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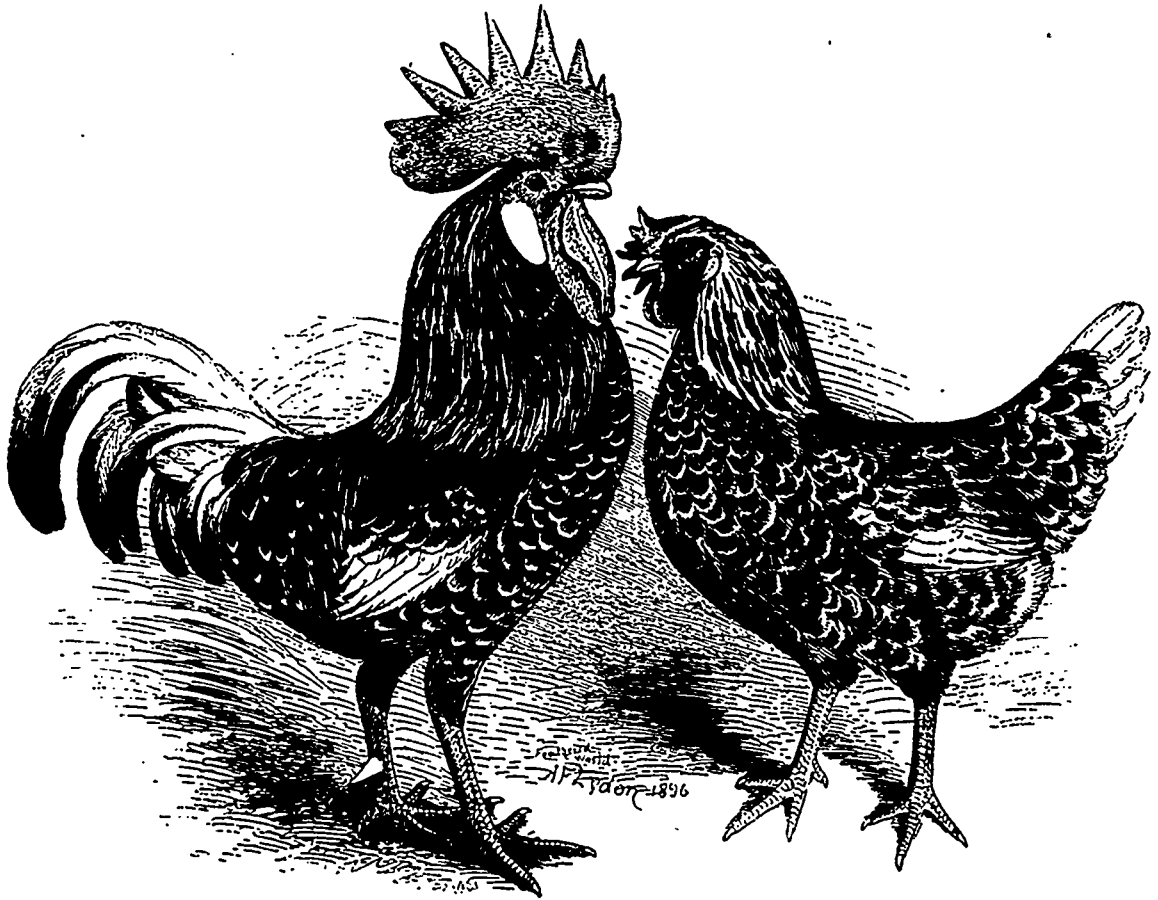
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PAIR ANCONAS.

Canadian Poultry Review, Toronto, Dec., '96.

THE CANADIAN POULTRY REVIEW

DEVOTED TO POULTRY, IN ALL ITS BRANCHES

Pigeons, Cage Birds, Rabbits & Pets.

VOL. XIX.

124 VICTORIA STREET, TORONTO, DECEMBER, 1896.

No. 12

SHOW DATES.

Hamilton, Dec. 16, 17, 18, and 19.
Woodstock, Dec. 28, 29, and 30.
Eastern Ontario (Kingston), Dec. 29, 30, and 31 and Jan. 1.
The Ontario (Guelph), Jan. 10 to 15.
Galt, Jan. 19, 20, and 21.
Montreal, Jan. 19 to 23.
Owen Sound, Jan. 19 to 22.

ENTRIES CLOSE

Hamilton, Dec. 12.
Eastern Ontario, Dec. 19.
Woodstock, Dec. 25.
The Ontario, Jan. 4.
Montreal, Jan. 6.
Owen Sound, Jan. 15.

NOTES AND COMMENTS

"PUT MONEY IN THY PURSE"

ADVISED Shakespeare, but this may be modernized by putting the amount of enclosed account into addressed envelope herewith and forwarding to us by return mail. The REVIEW costs but one dollar per year and under certain conditions seventy-five cents—that is where a new name is sent in with the renewal—and you can't afford to do without it. Several accounts are now overdue and should be paid.

WHO WANTS A FREE AD?

As is usual with us we offer a small advertisement not exceeding thirty words, to all who pay their subscription accounts for 1887 before the 31st Dec., 1896. This offer is good to end of December only, and subscriptions paid after that date can only be taken on the usual terms.

THE HAMILTON ASSOCIATION

will hold an open show on Dec. 16, 17, 18 and 19, on the percentage plan, sixty per cent going for first and forty for second for an entry fee of twenty-five cents. Entries close on Dec. 12th with the Assistant Secretary Mr. W. A. Höl.

ton as Mr. T. D. Murphy, the Secretary-in-chief, is now away from home so much that the bulk of the work must of necessity fall on Mr. Holton's shoulders.

MR. J. C. LYONS OF LUCKNOW,

is erecting a new poultry house two stories high 46 x 12 ft., of which we should like a description for REVIEW readers.

A SHOW IN WOODSTOCK.

The new and large association in Woodstock intend holding a show on Dec. 28, 29 and 30, at which Mr. L. G. Jarvis is to judge the poultry. As the association is a young one and needs all the support possible, the members ask as a special favor this year that every exhibitor send even a few entries to help them along. Entries close Dec. 25th with the Secretary Mr. S. F. Baulch.

MR. C. F. WAGNER, TORONTO,

has returned to his old address 726 King street west, where he has more and better accommodation for the manufacture of the Wagner incubator and brooder, to which now a good deal of his time is devoted. He of course will still breed the buff Leghorns.

OWEN SOUND SHOW.

The Owen Sound and County of Grey Poultry, Pigeon and Pet Stock Association intend holding their fourteenth annual exhibition in the Town Hall, Owen Sound, on Jan. 19th, 20th, 21st and 22nd, 1897, L. G. Jarvis, judge. This Association has in previous years been handicapped by the lack of railway accommodation; but on the completion of the extension of the G.T.R. from Park Head to this town it has made easy the connection with the great poultry raising country to the south-west. Birds can now be shipped by rail by either the Canadian or Dominion Express Companies. The Directors intend making this exhibition far exceed any previous one. Donations to the amount of \$125 have been received from the town, county and pri-

vate citizens. A silver cup valued at \$25 has been offered for the highest scoring bird in the show to be won twice by one exhibitor. One of the most handsome prize lists ever issued in Ontario is now ready for distribution and may be had from the Secretary.

MR. J. DORST

has received an enquiry for Wyandottes from New South Wales in reply to his ad. in REVIEW, while through the same medium Mr. Daniels recently sent a bone cutter to New Zealand.

MR. E. B. CALE, STRATFORD,

we regret to learn has been very ill with typhoid fever, but are glad to know that he is now well on the mend.

MONTREAL SHOW

will be held this year on January 19th to 23rd when Mr. H. S. Ball will judge the poultry. Mr. W. J. Morton is the Secretary, and enquiries for prize lists, etc., should be sent to him addressed P.O. Box 2270, Montreal. Entries close on January 6th, and a large entry is assured.

A POULTRY AND PET STOCK ASSOCIATION FOR THE MARITIME PROVINCES.

We heartily endorse the closing par. of the following from the *Co-operative Farmer* of Sussex, N.B. We are all inclined a little too much to provincialism :

We are very glad to learn that such an association is proposed for the Maritime Provinces and shall do everything in our power as a paper to help it along. There is no branch of work which is more in need of organized effort on the part of its promoters than the poultry business, and it is right that the breeders of all the Maritime Provinces should unite. We have had too much of petty provincialism in the past. Nova Scotians, New Brunswickers and P. E. Islanders have nothing to lose and much to gain by sinking their differences and working together for the common good. Especially is this true in live stock lines.

MANITOBA POULTRY ASSOCIATION.

At a meeting held on Nov. 19th Mr. Butterfield was appointed judge for the annual show to be held this season on February 16th to 20th, 1897.

MR. L. G. PEGUEGNAT, NEW HAMBURG,

owing to business was unable to take in he fall shows this season but hopes to make it interesting for partridge Cochin exhibitors at the Ontario.

THE ONTARIO.

Mr. Browne heads his announcement in this issue "ligger than ever" and we have no doubt the prophesy will be fulfilled. Guelph has always made the Ontario a success, in fact in past years it went there to retrieve its fortunes and we know the Royal city will not be out done this year by any previous experience. The date it will be noticed is a little later than usual, in our opinion a decided advantage. More money is offered than ever before, the judges are the "old reliables," and now all that is needed is the help of exhibitors. Entries close positively on January 4th and Mr. Browne assures us this means January 4th and not a few days later. Some were left last year, don't you be behind this year.

KINGSTON IS A GOOD PLACE TO SPEND A HOLIDAY

and as January 1st is the last day of the Eastern Ontario show to be held there this year, exhibitors who in the usual order of things could not visit the show can go, and return accompanied by their birds. Entries close Dec. 19 with Mr. F. H. Gisborne, the Secretary, Ottawa.

GALT SHOW.

The Galt Poultry Club will hold its inaugural show in that busy town on January 19th, 20th and 21st next, so that we will be enabled to give further particulars of the lists, etc. in next issue. Mr. J. Powley is the Secretary.

THERE ARE TWO ASSOCIATIONS

in Galt and we are sure it would be far wiser if the breach could be healed, forces united, and one strong association result. It shouldn't be impossible.

