased.



## BLACK-BREASTED RED GAMES.

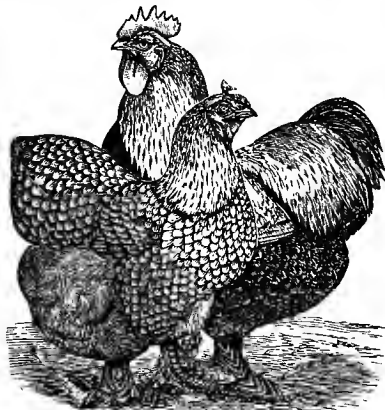
The illustration of these well-known favorites will give an excellent idea of our stock of Black-Breasted Red Games. They are probably the most ancient breed of fowls extant, as they have been well-known and very popular from the earliest times. Our Black-Red Games are of remarkably fine form and plumage; of fine symmetry and high stature; short hackle, close and bard-feathered. They breed very true to the standard, and give general satisfaction.

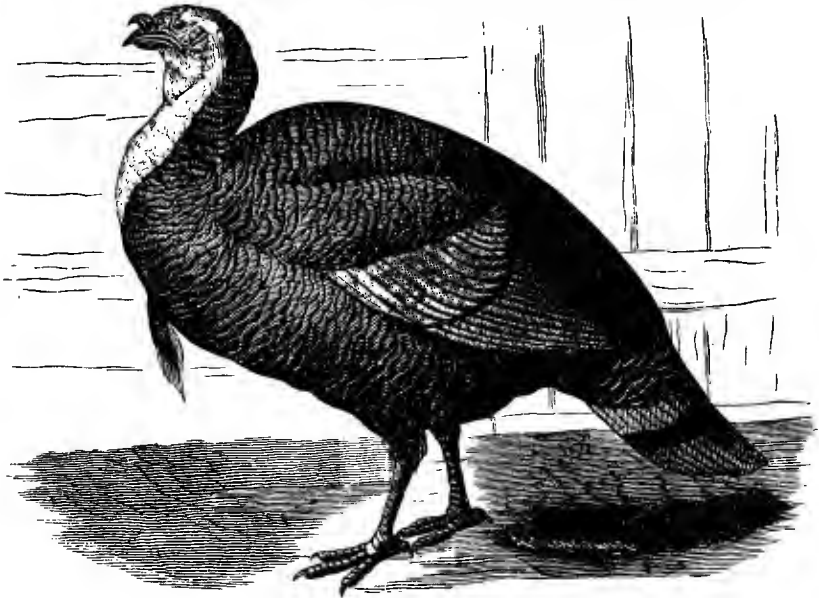
The game cock is the undisputed king of the poultry yard. The chicks are very hardy and easily raised. The thoroughbred hen is an excellent layer of the very richest and most delicately flavored eggs; as a mother none can surpass her. The game cock is vigorous, watchful, and a sure stock getter. They are comparatively small eaters, are excellent foragers, and can bear the closest confinement. As a table fowl they are the *ne plus ultra*, being unequaled in the rich game-flavor of their flesh. All-in-all, they are worthy of general cultivation as a fowl of beauty, utility and profit, even by those who justly disapprove of the pit and its use.

For crossing on other breeds, the Game cock cannot be excelled. Single cock or cockerel, \$5.00; pair, cock and hen, \$7.00; trio, \$10.00. Eggs, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

## PARTRIDGE COCHINS.

THE PARTRIDGE COCHINS are exceedingly hardy, being able to stand not only the severe winters but also the hot summers. They lay well and are good sitters, remaining close to the nest during incubation. They are very popular and most attractive in appearance. The fine, manly form, well built, symmetrical proportions of the cock, and the motherly bearing and downy feathering of the hen, united with the most beautiful colorings, cannot fail to rivet the attention of even the uninitiated. They are very large, lay well in winter, and are a profitable cross for increasing the size, hardiness and early maturing of barnyard fowls, for which purpose they are in large demand by farmers. We are breeding a very choice stock of the best imported strains. Price, single cock or cockerel, \$5.00; pair, \$7.50; trio, \$10.00. Eggs for hatching, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.





MAMMOTH BRONZE TURKEY GOBBLER.

## PURE MAMMOTH BRONZE TURKEYS

OF THE VERY BEST STRAIN AND OF THE LARGEST SIZE.

