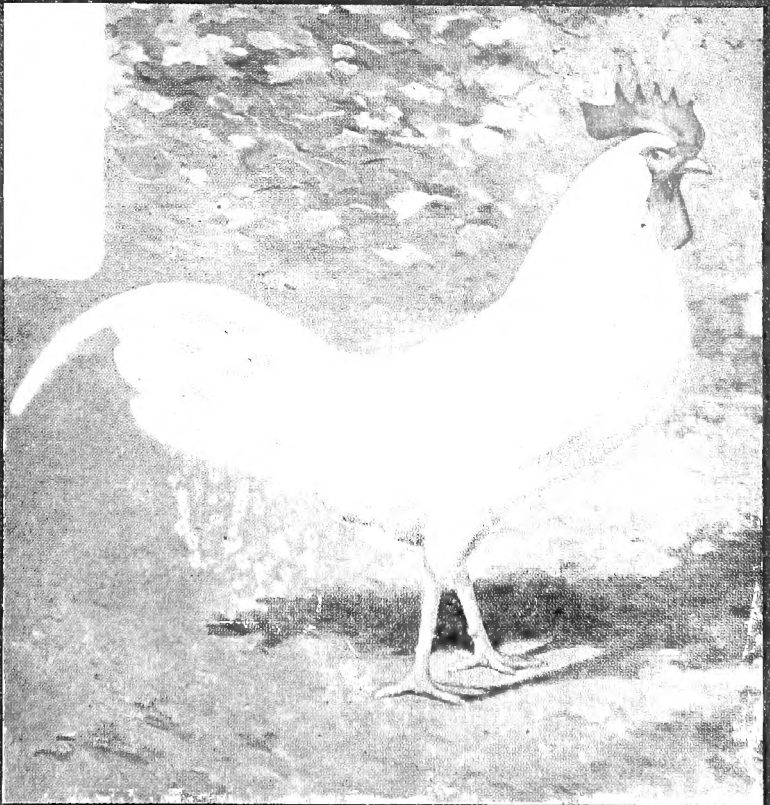
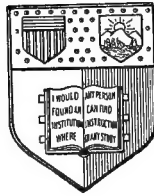


The
**CORNING
EGG FARM
BOOK**

BY CORNING HIMSELF





New York
State College of Agriculture
At Cornell University
Ithaca, N. Y.