FROM NOVA SCOTIA.

Mr. A. G. Goodacre, of Grand Pre, N.S., has bought the second prize Industrial pen of golden Wyandottes from Mr. R. H. Essex through the REVIEW and Mr. Essex kindly allows us to copy part of a letter to him from Mr. Goodacre, of more than passing interest. He writes :

"The birds arrived O.K. Saturday evening and I find them just as you represented them to be. I myself don't consider them a very handsome breed, too dingy looking, but possibly may look brighter in spring, some you know claim them to be the handsomest fowl in existence (?) I call them too dark for effect, would like to see more color throughout (i.e. where the S. L. have white). I am making a practice of carrying cockerels over so as to avoid too much inbreeding, for instance I shall probably pick out the best cockerel from

your pen next year and use him in '99 (if both of us are alive). Can you personally recommend (here follows some lines of a confidential nature which we omit). I am wanting a good B. P. R. cockerel for pullet mating. I have been sold too much *trash* in this line, I have come to the conclusion that it only pays to keep the best and so much more so to import the very best, but unfortunately my *best* and some of the fancy breeders' bests are as wide apart as the poles, mine are to a large extent governed by the American Standard, though not wholly, but theirs is a matter of "what can I get off!!!" I would like to place an order with you for two sittings of buff Rock eggs to be shipped second week in April, please furnish me with price for same."

MR. W. BARBER, TORONTO,

an old timer in the fancy, will judge Games and Game Bantams at the coming New York show. He will acquit himself well.

THE *Orillia Packet*

reports a Plymouth Rock pullet hatched in July as beginning to lay on Nov. 9th. The bird is owned by Mr. Frank Furrness.

MR. C. J. DANIELS

writes that a big improvement has been made in Bone Mills. The manufacturers are now using a new pattern knife, which clears itself. One customer writes that "the mills run 100 per cent easier than the old pattern machines." Mr. Daniels believes he now sells the easiest run and best machine on earth, and to back this up he gives customers the privilege of paying for a mill and trying it for one month, if not as he says purchasers can return mill and have money refunded.

"INDUSTRIAL" NOTES.

Anyone who looked carefully at the buff Leghorns at Toronto this year and was able to bear in mind the same classes of a few years back could not fail to be struck with the vast improvement in this year's birds, especially amongst the juveniles. Every year sees improvement in color and yet size is being kept up.

Mr. G. M. Haven bought at the Industrial for shipment to the United States the following single comb brown Leghorns: 1st and 2nd pullets, 1st cockerel and two females out of the 1st prize pen.

POULTRY ASSOCIATION OF ONTARIO.

STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR EXHIBITION, 1896, HELD AT PORT HOPE.

Receipts—

Balance at last statement.....	\$ 123 92
Ontario Government Grant for Coops....	500 00
" " " Annual (Discounted)...	874 75
Entry Fees, per Register.....	588 50
Membership Fees.....	97 00
Special Prizes, Cash.....	19 00
Interest from Bank on Deposits.....	6 53
	\$2209 70

Disbursements—

Prizes, including com. on P.O. Orders.....	1165 09
Purchase of New Coops, Numbers etc.....	487 28
Port Hope Association Grant for Expenses.....	103 25
Judges Fees.....	125 00
Secretary's Salary (Voted by Directors).....	150 00
Printing and Advertising.....	26 00
Postage, Express, Telegrams and Bk. Com.....	19 03
Secretary's Expenses at Port Hope, and R.R. fees.	12 55
Stenographer for Gov. Report and Minutes.....	10 00
Freight on return of Coops to London.....	23 55
Balance in Bank.....	87 95
	\$2209 70

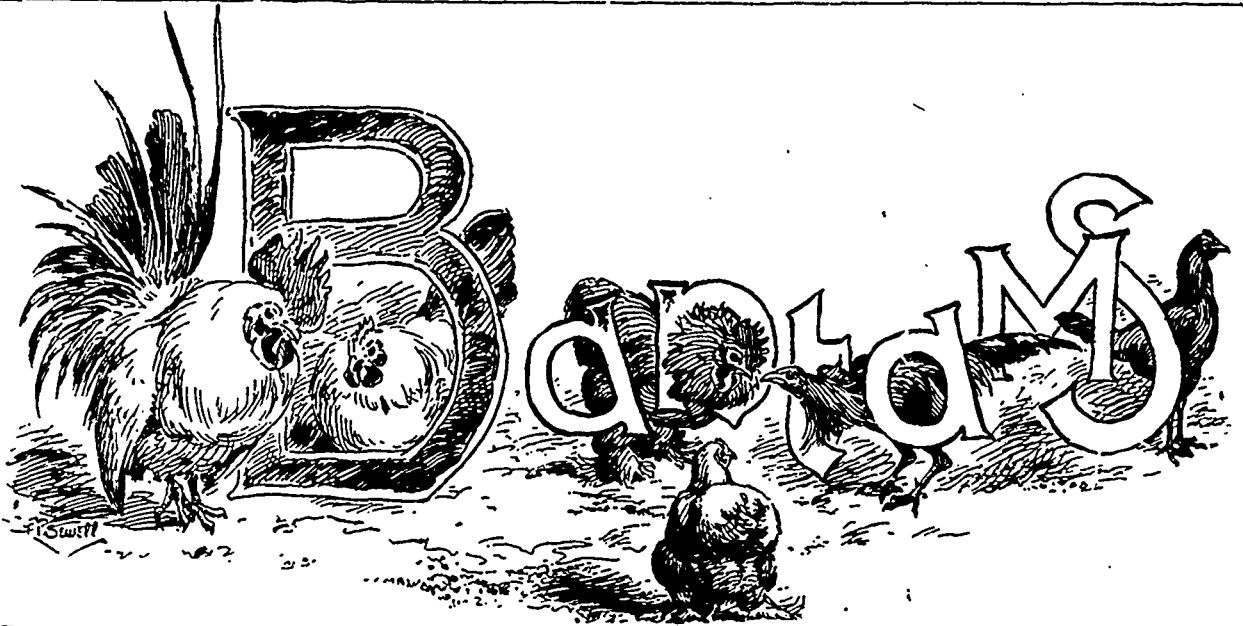
Audited and found correct. H. B. DONOVAN.
Nov. 18, 1896.

BLIND TURKEYS.

Editor Review :

CAN you tell me what is wrong with my turkeys? They have become blind and cannot see to eat. They have no sore of any kind on their eyes and were all in good health till a few days ago. When they suddenly became blind. I would like to know through your paper what to do to cure them. Yours truly,
J. E. H.

[It apparently is a kind of cold or distemper. Wash head with warm water with a slight dash of vinegar and dry well, or use a little zinc ointment on the eyes. You do not state if lids are closed or not, we presume they are. Ed.]



THE ROSE COMB WHITE BANTAM.

BY H. S. BABCOCK, PROVIDENCE, R.I.

THE black rose comb is quite a popular, and the white rose comb is quite an unpopular Bantam. The first is plentiful, the second scarce. The first has numerous breeders, the second few. Can any one tell why?

The only outward difference between the varieties is one of color. The same shape, the same size, the same characteristics, but one is black and popular, the other is white and hardly knows the meaning of the word popularity. Both colors are beautiful. Black, indeed, has a brilliancy which white lacks, but white on the other hand has a purity which no other color possesses, a delicacy that gives the suggestion of innocence and attractiveness. There does not seem to be enough difference in color to make the difference in popularity.

There is another difference, not in appearance, but in characteristics. It is a difference which would not be likely to make any difference in popularity, or if it did it ought to make it in favor of the white. The black is pugnacious and courageous, the white is gentle and mild, more peaceable, and less difficult to manage than the black.

The shape of the rose comb Bantam is exceedingly graceful. It is a shape that, unless it be that of the Game, is not exceeded in gracefulness by any breed, for the rose comb

Bantam is a diminutive Hamburg, and the Hamburg is one of the most graceful fowls in existence. That there should be but two varieties of Bantams with this shape is remarkable but there is a prospect that this lack will be supplied. If the Sebrights were bred with full tails they would approach this shape pretty nearly. We have perfected only black and white Hamburg Bantams, but to let out a secret, we know of some close approximations to golden and silver spangled Hamburg Bantams. These birds are pretty well spangled and of the correct shape and size, and if all goes well the time is not far distant when they will be perfected. They are beautiful now but they will be more beautiful when their perfection has been wrought out. We do not feel at liberty to tell more at this time; perhaps we have told too much already. But while these varieties are hopes and expectations, half fulfilled promises, the white rose comb is a hope, an expectation and a promise realized and fulfilled and deserves to be reserved from the portals of scarcity into which it has been allowed to fall.

How can the white rose comb Bantam be made more popular? There is an old maxim that "nothing succeeds like success." If the few breeders of this variety will make a determined effort they can make this variety more popular. They should exhibit freely, admire freely, write about their pets freely, and illustrate their articles freely. The public would thus become accustomed to the appearance of the bird and would appreciate it, buy it, breed it. But so long as breeders hold it back, they need not be surprised

that the public shows an equal indifference. Success can be conquered for any variety that has the beauty and the merits of the rose comb white Bantam.

BANTLINGS.

MR. Butterfield overlooked the Polish Bantams in his Toronto report. They made large classes and were of good quality all through. Mr. McNeill showed two grand pullets, bearded and blue legged, the best yet shown. The first cock, single comb, had been dubbed and this we think should have cost him premier place. The winning single comb chicks were both good crested birds in nice condition but a bit on the large size. Hens were an extra lot.

No two grains can beat buckwheat and barley as a winter feed for Games or Game Bantams. This combination contains properties wherewith the birds are kept in that hard feathered, glossy condition so desirable in these varieties.

TORONTO, POULTRY, PIGEON AND PET STOCK
ASSOCIATION.