These are the largest of all Turkeys, and, on account of their mammoth size, hardiness and richness of plumage, are by far the most profitable breed. They are the leading variety with those who raise Turkeys for the market. Gobblers two years old will weigh 30 to 40 lbs., and we have seen them to weigh 45 lbs.; adult hens, 14 to 18 lbs. In a flock of forty, we did

not have a gobbler under 18 lbs., and the greater number weighed 21 to 23 lbs., when only eight to ten months old. In all our shipments we make it a special rule to mate birds not related. We would advise all who intend purchasing to do so early, so as to secure the first choice. Our Bronze Turkeys this year are finer than ever before. They have all been carefully bred from the very best strain in the country, a pair of them, two years old, hen and gobbler, fattened for exhibition, having weighed seventy pounds. Last year we were entirely sold out of Bronze Turkeys by April 1st, and had to return customers their money. This year, however, we have made extra preparations to supply the increased demand, by adding to our flocks a number of new and choice specimens, and hope to be able to fill all orders. We would, however, solicit early orders. Single gobblers, \$7.00 to \$9.00; pair, mated for breeding, \$10.00; trio, gobbler and two hens, \$14.00. Eggs for hatching, \$3.00 per 6; \$6.00 per 13; \$11.00 per 26.



PURE MAMMOTH BRONZE TURKEY GOBBLER.

**NOTE.**—As Turkeys do not lay until late in the spring, we are often obliged to hold orders where other eggs are included. Customers will oblige us by stating whether we shall ship the other eggs at once, or wait and send all together.

Address all orders

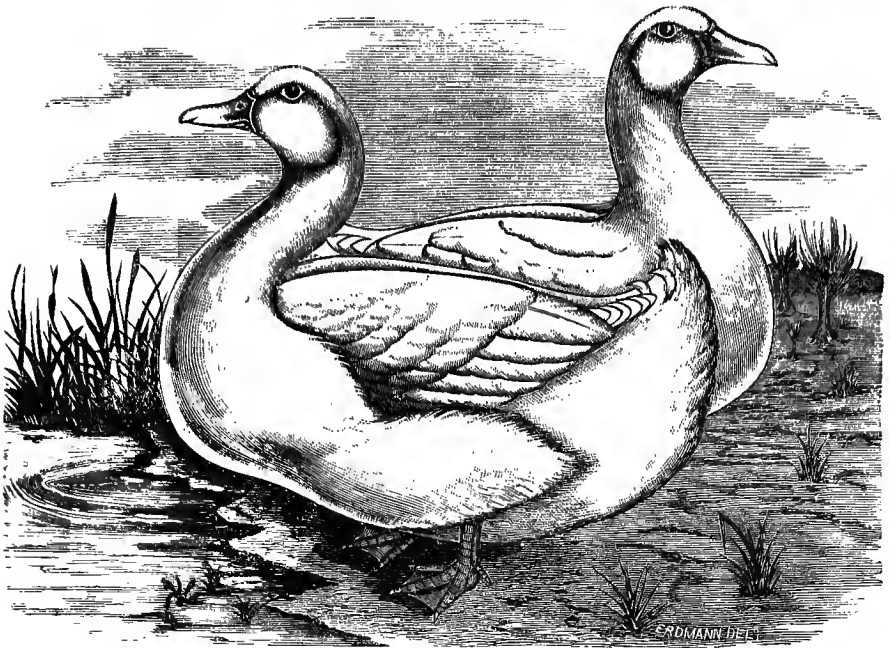
**W. ATLEE BURPEE & CO.,**

**Seed Growers and Stock Breeders,**

**PHILADELPHIA, PENN'A.**



## BURPEE'S FANCY POULTRY.



PAIR OF IMPERIAL PEKIN DUCKS.

### IMPERIAL PEKIN DUCKS.

This breed of Ducks has been our favorites for many years, but never before have we had them larger or finer than those raised the past season at FORDHOOK FARM. Visitors pronounced them the finest they had ever seen.

The Imperial Pekin Ducks, now so widely known, were imported from Pekin, China, in 1873. In color they are clear white, with a faint yellowish tinge to the lower feathers, which are very thick and downy. As the wings are much shorter than of common ducks, they are easily confined. They are very hardy, and care little for water, except for drinking. They are exceptionally good layers, a single duck having laid 200 eggs in one year. Ducklings hatched in February have been known to commence laying in August. Their eggs will hatch from two to three days earlier than other varieties. Our stock is of the best, and will give satisfaction to any one. Single Drake, \$4.50 to \$5.00; pair, \$7.00; trio, \$10.00. Eggs for hatching, \$1.25 per 6; \$2.50 per 13; \$4.75 per 26.