Library

Brill Memorial Collection
.....
Class 1888

Cornell University Library
SF 487.C85

The Corning egg farm book,



3 1924 003 126 566

mann

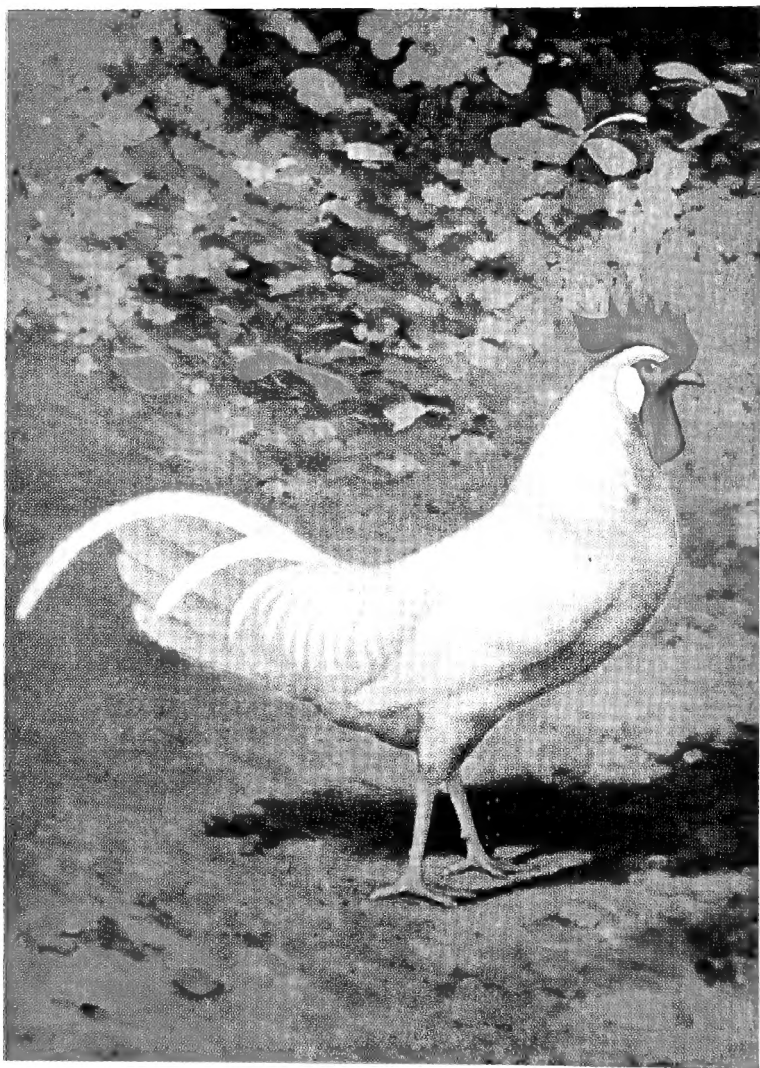


Cornell University
Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

<http://www.archive.org/details/cu31924003126566>



CORNING STRAIN UTILITY COCKEREL

Four Months and Twenty Days Old

THE CORNING EGG FARM BOOK BY CORNING HIMSELF

BEING THE COMPLETE AND AUTHENTIC
STORY OF THE CORNING EGG FARM
FROM ITS INCEPTION TO DATE

TOGETHER WITH FULL DESCRIPTION OF THE
METHOD AND SYSTEM THAT HAVE MADE
THIS THE MOST FAMOUS POULTRY
FARM IN THE WORLD

BOUND BROOK, NEW JERSEY
THE CORNING EGG FARM
PUBLISHERS

1912

COPYRIGHT, 1912, BY
GARDNER CORNING

CONTENTS

	PAGE
INTRODUCTORY	13

CHAPTER I

THE BUILDING OF THE CORNING EGG FARM	21
Started with 60 Buff Rock Eggs	22
More Money in Eggs	25
Adopted White Leghorns	25
First Use of Roosting Closets	27
We Count only Livable Chicks	30
Percentage of Cockerels Low	31
The Great Flock System Succeeds	33
Foreigners Visit the Farm	34
Investigated for Germany	35
Selection of Cockerels	36
Pullets Lay in 129 Days	37
Keeping Down Labor Bill	39
Adopted Hot Water Incubators	40
Why Great Farms Fail	41

CHAPTER II

EGG FARMING THE MOST PROFITABLE BRANCH OF POULTRY KEEPING	43
Developing the Great Layer	43
Corning Method in Small Flocks	44
On Large Farms	46

CHAPTER III

WHAT IS A FRESH EGG? AN EGG SHOULD BE SANI- TARY AS WELL AS FRESH	48
Manure Drainage to Drink	48

CONTENTS

	PAGE
Diseased Meat to Eat	49
As the Food, so the Egg	49
A Perfect Egg a Rarity	50
Unlimited Demand for Quality Eggs	50
CHAPTER IV	
PREPARATION OF EGGS FOR MARKET	54
CHAPTER V	
SELECTION OF THE BREED.—THE STRAIN IS OF UT- MOST IMPORTANCE	58
S. C. White Leghorns Outclass All	59
Line Breeding—Not Inbreeding	61
How Corning Farm Produces Unrelated Cockerels	62
CHAPTER VI	
ADVANTAGES OF LARGE FLOCK SYSTEM—REDUCES COST OF HOUSING AND ECONOMIZES IN TIME AND LABOR	64
Draughts the Stumbling Block	65
2,000 Birds to a House	66
CHAPTER VII	
WHAT IS A WINTER LAYER?—THE PROPERLY HATCHED AND REARED PULLET	68
Must Feed Green Food	69
CHAPTER VIII	
A GREAT LAYING STRAIN—THE SELECTION OF BREEDERS TO PRODUCE IT	71
Eighteen Months Old	71
Trap Nests a Failure	72
Type Reproduces Type	73