THE regular monthly meeting of the above Association was held in Temperance Hall, on Thursday evening, Nov. 12th. The President, Mr. Barber, in the chair. The minutes of previous meeting were read and confirmed. The following gentlemen were proposed for membership and accepted: Messrs. G. Berner, R. Wheeler, C. Moore, C. S. Benson and J. Craig. The following were nominated for offices for 1897: Hon. President, Mr. A. R. McKinley; President, C. Bonnick and R. H. Essex; 1st Vice-President, C. J. Daniels, R. Fox, C. Mick; 2nd Vice-President, J. Dilworth, C. Grimsley; Treasurer, J. Bennett; Secretary, R. Durston; Executive Committee, Messrs. Carter, Spry, Wood, Lake, Powell, Davies, Dewey and Gore. Delegates to Industrial Exhibition, Messrs. J. Dundas, W. Fox and J. Brown. Delegates to Western Fair, Messrs. W. Barber, C. J. Daniels and Wm. Fox. Auditors, Messrs. H. B. Donovan and J. O'Neil. It was moved and seconded that the Hon. Minister of Customs be appealed to to place pure bred pigeons for the improvement of stock on the free list, and that we ask sister Associations to act with us. It was also moved and seconded that all Rabbits and Guinea Pigs be added to the free list. There being no more business to transact the meeting adjourned at 10.30. Receipts for evening, \$5. R. DURSTON, Secy.

LIGHT BRAHMAS AT THE INDUSTRIAL.

Editor Review:

INOTE what my friend Mr. Butterfield has to say in the November issue of your paper *re* my criticism of light Brahma hens, and with your permission, desire to say a few words in reply.

I am really very sorry that I have apparently caused Mr. Butterfield so much uneasiness, and grieved to see that his memory is getting so bad. In the first place I did not have the privilege of making any criticism in the REVIEW, but what he evidently complains of appeared in the *Reliable Poultry Journal*. In the second place I did not use the words, "second hen should have been first." What I did say, however, was "First a very nice hen, but *to my mind*, she might easily have exchanged places with the second." There is a vast difference between what I said, and what Mr. Butterfield imputes to me. Surely I am entitled to write what I honestly believe to be so! At the time of writing my report I conscientiously thought, that *as they stood in Toronto*, the second hen was the best, and I think so yet; because, she was in somewhat better condition than the winner, was of better shape, larger, better in head, whiter in color, and had fully as good, if not better, leg and toe feathering. The winner had, I agree, better colored wings, and better tail coverts, but I certainly cannot admit that she had a more glossy neck. I thought the second hen better here.

However, I may have been wrong in my view, and, while I have the greatest respect for the decisions of Mr. Butterfield, who, for about twenty-five years has been one of our foremost judges, at the same time I shall always, while in any way connected with the poultry press, criticize in a friendly spirit, any award should I honestly, as here, believe the same to be wrong, which as I understand it, is the object of a report. I could, if need be, name others who attend the Industrial and had the same opinion in regard to this same decision.

Mr. Butterfield concludes by saying, "Sometimes when breeders of birds criticised have the misfortune of not being able to be at the show, they by criticism may think they did not get what they were fairly entitled to, hence my explanations." As both Mr. Oldrieve and Mr. Cole, the owners of the two hens were present this remark does not apply to the present case.

Yours, etc.,

THOMAS A. DUFF.

Toronto, Nov. 12, 1896.

PROFITABLE POULTRY KEEPING.

BY T. A. WILLIAMS, TORONTO, ONT.

(Continued.)

HAVING decided on incubating three or four hundred eggs per week we must make arrangement for housing and brooding the chicks in good time. It will not do to wait until the eggs are in the incubator, but it must be done the previous summer. When only one incubator is used, small portable brooders are the most convenient and economical, but when three large incubators are kept in operation the most convenient and economical system of brooding is by means of a pipe system brooder house. Following out the plan that we have in contemplation, it is safe to estimate that by the time our first lot of chicks is ready for market we shall have two thousand on hand. Such a stock of chicks will require a lot of care, and in order that the attendant may work to the best advantage it will be best to have them all under one roof.

The brooder house to accommodate the chicks from three incubators of 300-eggs capacity each, and a tender of 100-eggs capacity, should be 100 feet long by 22 feet wide, with the ends facing north and south and the long sides facing east and west. The hot water pipes should run down the centre of building from end to end, and the boiler should be placed exactly in the centre of the building—thus placed it feeds two distinct loops of piping, and it will be seen that the pipes at one end of the house may be used without having to boil water for the other end, which is not in use, thus there is economy in fuel. The two sets of piping should run forty-five feet from the boiler, one set running north, the other south—this leaves ten feet in the centre of house for the boiler, coal bin, and work room for the attendant, the total space given up to these several purposes being 10 x 22 feet. There is a walk the entire length of the building three feet wide on top of the hot water piping, which is covered in with flooring to retain the heat. There should be three flow and three return pipes connected by manifolds with the boiler, the far ends slightly higher than the boiler, and it is extremely important that there are no dips in the line of pipe, or air will be trapped and then it is impossible to get good circulation. The two sets of pipes are divided into fifteen sections of three feet each, the chicks in the first section of three feet having a run six feet wide and extending to the western wall, the chicks in the second section have a run of same width extending to the

eastern wall, thus it will be seen that the brooder sections proper open alternately to the east and west, and each section will accommodate one hundred newly hatched chicks—which, however, will have to be thinned out as they increase in size. By this system we have the minimum of piping with the maximum of run-way. In next issue we will consider the best way of constructing this brooder house in all its appointments.

(To be Continued.)

FOWLS, CARE AND FEEDING.

BY PROF. G. C. WATSON, OF THE U. S. DEPARTMENT OF AGRICULTURE.

(Continued.)

HAMBURGS and Leghorns, if they are frequently moved from one pen to another, will sometimes give the owner considerable trouble in flying over fences, even though they are seven feet high. If it is possible to place the fowls when they are quite young in the yard where they are to remain, much less trouble will be experienced. It has often been noticed that hens would remain peacefully in the yard where they had been reared, but if moved to another yard would give the owner more or less trouble by flying over the inclosure.

SELECTION OF BREEDS AND BREEDING.

A mistake is oftentimes made in selecting fowls of a breed that is not suited for the purposes for which they are to be kept. If egg production is the all-important point, it is a most serious mistake to select a breed of fowls that is not noted for this product. If, on the other hand, meat is the chief object, an expensive mistake will be made if any but the heavy-bodied fowls are chosen. The small, active, nervous, egg-producing breeds can not compete with the larger phlegmatic Asiatics for meat production. Then, too, if fowls are kept for both eggs and meat production, some breed of the middle class should be chosen. These, while they do not attain the great size of the Asiatics, are sufficiently large to be reared profitably to supply the table with meat, and at the same time have the tendency for egg production developed sufficiently to produce a goodly number of eggs during the year. The Wyandottes and Plymouth Rocks are good illustrations of this class of fowls. While individuals of these breeds have made excellent records in egg production, the records of large numbers do not compare favorably with the egg production of the Mediterranean fowls. All of the so-called Mediterranean fowls have

a great tendency toward egg production and require only the proper food and care to produce eggs in abundance.

A serious mistake is also made in selecting fowls for breeding purposes and in selecting eggs for hatching. On many farms the custom is to select eggs for hatching during the spring months, when nearly all the fowls are laying. No matter how poor a layer a hen may be, the chances are that most of the eggs will be produced during the spring and early summer months. A hen that has laid many eggs during the winter months is quite likely to produce fewer eggs during the spring and early summer months than one that commenced to lay on the approach of warm weather. Springtime is nature's season for egg production. All fowls that produce any considerable number of eggs during the year are likely to be laying at this time. It is therefore plain that whenever eggs are selected in the springtime from a flock of mixed hens, composed of some good layers and some poor ones, a larger per cent of eggs will be obtained from the poor layers than at almost any other season of the year. A mistake is therefore made in breeding largely from the unprofitable fowls. Whenever it is possible, fowls that are known for the great number of eggs they have produced during the year should be selected for the breeding pen. While it will be almost impossible, and certainly impracticable, in a majority of cases to keep individual records of egg production, yet a selection may be made that will enable a breeder to improve his flock greatly.

The two things necessary to produce large quantities of eggs with the Mediterranean fows are: (1) Proper food and care, and (2) a strong constitution, which will enable the fowls to digest and assimilate a large amount of food; in other words, fowls so strong physically that they will stand forcing for egg production. In this relation, we may look at the fowl as a machine. If that machine is so strong that it can be run at its full capacity all the time, much greater profit will be derived than if it can be run at its full capacity only a part of the time.

There is, perhaps, no time in the history of the fowl that will indicate its vigor so well as the moulting period. Fowls that moult in a very short time and hardly stop laying during this period, as a rule, have strong, vigorous constitutions, and if properly fed give a large yearly record. On the other hand, those that are a long time moulting have not the vigor and strength to digest and assimilate food enough to produce the requisite number of eggs. If it is necessary to select fowls at sometime during the year other than the moulting period, some indication of their egg producing power is shown in their general conformation. In selecting a hen for

egg production, her form will give some indication of value. A long, deep-bodied fowl is to be chosen rather than one with a short body, whose underline is not unlike a half circle. A strong, hearty, vigorous fowl usually has a long body, a deep chest, with a long and quite straight underline. Other things being equal, the larger bodied fowls of the egg breeds are to be preferred. It is a rule that fowls bred for egg production are larger bodied than those bred for fancy points. Whenever vigor and constitution form an important part in the selection of fowls for breeding, the size of the fowls is invariably increased.

FEEDING.

In feeding for egg production, a valuable lesson may be learned from nature. It will be observed that our domestic fowls that receive the least care and attention, or, in other words, whose conditions approach more nearly the natural conditions, lay most of their eggs in the springtime. It is our duty, then, as feeders, to note the conditions surrounding these fowls at that time. The weather is warm, they have an abundance of green food, more or less grain, many insects, and plenty of exercise and fresh air. Then, if we are to feed for egg production, we will endeavor to make it springtime all the year round; not only to provide a warm place for our fowls and give them a proper proportion of green food, grain, and meat, but also to provide pure air and plenty of exercise.