#### PURE BONE FLOUR.

This bone meal is prepared expressly for our trade, from fresh beef bone, and is *absolutely pure*. To fertilize house plants, use at the rate of one part bone flour to fifty parts soil; or when used for fruit, flower or vegetable crops, it should be sown broadcast and thoroughly mixed with the soil to the depth of eight or ten inches. We recommend it also mixed with meal for feeding to cattle and young chickens. PRICES: 5 lbs. 30 cts.; 10 lbs. 50 cts.; 25 lbs. \$1.25; 50 lbs. \$2.25; 100 lbs. at 4 cts. per lb.

#### FRESH GROUND BONE.

This is of equally fine quality as the bone flour, and is granulated or cracked, about the size of cracked corn. A box full of it should be kept within access of poultry continually, as it is almost indispensable to their well-being. PRICES: 5 lbs. 30 cts.; 10 lbs. 50 cts.; 50 lbs. \$2.00; 100 lbs. \$3.50; 200 lbs. and over at 3 cts. per lb.

D. H. MORRISON, Pertone, Ill., Nov. 16th, 1889, writes:—I received the pair of Collies, also the registered pedigree. We are entirely satisfied with the dogs; they are quite at home and lively as two crickets.

MRS. M. H. EYERS, Oakland, Cal., Oct. 29th, 1889, writes:—I have just received the lovely Collie dog you shipped me in excellent condition. My husband and the boys are wild with delight. My husband brought two gentlemen who are judges of the Collie, and they both pronounced him an exceedingly fine animal, and spoke of his fine head and intelligent eye. I do thank you again for sending me such a fine puppy.

#### CRUSHED OYSTER SHELLS.

Also for fowls. PRICES: 10 lbs. 25 cts.; 25 lbs. 50 cts.; 50 lbs. 90 cts.; 100 lbs. \$1.50; 200 lbs. \$2.50; one barrel (about 300 lbs.) \$3.50.

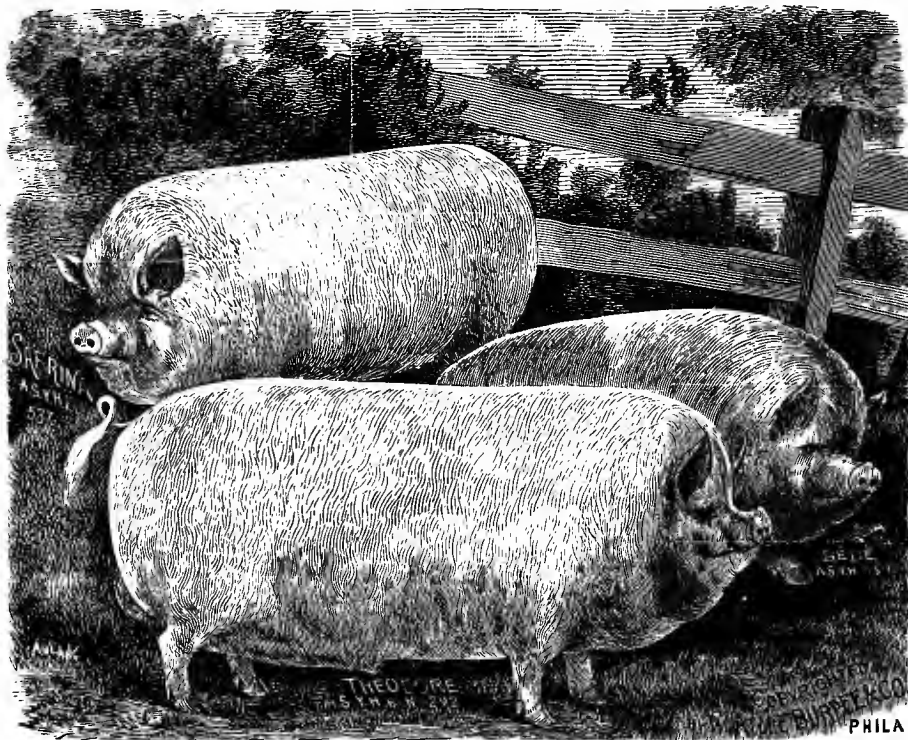
#### DALMATIAN INSECT POWDER.

*The best and safest destroyer of insects.* It speedily kills every species of flying and creeping insects: ROACHES, BUGS, FLIES, MOSQUITOES, LICE and FLEAS on animals and pets, MOTHS, CENTIPEDES, SPIDERS, and INSECTS on plants and vermin of every kind. Insects cannot live after inhaling this powder—they breathe it and die; but it contains nothing whatever that is dangerous to human life. Price 25 cts. and 50 cts. per box, postpaid.