CONTENTS 5

CHAPTER IX

	PAGE
BEST TIME TO HATCH	76
Experiment in Late Hatching	78

CHAPTER X

SUCCULENT GREEN FOOD — SATISFACTORY EGG PRODUCTION IMPOSSIBLE WITHOUT IT	80
Sprouted Oats Best	82
How They are Grown on the Farm	82
Timothy and Clover Cut Green	84

CHAPTER XI

ANTHRACITE COAL ASHES — A SUBSTITUTE FOR MANY MORE EXPENSIVE NECESSITIES . .	86
Better Than Charcoal	87

CHAPTER XII

EGGS FOR BREEDING SHOULD BE LAID BY A REAL YEARLING HEN	89
90,000 Orders for 40,000 Eggs	90

CHAPTER XIII

POLICING THE FARM WITH BLOODHOUNDS, ETC. . . .	92
Shoot First — Investigate Afterward	92
Socrates, the Great Bloodhound	93

CHAPTER XIV

NECESSITY FOR PURE WATER — AN EGG IS CHEMICALLY 80% WATER	96
Automatic Fountains Essential	96
Hot Water in Cold Weather	97
Hens Drink More in Afternoon	97

CHAPTER XV

	PAGE
HARD COAL ASHES, OYSTER SHELL, AND GRIT . . .	99

CHAPTER XVI

BEEF SCRAP AND GREEN BONE SUBSTITUTES FOR NATURE'S ANIMAL FOOD	101
Green Cut Bone Nearest Nature	101

CHAPTER XVII

A TIME FOR EVERYTHING — EVERYTHING ON TIME	103
Fixed Feeding Hours	103
Four Collections of Eggs Daily	105
Mash Fed in Afternoon	105

CHAPTER XVIII

INCUBATION ON THE CORNING EGG FARM	106
Hen Reigns Supreme	106
Livable Chicks — Not Numbers	107
Uniform Temperature Most Important	108
Ventilation and Moisture Next	108
Hot Water Machines Best	110
Corning Incubator Cellar Unequaled	111
Eggs Turned from Third to Eighteenth Day	112
103 Degrees Maintained	112
Cool But Never Cold	113
Cover Glass Doors	114
All Good Chicks Hatch in 20 Days	114
Set Incubators Toward Evening	115
Tested Only on Eighteenth Day	116
Moisture	117
Chicks Handled Only Once	117
Baby Chick Business Cruel	118

CONTENTS

7

CHAPTER XIX

	PAGE
REARING CHICKS IN BROODER HOUSE—THE FOLLOWING TWO YEARS' RESULTS DEPEND UPON SUCCESS IN BROODING	121
Corn Not Proper Chick Food	122
Follow Nature's Teaching	122
A Balanced Food	123
Never Build a Double House	126
Must Drain Chick Runs	127
Concrete Floors Mean Dampness	127
Corning Heated Brooder House	128
Corning Feeds Dry Food Only	129
Three Feeds Daily	129
Green Food Third Day	130
Animal Food Tenth Day	130
Avoid Moving Chicks Often	132

CHAPTER XX

HANDLING BIRDS ON RANGE—THE YOUNGSTERS MUST BE KEPT GROWING ALL THE TIME	134
A Corning Wrinkle	135
Grain and Mash Once a Day	137
Plenty of Shade	139
Removed to Laying House Middle of September	140

CHAPTER XXI

FEEDING FOR EGGS—WHOLESOME NOURISHMENT — NOT DESTRUCTIVE STIMULANTS	143
Easy Assimilation	143
Perfect Health or No Eggs	144
Abundant Animal Food	144
The Corning Mash the Secret	145
" Egg Foods " Kill Layers	146
Mustard Increases Egg Laying	147
Mustard Increases Fertility	148
4,000 Layers Fed Mustard	149