Farmers who keep only a small flock of hens, chiefly to provide eggs for the family, frequently make a mistake in feeding too much corn. It has been clearly proven by experiment that corn should not form a very large proportion of the grain ration for laying hens; it is too fattening, especially for hens kept in close confinement. Until the past few years, corn has been considered the universal poultry food of America. This, no doubt, has been largely brought about by its cheapness and wide distribution. The recent low prices of wheat have led farmers to feed more of this grain than formerly, and with a consequent improvement in the poultry ration.

When comfortable quarters are provided for the fowls, the nutritive ratio of the food should be about 1 : 4; that is, one part of protein or muscle-producing compounds to four parts of carbohydrates or heat and fat-producing compounds. Wheat is to be preferred to corn. Oats make an excellent food, and perhaps come nearer the ideal than most any other single grain, particularly if the hull can be removed.

Buckwheat, like wheat, has too wide a nutritive ratio if fed alone, and produces a white flesh and light colored yolk if fed in very large quantities. In forcing fowls for egg production, as in forcing animals for large yields of milk, it is

found best to make up a ration of many kinds of grain. This invariably gives better results than one or two kinds of grain, although the nutritive ratio of the ration may be about the same. It has been found by experiment that the fowls not only relish their ration more when composed of many kinds of grain, but that a somewhat larger percentage of the whole ration is digested than when it is composed of fewer ingredients. It has been clearly proven by experiment that food consumed by the fowls influences the flavor of the eggs; that in extreme cases not only is the flavor of the food imparted to the eggs, but also the odor. This of itself is sufficient reason for always supplying wholesome food for the fowls and seeing to it that none but wholesome food is consumed.

It is conceded by the majority of poultrymen that ground or soft food should form a part of the daily ration. As the digestive organs contain the least amount of food in the morning, it is desirable to feed the soft food at this time, for the reason that it will be digested and assimilated quicker than whole grain. A mixture of equal parts, by weight, of corn and oats ground, added to an equal weight of wheat bran and fine middlings, makes a good morning food if mixed with milk or water, thoroughly wet without being sloppy. If the mixture is inclined to be sticky the proportion of bran should be increased. A little linseed meal will improve the mixture, particularly for hens during the moulting period, or for chickens when they are growing feathers. If prepared meat scrap or animal meal is to be fed it should be mixed with this soft food in proportion of about 1 pound to 25 hens. It will be necessary to feed this food in troughs to avoid soiling before it is consumed.

Clover, during the early spring, is perhaps one of the cheapest and best foods. It is readily eaten when cut fine in a fodder cutter, and furnishes a considerable amount of nitrogen. If clover is frequently mowed, fresh food of this kind may be obtained nearly all summer, particularly if the season be a wet one. Should the supply of clover be limited or the season unusually dry, green food may be cheaply and easily grown in the form of Dwarf Essex rape. This should be sown in drills and given the same cultivation as corn or potatoes. When the rape is from 8 inches to the foot in height, it may be cut and fed. It furnishes a fresh, crisp food that is readily eaten. If cut a few inches from the ground, a second and sometimes a third crop will be produced from one seeding. Alfalfa will also furnish an abundance of green food. It must, however, be cut frequently, each cutting being made before the stalks become hard or woody.

A good quality of clover hay cut fine and steamed makes an excellent food for laying hens if mixed with the soft food.

Cabbages can be grown cheaply in many localities and make excellent green food so long as they can be kept fresh and crisp. Kale and beet leaves are equally as good and are readily eaten. Sweet apples are also suitable, and, in fact, almost any crisp, fresh, green food can be fed with profit. The green food, in many instances, may be cut fine and fed with the soft food, but, as a rule, it is better to feed separately during the middle of the day, in such quantities that the fowls have about all they can eat at one time.

GRIT.

It is necessary that fowls have access to some kind of grit if grain food is fed in any considerable quantities. During the summer months, when they have free access to the yards or runs, it will not be necessary to provide grit, providing the soil is at all gravelly. If, on the other hand, the soil is fine sand or clay, it will be necessary not only to provide grit during the winter months, but throughout the whole year.

Small pieces of crushed stone, flint, or crockery ware will answer the purpose admirably. There are many poultry supply houses which keep constantly on hand crushed granite in various sizes suitable for nearly all kinds of domesticated fowls.

Crushed oyster shells, to a large extent, will supply the necessary material for grinding their food and at the same time furnish lime for the egg shells. Chemical analysis and experiments, together with the reports from many practical poultrymen, show conclusively that the ordinary grain and the green food supplied to laying hens do not contain enough lime for the formation of the egg shells. It will require several times as much lime as is ordinarily fed if good, strong egg shells are to be produced. Crushed oyster shells will supply this necessary lime if kept continually before the fowls, trusting to them to eat the amount needed to supply lime rather than mixing the shells with food. The judgment of the fowl can be relied upon in this respect:

MEAT FOOD.

Where fowls are kept in confinement it will be necessary to supply some meat food. Finely cut fresh bone from the meat markets is one of the best if not the best kind of meat food for laying hens and young chickens. Unfortunately, it is not practicable for many poultrymen to depend wholly on this product, for the reason that it is often inconvenient or impossible to obtain, and when once secured it can not be kept in warm weather without becoming tainted. Tainted bones should be rejected as unfit for food. Skim milk

milk may be substituted wholly or in part for meat food without a decrease in egg production provided the proper grain ration is given.

FEEDING SMALL CHICKENS.

Chickens do not require food for the first twelve to thirty-six hours after hatching. One of the best foods that can be fed the first few days is stale bread soaked in milk. This should be crumbled fine and placed where the chickens have free access to it, and where they can consume all of the food without soiling it. If placed on the floor of the brooder or the brooder run, the larger part of the food will be trampled upon and will soon become unfit to eat.

A simple and efficient feeding trough may be made by tacking a piece of tin about $3\frac{1}{2}$ inches wide along the edge of a half-inch board so that the tin projects about an inch and a half on either side of the board, bending the tin so

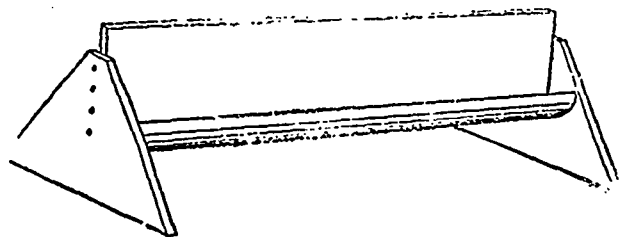


Fig. 4.—Feeding Trough.

as to form a shallow trough, and fastening the board to blocks which raise it from 1 to 2 inches from the floor. (See fig. 4.) The trough may be from 1 to 3 feet long. It is within easy reach of the chickens and so narrow that they can not stand upon the edges. Food placed in such feeding troughs can be kept clean until wholly consumed.

Granulated oats (with the hulls removed) make an excellent food for young chickens. There is, perhaps, no better grain food for young chickens than oats prepared in this manner. It may be fed to good advantage after the second or third day in connection with the bread sopped in milk. A good practice is to keep it before them all the time.

The chickens should have free access to some kind of grit after the first day. Coarse sand makes an excellent grit for very young chickens. As they get a little older some coarser material must be provided.

Milk is an excellent food for these young fowls, but requires skill in feeding.

One of the greatest difficulties in rearing fowls is to carry young chickens through the first two weeks without bowel disorders. Too low temperature in the brooder, improper food and injudicious feeding, even if the right kinds of food

are given, each plays an important part in producing these disorders. After the first ten days milk may be given more freely, perhaps, than during the earlier stages of the chick's existence. As the chick becomes a little older, more uncooked food may be fed. A mixture of fine middlings, wheat bran, a little corn meal, and a little linseed meal mixed with milk makes a valuable food. Hard-boiled eggs may be fed from the beginning, but, like milk, require more skill than the feeding of bread sopped in milk. On farms where screenings from the various grains become really a by-product, these form a cheap and efficient food for the chickens. Wheat screenings, especially, form one of the best foods, particularly if they contain a considerable portion of good kernels that have been cracked in thrashing. Then, too, the screenings contain a number of weed seeds that have feeding value and are relished by the fowls. They not only provide sustenance, but give variety, and this, in a measure, improves the general health.

Drinking fountains require close attention. Small chickens drink frequently and oftentimes with their beaks loaded with food, which is left, to a greater or less extent, in the water supply. As it is necessary to keep these fountains in a tolerably warm atmosphere, they soon become tainted and emit a disagreeable odor. This condition must not be allowed to exist, for all the food and drink consumed by fowls should be wholesome. It has often been said that "cleanliness is next to godliness," and certain it is that cleanliness is next to success in poultry keeping. The drinking fountains must be kept clean. If automatic fountains are used great care must be exercised in keeping them clean and free from bad odors. Nothing less than frequent scalding with steam or hot water will answer the purpose. A cheap, efficient drinking fountain may be made of a tin can with a small hole in one end near the lid of the can, under which is soldered a crescent-shaped piece of tin, forming a lip or a small receptacle for water. If the can is filled with water and then placed on its side, a small quantity of air will pass into the opening and a little more water will flow out. This kind of fountain will keep before the chickens a small quantity of water at all times accessible. By exercising care and keeping fountain thoroughly clean, satisfactory results are easily obtained from this arrangement.

BROODERS.

If one resorts to artificial incubation it will be necessary to provide a brooder of some kind. It may be simple and quite inexpensive, or complex and costly. It is not neces-

sary, however, to see that the brooder is capable of doing certain things. Some of these requisites are summed up in the following: It must be warm. The little chickens require a temperature of from 90° to 100° the first few days, and at all times they should find it so warm in the brooder that they are not inclined to huddle together to keep warm. If the brooder is automatic, then the temperature may be kept quite even throughout the whole floor space. If, on the other hand, the brooder is heated from one side or from the top, and is not automatic, it will be best to construct it so that certain parts of the machine will be very warm, in fact, a little warmer than is necessary for the chickens, and some other part somewhat too cool. It does not take them long to learn just where the most comfortable position is. They may be trusted entirely to select the proper temperature if the brooder is of sufficient size so that it is never crowded. A brooder constructed on this plan will require less attention than almost any other. It may undergo a considerable variation in temperature without overheating or chilling the chickens.