WM. M. HENRY, Virginia, Ill., April 23d, 1889, writes:—My Collie pups came to hand in good order and are growing nicely. They are even better than I expected.

HENRY EARLE, Box 566, Montreal, Canada, Nov. 27th, 1888, writes:—I am much pleased with my Collie dog. My Scotch friends also pronounce him A No. 1, and say he will grow up a magnificent dog.

G. H. JONES, Catskill, N. Y., June 20th, 1889, writes:—The pair of Collie puppies registered as Lassie and Donald excel anything I have ever seen in this locality, and I would not part with them for four times their cost. They are wonderfully intelligent, and are greatly admired by all who see them.



A TRIO OF SMALL YORKSHIRES, OWNED BY W. ATLEE BURPEE & CO.

## SMALL ENGLISH YORKSHIRE PIGS.

Our Small English Yorkshire Pigs (so called to distinguish them from the large, coarse breed) are unsurpassed. The principal importations were made to this country during the years 1872 to 1878. From the stock thus secured (which was the best to be found in England) many hundreds of pigs were bred and sold, finding their way into nearly every State in the Union.

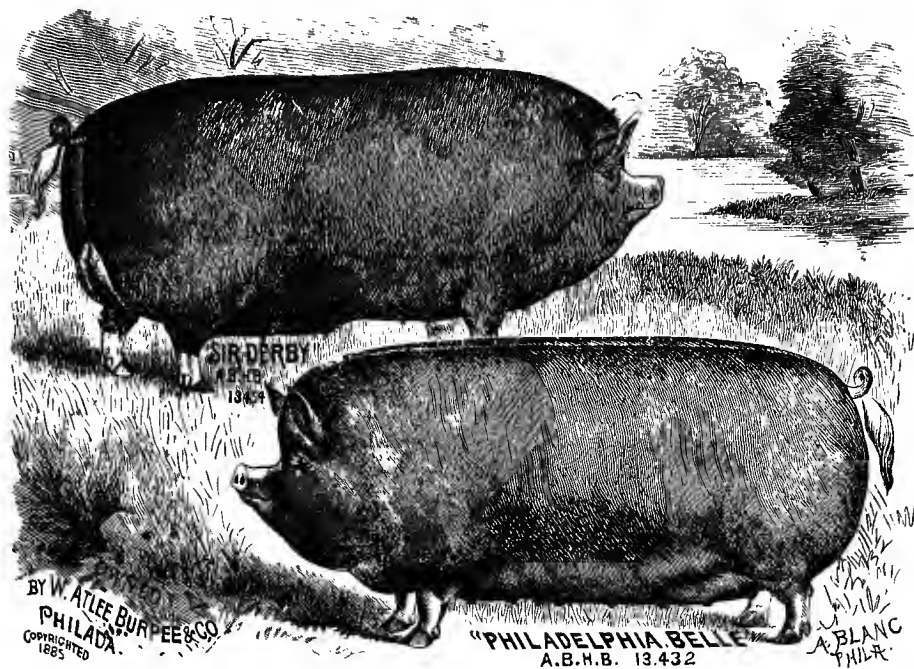
The general characteristics of the SMALL YORKSHIRES, as given by Mr. G. W. Harris, are, viz.: "Very short in snout; well dished in face, with large jowls; small, thin, erect ears, slightly pricked and forward (never lopped); broad between the eyes; short in the neck; lengthy in body; broad in loin; straight in the top line from the shoulder to the tail; have thick, broad, deep-cut hams and shoulders; are low in the fork; full and deep in flank; fine in bone, with short, stout, well-set legs; and a full coat of fine, white hair. The Yorkshires are quiet in disposition, and are easily kept enclosed by fences that prove no barrier against the roaming propensities of other pigs. They fatten at an early age. In fact, some of our sows we cannot keep lean. They are characterized by smallness of bone and offal; careful experiments show them to waste less in dressing than any other breed. The flesh is far superior to that of coarser breeds for table use. They will produce more pork from a given amount of food consumed than any other breed."