	PAGE
Mustard Maintains Health	150
Keep Appetite Keen	150
CHAPTER XXII	
BREEDING HENS DURING MOULT — COMING BREEDERS MUST BE KEPT EXERCISING THROUGH THIS PERIOD	153
Do Not Overfeed	154
CHAPTER XXIII	
FEEDING THE BREEDING COCKERELS	156
CHAPTER XXIV	
PREPARING SURPLUS COCKERELS FOR MARKET	157
Must Have Green Food	158
CHAPTER XXV	
\$6.41 PER HEN PER YEAR	159
\$6.41 Not Extravagant Claim	160
Corning Farm Makes More Than \$6.41	161
CHAPTER XXVI	
THE BUILDINGS ON THE CORNING EGG FARM	163
No. 1, Brooder House, Incubator and Sprouted Oats Cellars	164
Building No. 2, Work Shop, etc.	167
Building No. 9, Horse Stable	169
Building No. 10, Wagon Shed	170
Building No. 12, Office Building	170
CHAPTER XXVII	
CONSTRUCTION OF LAYING, BREEDING, AND BREEDING COCKEREL HOUSES	171
Nearly Six Feet from Ground	172
Double Floors	173

CONTENTS

9

	PAGE
Canvas Windows	174
Double Doors	176
Draught-Proof Roosting Closets	177

CHAPTER XXVIII

THE COLONY HOUSES — THERE ARE FORTY-ONE ON THE FARM	180
Cotton Duck Windows	181

CHAPTER XXIX

MATERIALS REQUIRED FOR LAYING HOUSES	182
Bill of Material for the Construction of Colony House	183

CHAPTER XXX

THE ORIGINAL THIRTY HENS	184
------------------------------------	-----

CHAPTER XXXI

EGG RECORDS	186
How Corning Farm is Able to Get Great Egg Records	187
Highest Percentage of Fertility	188

CHAPTER XXXII

PREVENTION AND TREATMENT OF DISEASES	190
--	-----

CHAPTER XXXIII

A WORD IN CLOSING	192
Nothing to Hide	193
Illustrations are Photographs	193
The Corning Success	193
Our Advice to Beginners	194
Single Comb White Leghorns Only	194
It's "Strain" You Want	194
Utility, Not Show Birds	195
Corning Largest Specialty Farm in World	195
Points That Mean Success	196

ILLUSTRATIONS

Corning Strain Utility Cockerel . . .	<i>Frontispiece</i>
	<small>FACING PAGE</small>
Lay-Out of Farm	16
Interior Sterile Laying House No. 3, in 1910 . . .	22
Entrance to Farm in 1909	24
As You Approach the Farm, 1911	28
Office Building	30
Breeding Cockerels, Fall of 1909	34
Interior Laying House No. 2, in 1910	38
Panoramic View of the Farm	46
Thirty Dozen Corning Sanitary Fresh Eggs Ready to Ship	54
The Strain that Makes the Corning Egg Farm Fa- mous	58
Three Sterile Laying Houses Containing 4,500 Pul- lets	64
Interior Laying House No. 1, in 1910	68
One of the Breeding Houses just after Mating, 1910	72
Sprouted Oats Cellar	78
Two-Weeks-Old Chicks in Brooder House Runs . .	84
Yearling Hens in Breeder House before Mating . .	90

	FACING PAGE
“Socrates,” the Great Bloodhound Which Heads the Corning Kennels	92
“Socrates II” and “Diogenes”	94
Buster, America’s Greatest Ratter	94
Corning Automatic Drinking Fountain	96
Part of the Old Incubator Cellar	104
Brooder House, Showing Chick Runs	120
Old Arrangement of Brooder House	124
Chicks Six Weeks Old	128
Colony Range Feed and Water Wagon with “Billy”	136
Feeding on the Colony Range	140
Baskets of Eggs	150
Breeding Cockerels, Fall of 1911	156
No. 3 Laying House Filled with 1,500 Pullets	158
The Workshop on the Corning Egg Farm	162
The Celebrated Corning Large-Flock Laying House No. 3	170
Laying House Prepared to Receive 1,500 Pullets from Range	172
One of the Breeding Houses in 1911	174
The Corning Colony House	178
Breeding House in 1907 — The Original Corning House	182
Pullets in Laying House No. 2, Fall of 1911	184
Diagrams and Detailed Plans of Buildings, etc.	199

INTRODUCTORY

THE Method, and the style of the buildings, evolved and worked out on The Corning Egg Farm, when put into book form proved so helpful to so vast a number of poultry keepers, that the sale of this first literature, which for a time was added to as the months went by, reached the enormous total of over 140,000 copies in eighteen months.

The writings were the simple, plain statements of facts, and enabled others who followed them to reach a success which, until this System was used, may have been dreamed of, but was never realized.