The brooder should be easily cleaned and so constructed that all of the floor space can readily be seen. Inconvenient corners are objectionable in brooders. In fact, any corner is objectionable, but if brooders are constructed cheaply it is almost necessary to make more or less corners. If constructed of wood, circular ones are somewhat more expensive than square or rectangular ones. The floor must not only be kept clean but dry.

Top or side heat is to be preferred to bottom heat, but there must be sufficient bottom heat to keep the floor dry.

As the chickens get a few days old, plenty of exercise must be provided. One objection to many of the brooders in the market is that the chickens are kept too closely confined and not allowed sufficient exercise. It will be a matter of surprise to many to learn how much exercise these little fellows require. With the young chicken, as with the athlete, strength is acquired by exercise, and above all other conditions of growth, strength is the one thing necessary in the young chicken.

INCUBATORS.

The modern improvement in incubators has made the rearing of fowls solely for egg production quite out of the question unless these machines are used. No experienced poultryman at the present time will undertake to rear fowls in large numbers for the production of eggs and depend on the hens that lay the eggs for incubation. The Mediterranean fowls can not be depended upon for natural incubation.

Artificial incubation must be resorted to if these fowls are to be reared in considerable numbers.

There are many kinds of excellent incubators on the market. As with many kinds of farm machinery, it is impossible to say that one particular kind is better than all others. Then, too, an incubator that would give very satisfactory results with one individual might prove to be quite inferior in the hands of another person. What is best for one is not necessarily best for another. It is advisable, before investing extensively in any make of incubator, to thoroughly understand the machine. If good results are obtained, then additional machines of the same kind should be purchased. Failures are recorded simply because the individual fails to understand the machine he is trying to operate, or, in other words, fails to learn how to operate that particular machine to the best advantage. A successful poultryman must necessarily pay close attention to petty details. Not only is this necessary in caring for little chickens and mature fowls but also in the care and management of incubators and brooders. The whole business is one of details. While incubators may vary considerably one from another, yet there are certain points to which all should conform. Some of these points are summed up in the following:

(1) They should be well made of well seasoned lumber. The effort of manufacturers to meet a popular demand for cheap machines has placed on the market incubators that are not only cheaply made, but made of cheap and not thoroughly seasoned material.

(2) The incubator should be easy of operation. All its adjustments should be easily made and so arranged that the more delicate machinery is in plain view of the operator. The machine should be automatic in operation. When supplied with the necessary heat it should control perfectly within certain limits the temperature of the egg chamber. This result is accomplished in various ways. The regulating force, whatever it may be, should be placed within the egg chamber so that the regulator may vary as the temperature in the egg chamber varies, irrespective of the changes of temperature of the room in which the incubator is placed. The regulator must be sensitive. The change of temperature which is necessary for the complete working of the regulator ought not to be more than one degree; that is, one degree above or below the desired temperature. It is better if the range of temperature can be reduced to one half of one degree, thus making a total variation of one degree instead of two degrees.

It should not be inferred that a much wider variation than this will not give excellent results under otherwise favorable

conditions, but, other things being equal, those machines which are most nearly automatic are to be preferred. In addition to the foregoing requisites, a convenient appliance for turning the eggs, positive in its action, should accompany each incubator. This may be an extra tray that is to be placed bottom side up over the tray of eggs and held firmly in this position while both trays are turned, thus completely transferring the eggs from one tray to the other without jar. The different machines have very different appliances for accomplishing this result. Excellent results are obtained by the use of many machines now on the market when the operator of these various machines is thoroughly interested. Poultrymen have, for a term of years, hatched in incubators over 80 per cent of all eggs put in the machine. It must not be interred that this is an easy thing to do. A record of this kind is attained only by close observation and good judgment, not only in running the machine, but also in the breeding and care of the fowls to produce fertile eggs.

DISEASE AND LICE.

Disease and lice are the great obstacles to be overcome in poultry raising. The houses may be kept free from lice by a liberal use of kerosene emulsion and by whitewashing. Whitewash serves a double purpose, that of ridding the house of lice and making the interior much lighter. A small window, with the interior of the house whitewashed, will make the building as light as a much larger window without the whitewash. If the poultry houses are kept free from lice, the fowls can usually be depended upon to keep themselves free by a liberal use of the dust bath. If, however, body lice are found, they may be successfully treated by dusting insect powder under the feathers in the evening and allowing the fowls to be undisturbed on the perches after the treatment.

Gapes in chickens frequently destroy large numbers, and are caused by trematode worms in the windpipe. The number of worms is sometimes so great as to completely choke the fowl. A feather moistened with turpentine or kerosene oil and inserted into the windpipe and turned until the worms are removed is a practice quite largely recommended. Others recommend removing the worms with a fine wire or horsehair, doubled so as to form a loop; this is to be inserted into the windpipe and turned until the worms are detached, and then withdrawn, bringing the worms with it. Another remedy practised by some poultrymen is to cause the chicks to breathe air in a confined space into which fine, slaked lime is occasionally dusted.

Preventive measures are far more satisfactory than the

treatment of infected fowls. The pens and yards should be kept clean and dry and the chickens kept in as thrifty condition as possible by supplying proper food and exercise. While these conditions may not insure absolute freedom from the disease in every instance, yet to moisture and filth can be attributed nearly all cases of gapes, particularly if the yards or pens were previously occupied by infected birds. Yards that have been allowed to become damp, filthy, and infected with the gape-worm may be improved by draining and thorough cultivation. Heavy applications of lime just before cultivating or saturation of the soil with strong salt solution (provided no crop is to be grown) are recommended by experienced poultrymen.

Chicken cholera.—This is an exceedingly fatal contagious disease, which is widely distributed over this country, and causes enormous annual losses, especially in the central and southern sections.

The first symptom of the disease is, in the majority of cases, a yellow coloration of that part of the excrement which is usually white, quickly followed by diarrhoea and rise of temperature. Other common accompanying symptoms are the drooping of the wings, stupor, lessened appetite, and excessive thirst. Since the disease is due to a specific germ, it can only be introduced into a flock by direct importation of this germ, generally by fowls from infected premises. As soon as the symptoms of the disease are observed "the fowls should be separated as much as possible and given restricted quarters, where they may be observed and where disinfectants can be freely used. As soon as the peculiar diarrhoea is noticed with any of the fowls, the birds of that lot should be changed to fresh ground and the sick ones killed. The infected excrement should be carefully scraped up and burned, and the inclosure in which it has been thoroughly disinfected with a one-half per cent solution of sulphuric acid or a one per cent solution of carbolic acid, which may be applied with an ordinary watering pot. Dead birds should be burned or deeply buried at a distance from the grounds frequented by the fowls.

"The germs of the disease are taken into the system only by the mouth, and for this reason the watering troughs and feeding places must be kept thoroughly free from them by frequent disinfection with one of the solutions mentioned.

* * Treatment of sick birds is not to be recommended under any circumstances. The malady runs its course, as a rule, in one, two, or three days, and it can only be checked with great difficulty."—(D. E. Salmon, U.S. Dept. Agr. Rpt. 1880, p. 444)

Roup is one of the most dreaded of diseases. It is some-

times spoken of as the winter disease. The symptoms are hoarse breathing, swelled eyes, discharge at the nostrils, and sometimes fetid breath. Treatment is not generally satisfactory. The affected birds should be removed, the houses cleansed and disinfected. Damp, foul air and cold drafts in the poultry houses should be carefully avoided whenever fowls are subject to roup. A decrease in the proportion of corn and an increase in the proportion of meat food in the daily ration is held by some to be highly beneficial in ward-off this disease.

In general, the treatment of the common diseases of fowls is not so satisfactory as preventive measures. Nowhere more than in the poultry business does that old adage apply, "An ounce of prevention is worth a pound of cure."

DRESSING AND SHIPPING.

A considerable proportion of the dressed poultry consigned to commission houses in large cities brings to the producer a much smaller profit than it would had the same poultry been dressed and packed for shipment with greater skill. It is of prime importance that the poultry products be placed on the market in a condition that will make them appear as inviting as possible. Proper feeding for two or three weeks before the fowls are slaughtered will improve their color materially.

In most of the American markets fat fowls with a yellow skin bring the highest price. This condition may be secured most cheaply by feeding a grain ration composed largely of corn for two or three weeks before the birds are slaughtered. Of the more common grain foods there is none that excels corn for this purpose.

The commission men and shippers, who study in detail dressing and packing, state that uniformly fine quality will soon acquire a reputation among buyers. The shipper should always be careful to have the product look as neat as possible. In some of the large cities ordinances prohibit the sale of dressed poultry with food in their crops. In a few instances the sale of live poultry in coops which contain food is also prohibited. In all cases it is best to withhold food from twelve to twenty-four hours before killing, but the fowls should have plenty of water during this time, that they may be able to digest and assimilate food already consumed. All fowls should be killed by cutting through the roof of the mouth and allowing them to bleed to death. In all operations of dressing avoid cutting or bruising the skin or breaking bones. Care is required in the case of the heavy fowls in picking and handling to prevent bruising the skin. In packing fowls use neat, clean, and as light packages as will carry safely. Boxes or barrels holding about two hundred pounds meet these requirements best; boxes are better

for turkeys and geese and barrels for chickens. Barrels may be used, however, for dry shipment as well as for hot weather shipment when the fowls are to be packed in ice.

In shipping live poultry the coop should be high enough to allow the fowls to stand upright without bending their legs. When large coops are used there should be partitions, so that if the coops are tipped all of the fowls are not thrown to one side. They should have plenty of room in the coop. If possible put only one kind in a coop or in one division of a coop.

ANCONAS.