The artist visited our herd for the express purpose of making drawings from life of several of our breeding animals. The magnificent Boar, Burpee's Theodore, A. S. Y. H. B., No. 292; Sabrina, B., No. 537; Bebe, No. 540, are well represented in the illustration given above. The sire of Theodore, No. 292, is Lord Theodore, 103, he by Dick Turpin II, 101. Dam, Flirt III, 317, by Diomede, 91; second dam, Flirt, 208, by Sir John, 38; third dam, Marchioness C., 84, by King George, 61; fourth dam, Duchess of Bristol, 100, by Duke of Yorkshira, imported; fifth dam, Flora, 81, imported. Lord Theodore won the second prize at New York State Fair, 1884. Diomede won first prize at same fair, 1881, and at Onondaga County Fair, 1881, also second at New York State Fair, 1882.

The sire of Bebe, No. 540, is Lord John II, 120; he by Lord John, 89. Dam, Violet Hambrook, 261. Sabrina B., No. 537, was sired by Lord Rinaldo, 95; he by Rinaldo, 59. Dam, Sabrina, 184; she by Rinaldo, 50.

We are this year breeding from Fordhook Prince, No. 610, Osceola, No. 787, and other boars which are not related to any of our former blood, and can insure our customers of blood entirely new to stock formerly received from us.

Our prices for *first choice pigs*, mated for breeding, *not akin*, eight weeks old, are \$12.00 each, \$22.00 per pair; trio, boar and two sows, not akin, \$30.00; boars ready for service, 6 to 8 months old, \$25.00 to \$40.00 each; sows, served, \$30.00 to \$40.00 each, according to age.



## BERKSHIRE PIGS.

As a distinct breed the Berkshires are one of the oldest, best known and most popular in the world. In the standard it is described as follows: "Short, wide-dished face; eyes set far apart, heavy jowls and a short, thick neck. Legs should be short and wide apart in front, to allow for a large development of the vital organs, and behind for the growth of the leanest and best part of the ham. Back broad and straight; markings black, with white tips on feet, tail and face. Occasionally white will appear higher up on the legs. The meat of a Berkshire is sweet and juicy, with the fat and lean nicely intermingled. They are of good size and easily fattened."

The above illustration, accurately drawn from life, represents our Berkshire Boar, **Sir Derby**, American Berkshire Herd Book, No. 13,454. His sire was Marquis of Lansdown, 10,975, and his dam was Young Night Flower; she by Royal Derby, 4177, imported. Second dam, Night Flower, 8458, by Linden Cardinal, 2999. Third dam, Gipsev Queen II, 8448, by Gloucester, 3873. Fourth dam, Gipsev Queen, 8214, by Sturdy, 1489. Fifth dam, Cleopatra.

**Philadelphia Belle, 13,432**, also illustrated, is a model of perfection. Her sire was Royal Derby, 4177, imported; he by Gloucester IV, 4017. Dam, Night Flower, 8458, by Linden Cardinal, 2999; second dam, Gipsev Queen II, 8448, by Gloucester, 3873.

Prices of extra choice pigs, mated for breeding, eight weeks old, \$12.00 each, \$22.00 per pair. Trio, boar and two sows, not akin, eight weeks old, \$30.00. Boars for service, \$30.00 to \$40.00 each. Sows served and supposed to be in farrow, \$30.00 to \$50.00 each, according to age.

**FRANK KNABE**, Genito, Va., July 17th, 1889, writes:—The pig came safely to hand in good condition. Am perfectly satisfied with him.

**B. F. DOCKSTADER**, Fonda, N. Y., June 3d, 1889, writes:—The pair of Berkshire pigs were received in good condition, and I am very much pleased with them. They are a very fine pair.

**M. L. FLOW & Co.**, Monroe, N. C., June 5th, 1889, write:—The Yorkshire pigs arrived this morning, and we are well pleased with them. What will you sell us another Yorkshire and Berkshire for?

**J. A. AYERS**, La Plata, Mo., June 3d, 1889, writes:—The Yorkshire pigs came to hand in good condition, and I am well pleased with them.

**MATTHIAS A. BICKAR**, P. M., St. Joseph, Va., June 3d, 1889, writes:—The pair of Yorkshire pigs ordered from you came in good condition, and I am well pleased with them. I have never seen nicer pigs than they were. There were a great many to look at them on the route home with them, and the universal expression was that they are the best pigs ever seen.

**J. J. SHUFFIELD**, Camargo, Pa., Jan. 1st, 1888, writes:—I received my Berkshire pig on the 19th of December, and am well pleased with him.

**A. K. BRADLEY**, Tioga, Tex., Feb. 21st, 1889, writes:—The Jersey Red pigs arrived safely and in good condition. I am well satisfied with them. Every one that sees them admires them in a way that is gratifying.