The literature from this Farm has gone out over the entire civilized World, and the visitors, who arrive in ever increasing numbers from month to month, come from every quarter of the Globe.

The Corning Egg Farm has been written of in periodicals of every nature, and in almost every language the World over. For the last twelve months the requests for further, and more explicit, detailed information relative to breeding and feeding for eggs, the specialty from which The Corning Egg Farm has never swerved, have become a demand. So that, after mature deliberation, it was decided to write the history of The Corning Egg Farm, from its inception to

date, including the work of the last two years, which has never before been fully published.

“The Corning Egg Farm Book by Corning Himself” is to-day the only publication giving facts in regard to the Farm and its unique Method right up to date.

As the book is read it must be borne in mind that, in breeding to produce a great layer, at first very marked increases in the number of eggs during the first ten months of laying may be gained. The general average number of eggs laid each year, from official reports, is less than 100 per hen. On The Corning Egg Farm, when the average had reached 143.25 eggs, the next jump, in the following year, was more than had been expected, and the record of 145.11 eggs for each hen for ten months, though showing an increase apparently small, in reality was a very great advance indeed.

From this time on, the gain, although representing a narrower margin of increase, was in reality a much greater achievement. The trotting horse may serve as an illustration. When Dexter trotted his famous mile he clipped off a number of seconds from the previous record, and it seemed as if it would be a matter of considerable time before his mark would be lowered. But within a comparatively short time a number of trotters turned off a mile in two-ten, and from this figure, within a short period, a large company of famous horses had reached the two-

five mark, but every quarter of a second which reduced this mark meant greater achievement in breeding than was represented by the reduction of records from two-sixteen to two-five, and we have not yet seen the horse which, in single harness, without a running mate, can turn the mile track in two minutes flat.

The Corning Egg Farm realizes that from this on improvement will be shown by fractional figures, but these fractions will represent a greater progress than the figures which have gone before.

Two years ago the unequaled results of The Corning Egg Farm had seemed unsurpassable, but to-day we are able to look back from higher ground and see the road over which we have traveled to reach a point very considerably beyond the unequaled position of two years ago.

It is our hope and aim, year by year, to improve the present position. The man who believes he has learned all there is to learn is a failure. The successful man is the one who is sure there is an opportunity to advance considerably beyond the point he has already attained, and The Corning Egg Farm believes this to be true, and has constantly worked with that idea before it.

With an experience back of them of nearly six years the Builders of The Corning Egg Farm know that this Book furnishes the necessary guide for success in poultry culture. What has been, and what

is being, done at The Corning Egg Farm is not experimental work. Successful results follow the Method and System employed as surely as day follows night. It is no longer necessary for the novice to try out the various plans proposed to him by the literary poultryman, whose methods are worked out on a mahogany desk, with pen and ink, or more often, perhaps, by dictation to a stenographer.

Years of careful thought and study, and the expenditure of much time and many thousands of dollars in developing the Corning Method have eliminated all necessity for experimental expenditure. The building up of an Egg Farm is within the reach of any man who will follow the Corning plan herein described faithfully and persistently.

The man or woman who determines to pursue some branch of the poultry industry must first decide what particular branch.

Shall it be to raise poultry for market?

If so, what? Squab Broilers? Soft Roasters?
Or Capons?