THE illustration we give in this issue is from the English *Feathered World*, the premier fancy journal of the Old Country. The Ancona is little known on this side and since the death of Francis H. Mortimer of Pottsville, Pa., who for years was a regular contributor to the REVIEW, has lost rather than gained in popular favor. He was a strong advocate of the breed and always warm in its praise. The birds depicted in the picture are typical and the cock a winner in the largest shows. Mrs. Bourlay, in writing of them, says:

These birds, though rapidly gaining favor with the public, are still unknown to many who are interested in the different breeds that stock our poultry yards. A certain confusion concerning them has also arisen from the notice of Anconas in Mr. Wright's book, his description not tallying with the birds as now exhibited, but a recent correspondence in the pages of a contemporary has proved, beyond doubt, that the Anconas of the past were a manufactured breed, produced by crossing black and white Minorcas. Mr. W. Beard, of Tiverton, seems to have cultivated them largely, and they are described as resembling Scotch Greys with black and white mottled legs. Mr. Harwood, of Tiverton, distinctly remembers specimens being shown in 1874; they were common, he says, but little trouble was taken to breed them to one type, and consequently they did not attract any great amount of attention. It is these birds which are described by Mr. Wright, and they must be carefully distinguished from the Anconas of to-day, which are of an entirely different type.

To begin with, they really are "Anconas," having been imported from that town in North Italy by Captain Rowle, of the ship "Bugle," about twelve years ago. Their merits at that time were not recognized, but in 1887 they were again imported and obtained a certain amount of favor, and were often seen at shows. In June, 1894, Mr. E. Brown, F.L.S., saw the pens at Frankley, the result being a short but comprehensive article by him in the *Live Stock Journal*

Almanac of 1895, with an illustration of two of the birds by Mr. Ludlow. Since then their popularity has steadily increased. A special class was held for them at Brigg show in February, 1896, when some very good birds were shown, and we are promised a class at Birmingham, 1897. They constantly appear in the A. O. V. classes, and frequently carry away prizes and commendations.

And now to describe the modern Ancona. They are bright active birds, taking much exercise and largely providing for themselves, if allowed to range. They delight to roost in trees, and will do so till really cold weather sets in and we force them to seek warmer quarters. No cold, however, stops their egg production; frost and snow, bitter north-east winds, or driving hail, is all one to them. The egg basket is never empty, and many are the petitions received during the winter for a "few eggs just to keep our customers together" from neighbours whose fowls have given up the battle. No "spice" is given, and no artificial warmth provided, but they are fed on the best grain obtainable, with a little crissel in the depth of winter.

(To be Continued).

CAKCLE.

The Ontario Agricultural College, Guelph, are having several of the best specimens of their flock photographed. If successful we may be able to present our readers with a plate of them in our January issue.

Mr. L. G. Jarvis, the popular judge and manager of the Poultry Department of the above institution, is to judge the Owen Sound, Hamilton, and Woodstock shows, and, of course, his specialty classes at the Ontario, all of which he will report for REVIEW. In addition to this he has several lectures booked, one of which he delivered before the Galt Poultry Association on November 30th.

We don't know Mr. Jarvis' terms for these lectures, but they cannot fail to be both interesting and instructive and well worth the little expense incurred to any poultry association. A lecture on judging, we know for a fact, would fill

the proverbial "long felt want," and should eventually do away with much of the recrimination at present indulged in.

Mr. W. H. H. Hewitt, of New Haven, Conn., is desirous of buying live poultry by the carload, if offered at a reasonable price. At this season live poultry can be purchased from the farmers at a low price and a good profit could be made if proper shipping facilities are available. Those interested should write Mr. Hewitt direct.

THE LATE OTTAWA SHOW.

Editor Review:

IN comparing the list of awards of the prize winning birds at the Central Canada Exhibition, held 17th to 20th Oct., '96, as published in the November number of the REVIEW, I find it does not correspond with the list sent you for publication.

In the Dorking class the list published in the REVIEW reads as follows: Cock, 1 2 and 3 J. Main, Milton; hen, 2 J. Main, 3 Reid; cockerel, 2 and 3 J. Main; pullet, 2 Main.

The list as sent for publication was as follows: Cock, 1—, 2 and 3 J. Main, Milton; hen, 1 —, 2 J. Main, 3 W H Reid; cockerel, 1—, 2 and 3 J. Main; pullet, 1 —, 2 J. Main.

Any person reading the list as published could only arrive at the conclusion that only birds deserving a second and third prize were exhibited where first prize birds were exhibited, and awarded prizes accordingly. It also would convey to the exhibitor, and justly so, the impression that the official in making out the list made the omission and would write to the Secretary to have the omission corrected. I wish to have the correction made before it is brought to that official's notice. Will you please therefore, in the December issue of the REVIEW have the omission corrected, and oblige

Your obedient servant,

E. H. BENJAMIN,

Subt. Poultry Branch C.C.Ex. Assoc.

[No blame at all can be attached to Mr. Benjamin, who was most painstaking in compiling the list sent us, but we have reasons which we cannot explain

here for suppressing the name, as we now do in Mr Benjamin's letter. First prizes were awarded in all the classes mentioned.—Ed].



Mr. J. H. Cayford, Box 1,168, Montreal, is our Agent and Correspondent for the Province of Quebec. Any correspondence relating to subscriptions or advertising may be addressed to him.

The man who cheats his paper
Out of a single cent,
Will never reach that heavenly land
Where old Elijah went!

But when at last his race is run—
This life of toil and woe—
He'll straightway go to the fiery land
Where they never shovel snow.

—Exchange.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

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The Reliable Incubator and Brooder Co. of Quincy, Ill., have published a new catalogue of 168 pages, ornate in every particular. The cover design is printed in colors and is unique, while the inside teems with a description of

their stock and yards besides much valuable general information. All interested should send for a copy.

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Canadian Poultry Review, Toronto, Ont.

TO meet the wants of advertisers who are continually using this column, and who find it a great trouble to be constantly remitting small amounts, we have adopted the plan of issuing Coupons (as above) good for 30 words each, 4 for 1. Any one buying these Coupons use them at any time in lieu of money when sending in an advertisement. Not less than four Coupons sold.

Bantams.

For Sale—A number of choice Golden and Silver Sebright Bantams, also Eggs in season, \$2 a setting. William Stuart, Goldie's Mills, Guelph, Ont.

A few Splendid Black Red Bantam cockerels for sale at \$1 each. A grand opportunity to introduce new and stylish blood. Don't miss it. H. H. Freeman, Milton, Ont.

Cochins.

Buff Cochins—I have for sale a number of last year's birds and this year's chicks. No better in the country. Score cards. John S. Moffatt, Guelph, Ont.

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For Sale—One pair colored Dorkings, winners of 1st at three shows this fall. Will sell cheap or exchange for other varieties. Robt. W. Croome, Bantford, Ont.

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For Sale Cheap—Two Ayle-bury drakes, very large and grand exhibition birds, also some Silver Grey Dorking cockerels, good stock. Write for prices. McKee Bros., Norwich, Ont.

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Pit Game for Sale—Trans-Atlantics, blue, black and tans, greys, Irish Black Reds, Steel-Jap crosses, Gr ds, Jays, Brown Reds and Muffs, also 1 fawn Lop buck, 4 months old, measures 21 in., or will exchange for 21 pigeons. Write W. M. Anderson, Palmerston, Ont.

Single Express Rates—Starvation prices Games, Heathwoods, Irish Black Reds, Tornados, Irish and Mexican Grays, and Cornish Indians. Free circular. C. D. Smith, Fort Plain, N.Y. Mention Review. 197

Free, Games, Illustrated Circular—Eggs \$1 per 13, Heathwoods, Irish B.B. Reds, Tornados, Irish and Mex can Grays, Cornish Indians \$2 per 13, fowl at all times. C. D. Smith, Fort Plain, N.Y. 197

For Sale or Exchange—Pit Game, Black Reds and Blue Pyle. All first-class stock. William McNaughton, Box 415, Galt, Ont.

For Sale—One Pyle cock and hen, father and mother to first prize pullet at Industrial; one Pyle cockerel and three pullets, and a few Silver Duckwing cockerels. F. Troth, 266 Salem ave., Toronto.

Exhibition Games—Black Reds, Duckwings and Pyles, bred from the very best strains. A few birds for sale at reasonable prices for quality of stock. Stamp for reply. A. J. Grigg, Clinton, Ont.

Trans-Atlantics—The world's most famous Pit strain. Fowls \$10 per trio. If you want the best Games in America, write for circular, mentioning REVIEW. H. P. Clarke, Indianapolis, Indiana.

Hamburgs.

For Sale or Exchange—Silver Spangled Hamburgs, 1 cock, 2 hens, winners of many prizes; 3 cockerels and 3 pullets from them. Would exchange for a St. Bernard dog. Box 346 Newmarket, Ont.

Black Hamburgs, cock (2nd at New York as cockerel, 1895) and five hens, only \$8. Essex, 13 Emerson ave., Toronto.

Leghorns.

White Leghorns—Beauties, no culls. I will sell 25 at \$1 each, or 6 for \$5. Your money back if not pleased. Must have room. Write quick. A. W. Graham, St. Thomas, Ont.

For Sale—135 April and early May hatch White Leghorn chicks from first grand breeding pens. A rare chance to secure choice exhibition and breeding cockerels and pullets of the old reliable Royal strain, noted for their large size, large lobes, red faces, correct combs, long yellow legs, and absolutely white plumage. Birds mated not near akin. Geo. E. Lee, Highgate, Ont. 1207

My Entire Stock of Black Leghorns is now for sale without reserve. They are sure winners and just what you want for the winter shows. One cock sire of all my prize winners, 15 hens, including 1st at last Ontario Show and 1st hen at London this year, and other winning hens, 20 cockerels, 10 of which are equal to my first prize cockerel at last Ontario Show, also 50 pullets, many of which will score over 94. Order quick as the early buyers will get the best birds, and they will all be sold at half their value. Also Rose-comb White Leghorn hen. 1st at Toronto last year, price \$1.50, to dandy R C pullets and 3 cockerels at \$1 each. For further particulars and prices address George Downham, Wisbeach, Ont.

On Buff Leghorns at Canada Central Fair, Ottawa, we won seven prizes on eight entries against birds from all parts of Canada. Only a few cockerels and pullets left, so write quick if you want exhibition or breeding bird of the best. Will. F. Lowe, Almonte, Ont.

Langshans.