**GEO. A. WILKINS**, Mayville, Mich., Feb. 24th, 1889, writes:—I have been away from home awhile. When I got home I was surprised that my brother had not written to you about that pig. It is a daisy and a pet of the family. It is pretty late, but please accept many thanks for sending us such a fine pig. Every one that sees him says he is the nicest pig they have ever seen.

**H. L. FLOYD**, Clayton, Alabama, Mar. 16th, 1889, writes:—I received my pigs to-day, and was surprised to find them looking so well after their long trip. They arrived all O. K., and they are as fine as I ever saw. Every one that has seen them is perfectly carried away with them. I am glad to say to you that they come up to the advertisement exactly, and give entire satisfaction.



## CHESTER WHITE PIGS.

Of all the large breeds, we know of none superior to the CHESTER WHITES. They are invaluable on account of their large size, readily weighing 175 to 200 pounds at six months old, and 350 to 500 pounds at one year. Our stock is remarkable for uniformity of breeding, and as our man remarked only a few days ago, the Chesters surpass all others for having large litters of a uniform size, it being a rare thing to find runts in the litters. The shipping of half-breeds and mongrels by unprincipled dealers, caused by the large demand for this breed, has given many persons the impression that Chester Whites do not breed to a fixed type. This is not the case, as our customers can testify who have purchased this breed from us. As a farmer's hog they have few, if any, equals. They are gentle, quiet and easily kept. They are not liable to mange, thrive well in small enclosures, and give general satisfaction.

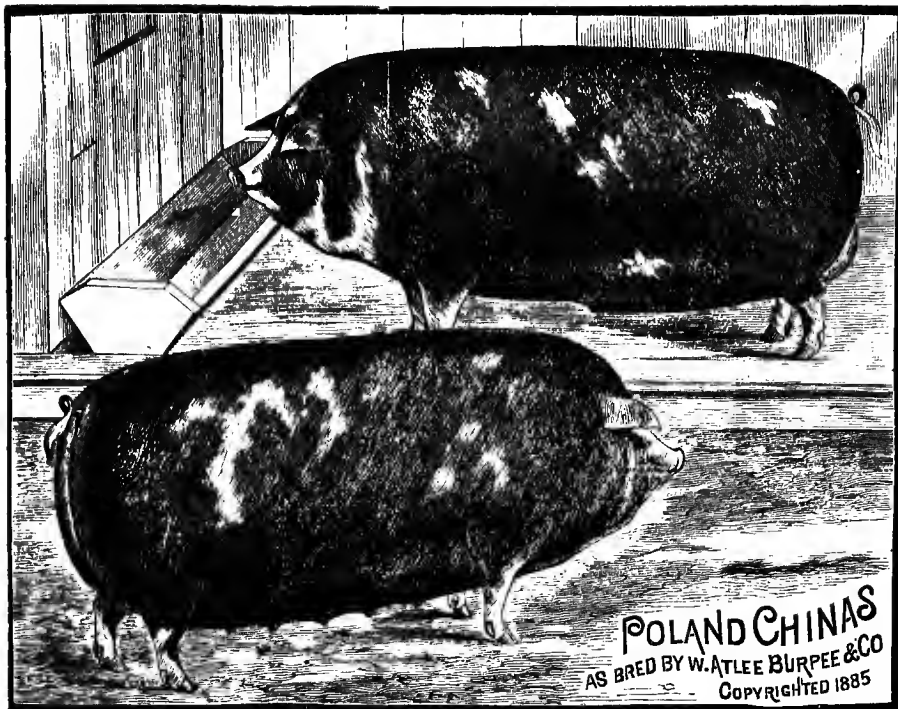
The principal points of pure Chester Whites are as follows: head very short and broad between the eyes; ears medium, thin and drooping toward the eyes; neck short and thick; long, deep body, well-sprung ribs, giving ample room for large, sound digestive organs; back broad and perfectly straight; large, thick and deep hams; well-formed, heavy shoulders; fine bone; hair white, generally straight, but in some cases wavy; skin fine and thin; tail neat; legs short and well-set, capable of bearing the heavy carcass.

For the benefit of our customers who are not acquainted with this superior breed, we would say they were originally made up principally from a combination of three strains—a large, coarse white hog that was brought into Chester County in 1812 and crossed with hogs imported by Capt. James Jeffrey from England in 1818, called Bedfordsires, and also hogs imported into Delaware County, Pa., about the same time, called Chinas. The Chinas and Bedfordsires both had black blood in them, and hence the reason why black and blue spots so often appear on the skin and sometimes in the hair of the pure Chester Whites. But by judicious crossing and selecting, this has, to a great extent, been bred out. We have been breeding the Chesters for a number of years, and have always been careful to select none but the choicest animals. We take special pride in Chester Whites, and we know of no other breed of swine so well suited to the general farmer, or so profitable.