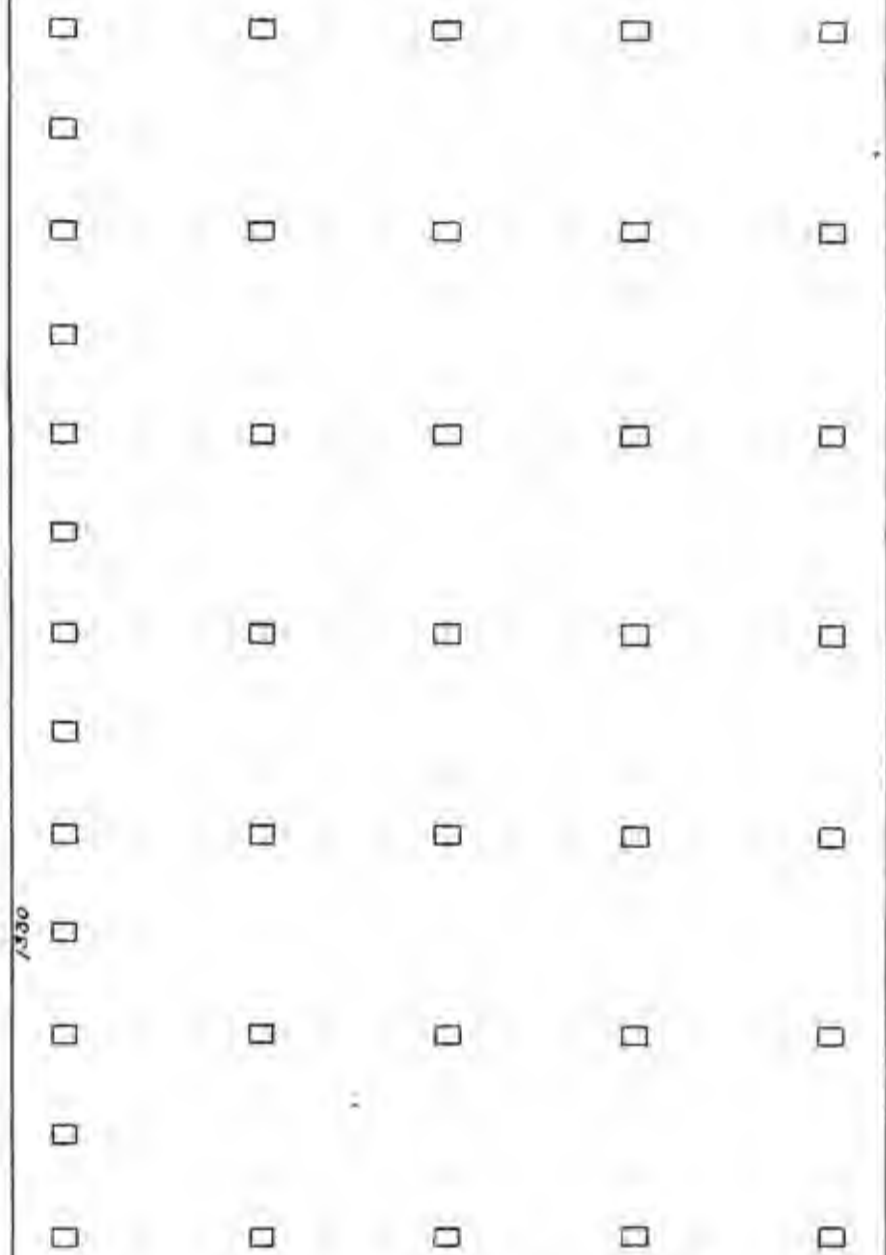
Perhaps all of these.

Some utility line is the best to start with.

Fresh, sanitary eggs are a necessity and command the highest price in the market, daily, for spot cash, just as readily as stocks and bonds command a daily cash value in any financial market. There can be

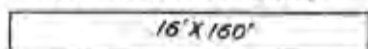
PULLET RANGE & COLONY HOUSES

EACH HOUSE 6'x10'
BUILT ON SKIDS
MOVABLE

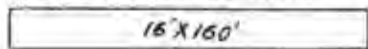


1330

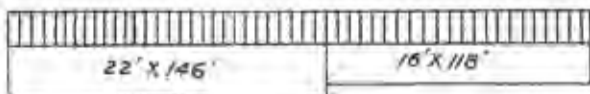
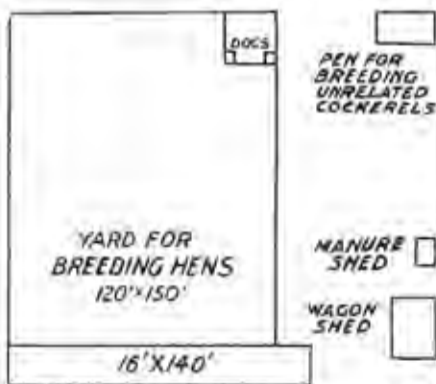
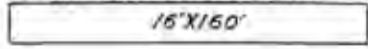
LAYING HOUSE NO. 3



LAYING HOUSE NO. 2

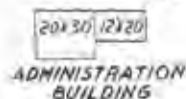


LAYING HOUSE NO. 1



BROODER HOUSE AND INCUBATOR CELLAR

WELL 117' DEEP
AND WIND-MILL



no better proof of the truth of this than the success of The Corning Egg Farm.