My Black Langshans won at Toronto Industrial 1st and 2nd on cockerel, 2nd on pullet, at Guelph Central 1st and 2nd cockerels, 1st and 2nd pullets. I offer some of these choice birds for sale. H. Karn, Guelph, Ont.

For Sale—Crowded for room and offer Black Langshan cock and Montreal Jan ary last, \$5; 15 pullets at your own price. Write at once. H. K. Stockwell, Danville, Que.

Langshans for sale, 80 birds bred from the best male in America, grand style and color, good comb, etc., none better. T. H. Scott, St. Thomas, Ont. 197

Black Langshans—Three cockerels bred from prize winners, May hatched, \$2, \$3 and \$4 respectively—these are fine birds and splendidly pure. Write quick. A. W. Graham, St. Thomas, Ont.

For Sale—Two good Black Langshan cocks, also some good cockerels, price \$1.25 each. Money refunded if not satisfied. Chas. A. Baird, St. Mary's, Ont.

For Sale or Exchange—Prize winning Black Langshans, or will exchange for Pekin Ducks. C. A. Mayhew, Thamesville, Ont.

PIGEONS AND PETS.

PIGEONS

MR. Geo. Bell, Toronto, on his return from England, brought back with him some black Jacobins said to be extra in quality. They are being kept for him in Belleville.

Mr. Chas. Currier, who has judged so many shows in the east, is to officiate again at the Montreal winter show.

The editor of the REVIEW at the last meeting of the Toronto Association had put through a resolution petitioning the Minister of Customs that pigeons for the improvement of stock be placed on the free list, and calling on other Associations for their help. We trust that all pigeon breeders will see that this is brought up at the meetings of the Associations with which they are connected, and have the President and Secretary sign an appeal on behalf of each Association. We see no reason why poultry should come in free of duty and pigeons be debarred from a like privilege.

We have added good bright buckwheat to our pigeon *menu* this winter and the birds appear to like and thrive on it. This grain with barley makes a good combination.

Boston pigeon show, just closed, had 1,500 entries, Pouters alone 150. When will Canada have a show like this? While we have been retrogressing the United States has made progress by leaps and bounds.

This is the season, so Messrs. Geo. Hope & Son, Toronto, informs us, that most of the English and other song birds are received in Canada, and a recent visit to their store bears this out. While there we saw a grand lot of Mocking Birds, Cardinals, Skylarks, Gold and Bull Finches, Linnets and various other breeds in grand feather and all healthy looking. In Canaries, the cages shown us disclosed trained Rollers, German, Norwich, Fancies, etc., while Pigeons, Rabbits, Guinea Pigs and Ferrets were present also. Goldfish in a neat globe make a nice present, and Messrs. Hope assures us that they can be shipped quite safely. Several extra fine grey Parrots caught our eye, as well as other varieties of the Parrot tribe. To anyone visiting the city this store is well worth a visit at this season.

CAGE BIRDS

AT the show of the Toronto Cage Bird Society, to be held Jan. 1st, forty classes are offered for Canaries and eight for other birds. The prizes are in all classes \$1, 50c. and two cards, but six entries must fill to gain first money, otherwise the firsts will carry second money only. Color fed birds will be disqualified. The entrance fee to members is 15c. for the first entry, or two entries for 25c. To non-members the fee for each bird is 25c.

Mr J. Bertie, of Toronto, is to judge the cage birds at the coming Woodstock show.

Being a bit of a Scotch fancier, I was sorry to read about the Scotch Fancy entries being on the decline. Might I suggest giving fewer prizes to first cross, and paying a little more attention to circle and well-set-back shins? It is nothing but high shoulders and long necks which win at present. Surely once and for all it should be settled that no judge exhibit at any show where he judged. Things might improve thus. Yours, etc., WILLIAM M'CAA, Garrallan Smithy, Old Cumnock, Scotland.

Dr. A. Boulton, Toronto, has imported two pairs of Crests, and Messrs. A. Atkinson, J. Park and W. H. Naylor a pair each of Lizards from a reverend gentleman of New Lowell, Mass., U.S.A. Some of the above are said to be tiptoppers and will, if entered, no doubt, stand to the front at the coming exhibition of the Toronto Canary and Cage Bird Society.

The regular monthly meeting of the Toronto Canary and Cage Bird Society was held in Forum Hall on Oct. 2nd, with two thirds or more of the members present. The Management Committee's progress report on matters pertaining to the annual show, which will be held, as usual, on New Year's Day, was fully endorsed. Judging by the plunge they are making and the enthusiasm with which they work, the Committee are endeavoring to make the coming show outdo all previous attempts. The cup donated by the Society to the Toronto Industrial Exhibition Association for Canaries, was presented to the winner, Mr. J. Naylor. The annual meeting takes place on Monday, Dec. 7th, when the nomination and election of officers will be held.

PREPARING BIRDS FOR EXHIBITION.

LECTURE BY MR. C. A. HOUSE.

(Continued from last month.)

THE feather was made up, in a great measure, of phosphate of lime, and it was essential that the birds should have lime to assist them in the

BUILDING UP OF THE FEATHER.

Without this they could not get them through the moult properly, and it was a mistake to think in such cases that food was the only thing they needed. They were apt to think when a bird was getting nicely through the moult, and stopped, that it had caught cold. Nine men out of ten would tell them that, and in the same degree would they be found to be wrong. There was no cold at all. Instead of the breathing organs being wrong, it was the digestive organs that were out of order. This was generally caused by ramming color food into the birds to such an extent as to cause it to clog, and the overflow of bile created the noise they heard at times. Get that condition altered, and their bird sailed nicely through the moult. A little magnesia or Epsom salts (the latter carefully applied) would bring about the desired effect. Coming to what Mr. Holmes called

WASHING AT THE FINAL PINCH,

he observed that it was rather a big operation, and one that was often fateful to novices and old hands alike. To the novice, he advocated practising on green Linnets, which might be purchased at 3d. to 4d. each, in preference to experimenting on valuable Canaries, as the former took a good deal of killing. (Laughter). He showed how important it was in a delicate operation of this character to see that everything used in the work was handy before commencing. It was essential that the bird be taken hold of with a warm cloth after the use of water, whilst it was a good thing to hold it, for a few moments, as near the fire as a person could hold his hand. Another point to be observed was the necessity of having the under portion of the bird nearest the fire. If, on placing it in the drying cage the bird was too weak to stand on the perch, the next best thing was to place it on a piece of flannel in the bottom, but not on its back, as the placing of it in that position caused the water to drain about the neck, which ended in the

ROTTING OF THE FEATHERS.

The great thing was to facilitate the air reaching the fibre of the feathers, and this was the best accomplished if the bird

could be placed on the perch. He condemned the practice of drying the birds too close to the fire, as it had the effect of giving it a hard and husky appearance by reason of the air not having an opportunity of reaching the fibres. A bird should not be taken to the bird room immediately after being washed. To remove a bird into a room where the temperature was much different was by no means a wise proceeding. A stimulant, say a little gin, administered after the washing process acted beneficially on the urinary organs and prevented chills. Cayenne pepper in the egg-food would also do good, whilst a spray of sherry (half a teaspoonful) induced the bird to set about preening itself quickly. He concluded by giving advice as to the importance of showing the birds in clean presentable cages, and a few hints with regard to making entries, etc.

Questions were invited, and Mr. Tesseyman asked the lecturer whether he considered the drawing of the frill of a Yorkshire was "faking?"

Mr. House replied that with a little care in feeding frills might, in well-bred birds, be got rid of. Birds, as a rule, with frills were narrow chested, which did not all of them carry their feathers properly. If a bird was lusty and strong and in extra high condition, and showed a frill, its food should be brought down. For instance, it was not wise to give it egg food. Hard seed and a tonic in its drinking water was preferable, whilst if it was weak they must act directly the opposite by feeding it well, which would have the effect of doing away with a pointed breast, and make room for each feather to lay down. It was wrong to pluck. To avoid frills they must, in selecting their breeding stock, choose birds with good level chests. If a frill did make its appearance it would disappear by regulating the food according to the condition of the bird.

Replying to further questions, Mr. House said that with regard to washing of birds before shows, in towns like Leeds, where there was so much smoke it was advisable to wash two or three days prior to the show, whilst in the country a week would be about the proper time.

One question was: Is it understood among judges that where there is a show with open colour the birds shown in the lightest colour have preference over those with only natural colour?

Speaking for himself, Mr. House said if he had two birds before him, one as rich as a cherry, and the other pale in colour, but possessing all the other necessary qualities which the rich one had not, the pale one would win. They must remember that type was first, quality next, and color last.

Replying to further enquiries the lecturer said that when a bird got up to the neck in colour it was advisable to lessen

the colour food a little. Reverting to the frill question, the lecturer, replying to one of the audience, said a few drops of cod-liver oil was a good thing as a conditioner, although Fellowes' Syrup was one of the finest things they could give to birds. Some doctors went so far as to say that it made new tissue.—*Fur and Feather.*

**SHOW OF THE CANADIAN CANARY AND CAGE
BIRD SOCIETY.**

THE Canadian Canary and Cage Bird Society held their annual show at Toronto, Nov. 26th. There was keen competition for prizes, which gave credit to the breeders. The honors were awarded as follows :