Our prices for first choice Chester White pigs are as follows:—

Single pig, male or female, 8 weeks old.....	\$13.00.
Pair mated, not akin, boar and sow, 8 weeks old.....	\$22.00.
Trio " " " " " 2 sows " ".....	\$30.00.
Boar ready for service, 6 to 10 mouths old.....	\$28.00 to \$35.00.
Sows, served by choice boars, 7 to 12 months old....	\$30.00 to \$40.00.

## BURPEE'S THOROUGHBRED STOCK.



### POLAND CHINAS.

The general characteristics of the Poland Chinas are: quietness, good breeders, kind mothers, good sucklers and early maturity. They are docile and easily handled. The color is naturally spotted, but fancy of the breeder has varied it from largely white to almost entirely black, the dark colors having the preference. The best specimens have long, deep bodies; straight, broad backs; large, full hams and shoulders; large, deep chest; low flank; short, full, high-crested neck; heavy jaw; short face; fine muzzle; small, thin, drooping ears; short legs, well apart, standing erect on fine, tough feet; hair fine without bristles.

The principal idea in breeding swine is to maintain a breed that will be as near perfect machines for converting grain and grass into pork and lard as possible, and we think we have such a machine in the Poland Chinas. We claim for the thoroughbred Poland Chinas that for early fattening qualities and continued growth they are second only to Chester Whites, among native breeds. They will readily fatten into clear pork at nine to ten months, weighing 250 to 325 pounds, or will continue growing until eighteen or twenty months, when they will weigh 400 to 700 pounds. They are not liable to mange, are extremely hardy, and thrive well on grass or clover.

At the present time we have in them a breed thoroughly established, of fixed characteristics, of fine style and good qualities, which can be relied upon for the production of a progeny of like qualities and character. The above illustration was drawn from life, and it fairly represents the type of this breed.

Single pig, extra choice, 8 weeks old .....	\$12.00
Pair, not akin, extra choice, 8 weeks old .....	20.00
Trio, " " boar and 2 sows, 8 weeks old .....	30.00

Boars for service, 6 to 9 months old, \$20.00 to \$35.00 each. Sows served by the choicest boars, 6 to 12 months old, \$25.00 to \$40.00 each, according to age.

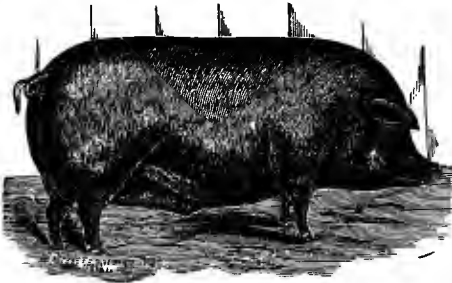
P. H. GRAVES, Sharp's Chapel, Tenn., June 28th, 1889, writes:—The 4th day of February last I sent to you for a Chester White Boar pig, which I received some eight or ten days later. I did not think at first you had given me a good pig, but now, not only I, but good judges, say it is the best pig that has ever been shipped to this locality. He is growing fine, and will make a large hog.

W. A. WHEELER, Oldham, Ky., Feb. 21st, 1889, writes:—The Chester Whites came to hand the 18th. I am well pleased with them. Thanks for your good selection and prompt shipment.

N. W. WINTERS, Sigourney, Iowa, March 26th, 1889, writes:—I received the Chester Whites on the 10th of March. They came through all right. I think they are splendid pigs. They are growing finely.

EDW. R. PHELPS, Poplar Mount, Va., March 13th, 1888, writes:—The small Yorkshire Boar pig shipped by you Jan. 17th came safe to hand. He is a beauty. Every one who sees him says he is the finest pig they ever saw.

G. W. MILLER, Young's Creek, Mo., Dec. 17th, 1888, writes:—The pig arrived in good condition, and is doing well. It was far beyond my expectations.



THOROUGHBRED JERSEY RED BOAR.