Belgians, yellow, 1 J Hodge, 2 W J Woodhouse, 3 J S Moffatt ; buff, 1 J W Detlor, 2 Moffatt. Scotch Fancy, first cross, 1 W Ferguson, 2 and 3 A Griffiths, H Way highly commended ; yellow, 1 Griffiths ; 2 J Hodge, 3 Way, W J Woodhouse highly commended ; yellow marked, 1 J Goggins, 2 and 3 Detlor, J Hunter highly commended ; buff, 1 Ferguson, 2 T Robertson, 3 Hodge, Ferguson highly commended ; buff marked, 1 Ferguson, 2 Detlor, 3 Goggins, Robertson highly commended ; hens only, 1 Hunter, 2 Detlor, 3 Way, W Eveleigh highly commended. Norwich, yellow, 1 W Cochrane, 2 Way, 3 F J Denning, Naylor H.C. ; yellow marked, 1 Naylor, 2 Denning, 3 J Matless, Denning H.C. ; buff, 1 Cochrane, 2 T Barnsdale, 3 F Davies, Way H.C. ; buff marked, 1 Matless, 2 Naylor, 3 Cochrane, Denning H.C. ; hens only, 1 Matless, 2 Way, 3 Hodge, Cochrane H.C. Crested Norwich, any variety, yellow, 1 Cochrane ; any variety, buff, 1 and 2 Cochrane ; hens only, 1 Denning, 2 H Cuthbertson, 3 Hodge Crest bred Norwich, any variety, yellow, 1 Way, 2 Denning, 3 Cuthbertson, James H.C. ; any variety, buff, 1 James, 2 Hunter, 3 Way, C Goodchild H.C. Crested, any other variety, yellow, 1 Way, 2 Cochrane, 3 Eveleigh ; any other variety, buff, 1 Cochrane, 2 Denning, 3 Douglas, Way highly commended. Crest-bred, any other variety, yellow, 1 James, 2 Goodchild ; any other variety, buff, 1 Way, 2 Denning, 3 Cuthbertson. Yorkshire, yellow, 1 and 2 Stevens, 3 C Ruff, Stevens H.C. ; buff, 1 2 3 and H.C. Stevens. Cinnamon, yellow, 1 Barnsdale, 2 Naylor, 3 Stevens, Douglas H.C. ; buff, 1 Stevens. Mules, 1 Way, 2 Naylor. Goldfinch, 1 Hunter. Best collection of cage birds, 1 Hollingshead, 2 Hodge.

CANARY BREEDING.

FROM A LECTURE DELIVERED BY MR. WILLIAM H. BETTS,
BEFORE THE MEMBERS OF THE CAGE BIRD CLUB AT
THE INNS OF COURT HOTEL, HIGH HOL-
BORN, LONDON.

A VERY important factor in the successful practice of this delightful hobby is the judicious purchase of the stock birds. Be careful, therefore, never to buy a bird for the breeding cage except from a reliable aviarist or a dealer of repute, and it is well, if possible, to get the bird some time between November and the beginning of January. If you defer purchasing until April there is the risk of finding yourself saddled with a bird that has been tried in the breeding cage and found to be valueless. When arranging the pairs for breeding you will find that it is not advisable to mate two buff Canaries, as the young would not be a nice color. A buff bird should be paired with a yellow, or, if there be no objection to the progeny being small, the mating of two yellow birds should result in young of a beautiful yellow colour, silky in feather. The old rule in Canary breeding is that size and bulk of feather come from the buff bird, while silkiness and colour come from the yellow Canary. As to cages, you will find the cheapest is that which is simply a box with a wire front. It will cost but a few shillings, and be always useful as a flight or stock cage when the breeding season is over. It is, at any rate, quite unnecessary to be extravagant in cages and aviary fittings, unless, indeed, you wish to have your bird room arranged in the nicest possible way—and then, of course, a bottomless purse is indispensable. But, whether your tastes be extravagant or economical, see that your cage be neither small nor complicated, and thus ensure health and cleanliness for your birds. It not being practicable to supply cage birds with shrubs in which to build their nests, it is usual to hang in the cage either a box or a nest pan ; boxes, unless made perfectly and quite free from crevices, are not to be recommended, so nest pans are usually provided, and they should be warm, spacious, and sanitary ; the neglect of any of these precautions may result in your having to regret an unsuccessful breeding season. Some hens seem to have a poor idea of building a nest, and they will need your help occasionally. A good way to artificially build a nest is to thoroughly unravel some hair felt or saddle packing, and arrange it in the nest pan as carefully as possible ; then take a hot egg, unshelled, and turn it round and round in the nest ; the heat of the egg will smooth the hair, and make it firm

and comfortable. In dealing with the important matter of diet, it is useless to attempt to breed these birds unless you can succeed in bringing them into fit condition for parental duties. It is advisable to begin dieting gradually with nourishing food; so in February, their ordinary supply of Canary seed and rape can be supplemented twice a week by a teaspoonful of best Dutch hemp seed for each bird; after a fortnight increase this to hemp seed on alternate days; then, when March arrives, egg-food and hemp seed on alternate days for two weeks; after that the birds should have both every day. During this time the sexes are better kept in different rooms, but at the end of March pair them, and you will find by that time that they are quite ready for married life and its responsibilities. A popular theory as to the white of egg is that it is utterly indigestible—so much so that not even the ostrich can eat it with impunity. I can only say that when I used fresh eggs in my bird room the white was never wasted and the birds eat it freely. A curious confirmation of the digestibility of the white of egg will be found in Huxley's "Elementary Lessons in Physiology," where it is specially selected as a suitable matter for experiment in artificial digestion, and as it may interest those who have not come across the passage, I propose, as it is very short, to read it. (Page 146, Section 19, edition 8, 1874; publisher, Macmillan). "It is easy to ascertain the properties of gastric juice experimentally by putting a small portion of the mucous membrane which contains the peptic glands into acidulated water containing small pieces of meat, hard-boiled egg or other proteid, and keeping the mixture at a temperature of about 100 degrees. After a few hours it will be found that the white of egg, if not in too great quantity, has become dissolved, while all that remains of the meat is the pulp,

consisting chiefly of the connective tissue and fatty matters which it contained." I have not tried this experiment, so content myself with quoting my authority, a particularly high one. The egg-food I make is composed of three parts of dessicated egg to nine parts of Elfick's or Welham's egg-food, or twelve parts of powdered biscuit; these are not weight measurements, of course. Grind the ingredients dry in a mortar, to thoroughly incorporate them and make it impossible for birds to pick out the egg and leave the biscuit, and make the mixture crumbly moist with water or milk, giving it to the birds in clean white porcelain pans. An alternative recipe is that of Mr. Thos. Heath, the founder of the London and Provincial Ornithological Society, the ingredients being: To three biscuits (cracknels) add one egg, and mix well with a teacupful of crushed hemp seed; make crumbly by moistening, and give to the birds in addition to their other food. I am not at all satisfied with the method of moistening egg-food usual in England—that of adding water—fearing that it produces a scouring effect, and I know that some of our most experienced raisers of Canaries have discontinued the use of water for that reason. Were I putting up any birds this year I should feel inclined to experiment with scraped raw carrot as a moistening agent, this root being largely used by the owners of delicate foreign birds for dampening food.

The 6th Annual Open-Exhibition

OF THE

Toronto Canary and Cage Bird Society

WILL BE HELD IN

Forum Hall, New Year's Day, '97.

48 Classes. Prizes Guaranteed.

Entries close Dec. 19th, 1896.

W. S. APPLETON, Secretary,
179 King St. West, Toronto.

Cage Birds, &c.

Wanted—1 pair of yellow Belgian Canaries. Address W. T. Beirnes, Lock Box 28, Birtle, Man.

For Imported Birds—Try Hope's Bird Store 109 Queen Street West, Toronto. Fine young Mocking Birds, warranted cocks, \$4 each.

Cages, Japanned, from 35c.—Cages, brass, from 65c; Cages, breeding, from 75c; Cage appliances nest and nestings, seed &c.; everything in the bird line at Hope's Bird Store, 109 Queen Street West, Toronto.

A Parrot for \$6—Fine healthy young Cuban Parrots, price \$6 each, in nice plumage, also Parrot Cages, Parrot Food, etc., at lowest rates and of best quality, at Hope's Bird Store, 109 Queen Street West, Toronto.

English Birds—Imported, Goldfinches, Linnets, Skylarks, Thrushes, Jays, Starlings, &c. Mocking birds, Cardinals. Fancy Finches &c at Hope's Bird Store, 109 Queen Street West, Toronto.

Parrots, Cockatoos, Love birds, Paroquets, Gold fish, fish globes bird cages, seeds, &c., &c. Fancy Pigeons, Guinea Pigs, Rabbits &c. A large stock now on hand at Hope's Bird Store, 109 Queen Street West, Toronto.

For Sale or Exchange.

FULTON'S BOOK OF PIGEONS

Reduced to \$5.

Large full page engravings of all varieties.
New edition re-written right up to date.
For sale by H. B. DONOVAN, Toronto.

Pigeons.

For Sale—Homers, blue, blue chequered and red chequered; Tumblers, red and white performers, 75c pair; blue Owls and yellow frills, \$1 pair. J. McKenzie, 122 Peter St., Toronto.

Tumbler Pigeons—75 cents per pair, also Dragons, Owls, Pouters, Red and Black Pied, Nuns, Magpies, Fantails all colors, Trumpeters, black, Jacobs, black and red, and Swallows, blue and black. W. M. Anderson, Palmerston, Ont.

P. G. Keyes, Ottawa, Ont., offers a few Magpies from his time tested birds at \$5 each; pair Barbs, winners, \$6; English Owl cocks, \$5 each; Homers 50c.

For Sale for want of room, 100 birds in Pouters, Fantails, Owls, Turbits, Barbs, Swallows, Magpies, etc., pairs and odd birds cheap if taken at once, also a few choice S S Hamburgs. W. H. Readwin, Guelph, Ont.

Pouters Only—Standard colours, winners at the Industrial, Ontario, Port Hope and Cobourg Shows. Choice stock and exhibition birds for sale at reasonable prices. Magill & Glidden, Port Hope, Ont.

Hints to Beginners (Pigeons) by F. M. Gilbert, new edition, 1894, revised with additional chapters. A most practical, timely and comprehensive work. Indispensable to the amateur. Price paper 50c. Address, H. B. Donovan, Toronto.

Jacobins, Pouters, White Fans, winners at the leading Canadian exhibitions, 150 choice birds to select from, no culls or cheap trash. A stamp will ensure full descriptions. Chas. Massie, Box 202, Port Hope, Ont. 297

Bargains—Two pairs Red Owls, 2 pairs Black Owls, 2 pairs Red Magpies, \$5 per pair; 1 pair Black Magpies, \$1.50; 2 pairs Homers, \$1; Blue Owl cock, \$1; the lot for \$30, or pairs. Readwin & Co., Guelph, Ont.