**DUROC, OR JERSEY RED PIGS.**

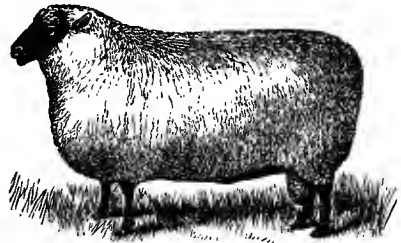
The general characteristics of these hogs are that they are good feeders, of large size, with strong constitution, and of docile disposition. For prolific breeders they cannot be excelled; they make the best of mothers and fatten readily. It is certainly true that they have many valuable qualities, as well as some that may be viewed as undesirable, but the former outweigh the latter so greatly that their unfavorable qualities are hardly worth considering. The vast improvement of late years, however, has almost, if not quite, obliterated the objectionable qualities possessed by the original stock. As an evidence of their fattening qualities, we would state that during the winter of 1885, of forty hogs slaughtered by two breeders of Jersey Reds, at the harvesting of the New Hanover (N. J.) pork crop, the average weight killed was 824 lbs., three of them being over 1000 lbs. each.

The standard agreed upon at the Convention of Jersey Red Breeders is as follows:—

Moderately long, quite deep-bodied, not round, but broad on back, holding the width well out to the hips and hams. The head should be small in proportion to the body, the face slightly dished, nose rather short, ears medium in size, pendant, and falling toward the eyes, and must not be erect. The neck should be short, deep and thick. The legs short, wide apart, and well set under the body. Bone of medium fineness; arm large, and flank well down. The hams should be broad and full, well down to the hock. Tail large at its base, and tapering to its extremity. There should be a good coat of hair of medium fineness; usually straight, but in some cases wavy, with few, if any, bristles at the top of the neck and shoulders. The color should be red, varying from dark, glossy cherry to light or yellowish red. An occasional fleck of black (usually on belly and legs) is admissible, but cherry red without black is preferred. In disposition they are mild and gentle. Pigs at nine months of age should dress 250 to 300 pounds, and when fully matured 400 to 700 pounds.

We sell first-class pigs at the following prices:—

- Single pig, pure blood, 8 weeks old.....\$12.00
- Pair, extra choice, not akin, 8 weeks old, 20.00
- Trio, " " " 8 " " 30.00
- Boars ready for service, 6 to 7 months old, \$25.00 to 30.00
- Boars ready for service, 8 to 12 months old..... 30.00 to 40.00
- Sows served by the choicest boars, 6½ to 7½ months old ..... 25.00 to 30.00
- Sows served by the choicest boars, 8 to 12 months old..... 35.00 to 50.00



THOROUGHBRED SOUTHDOWN RAM.

**SOUTHDOWN SHEEP.**

The world-renowned wool and mutton sheep is the Southdown. No other breed commands as high a market price. Southdowns will exist on short keep when the pasture is hard stocked, and from their hardy constitutions they are capable of enduring the bleak winds in winter and the drought in summer. They are adapted to a dry, hilly country, and are active, having often to walk far for a scanty supply of food. They are small consumers of food and come early to maturity. They possess a symmetrical and very neat form, which is greatly admired. The bone is small, the body thick and cylindrical, the ears wide apart. Both the ears and forehead are well covered with wool, which forms a protection from flies. The eye is bright and active; the chest wide, deep and projecting; the back flat to the tail; the hind legs are very full on the inside and wide apart.

We offer buck lambs at \$20.00 each; ewe lambs \$22.00 each; pair, buck and ewe, \$37.00. Bucks, one year and over, \$30.00 to \$35.00; ewes, one year and over, \$30.00 each; pairs, buck and ewe, \$60.00.

**SHROPSHIRE SHEEP.**

Although of comparatively recent origin, these valuable sheep are probably as widely distributed and as highly esteemed in England as any other variety. Originally improved and brought to their present state of perfection by a judicious use of Southdown rams on the ewes of the Longmynd in Shropshire and Candock Chase in Staffordshire, they have deservedly earned their ordinary name among English farmers, of "rent-payers."

They somewhat resemble the Southdown, but are considerably larger and of greater substance. They are very prolific. The average rate of increase among pure-bred Shropshires is 150 per cent., while the product from the cross of the Shropshire ram on half-bred long-wool ewes frequently reaches 200 per cent. The average clip of a Shropshire flock is seven to eight pounds, varying with the feed. They are hardy, and suitable to a large range of soils and climate, wet or cold. The yield, both of mutton and wool, is extremely good, and they are especially noted to-day for their symmetry, grand backs and heavy leg of mutton.

The stock from which we can supply our customers has won numerous prizes. We offer buck lambs at \$22.00 each; ewe lambs \$20.00 each; pairs, buck and ewe, \$37.00. Yearling bucks \$35.00 each; yearling ewes \$30.00 each; pairs, buck and ewe, \$60.00.