In whatever line a beginner decides to start he needs to go straight down that line without deviation, taking as his motto, "This one thing I do." In the fullness of time, having established a reputation for the quality of his eggs and birds, the demand for his eggs for hatching purposes and for his birds as foundation stock for other people, will naturally come to him, and it is very profitable.

One certain fact should be settled in the understanding of every beginner, to wit: it is not possible to invest from five hundred to five thousand dollars in the Poultry Industry and double your money in the first year, or even to earn 50% on the investment. Neither is it possible with \$300.00 to build a Laying House with a capacity for five hundred birds, if the house is properly built for warmth and meets sanitary conditions.

Housing for hens must be free from dampness. Concrete absorbs dampness, therefore, avoid it.

Any person starting in the poultry industry for profit, and, intending to follow it for a livelihood should begin in a small way, realizing that, like any other business venture, it must be built up and grow from year to year, and that, certainly for the first year, no money can be drawn out for living expenses.

These statements are made clearly and emphatically

because quite the contrary has been given out as a fact. Such reckless representations, because untrue, are misleading and injurious to both those engaged in the poultry industry and also to those who contemplate entering it, and should be branded as false, and the authors of such statements should be prohibited from using the United States Mails.

We are not, and make no pretense of being, philanthropists. We have written this Book primarily with the expectation that it will make The Corning Egg Farm and the Corning Method of Poultry Culture even more widely and impressively known to the World, and so benefit us by increased demand for our stock, eggs, and all other goods we may have for sale.

Secondly, we know that the Book will benefit others if they will follow the Corning Method and System herein laid down, and so prove of mutual advantage to readers and authors as well.

The Single Comb White Leghorn is par excellence *the* Egg Machine, provided always first class and the best strain of birds is procured, and the Corning Strain, without doubt or question, is the very best strain of Single Comb White Leghorns yet developed anywhere in the World.

We know this new, large, complete and thoroughly up to date Book will be the means of bringing us, and our unequalled Strain of Single Comb White Leghorns, into favor with thousands of people who, as yet, do not know us, just as the publishing of the

small and older booklet put us into touch with other thousands who are now doing a prosperous business by the use of this same Corning Strain Single Comb White Leghorns, and by following the Corning Method now more completely elaborated and explained in "The Corning Egg Farm Book by Corning Himself."

EDWARD AND GARDNER CORNING.

The Corning Egg Farm,
Bound Brook, New Jersey.
December, 1911.

The Corning Egg Farm Book

CHAPTER I

The Building of the Corning Egg Farm

HAVING determined, in 1905, to engage in some business connected with the feathered tribe, we decided to try out the squab proposition versus market poultry. After searching over a period of many months, in various parts of the country, with the idea of finding a place where the existing buildings might be utilized for our needs, we finally were obliged to abandon this idea and purchased, early in the year 1906, twelve and a half acres of land, now known as Sunny Slope Farm. This property lies about two miles west of Bound Brook, New Jersey, which town is reached by the Central Railroad of New Jersey, the Baltimore & Ohio, the Philadelphia & Reading and the Lehigh Valley Railroads, and the Farm is most accessible, as it is on the trolley line which connects Bound Brook and Somerville.

In the early Spring of 1906 we began our buildings, erecting a house, for raising squabs, which would accommodate five hundred pairs of breeding

birds, a hen house of the scratching shed variety, capable of accommodating some two hundred and fifty hens, and a work-shop with living apartments for the resident man.

We also sunk a well one hundred and seventeen feet deep, erecting over it a sixty foot wind-mill tower, which carries an eighteen hundred gallon tank. From this pipes were laid to convenient parts of the property.

Three hundred pairs of Homer pigeons were placed in the house built for that purpose, and we went diligently to work to prove that this was the quick and easy way to wealth which the ingenious writers of squab literature proved so conclusively on paper.

On the chicken side of the experiment we seemed to lean (possibly because of the fact that squabs take one into the slaughter house business) towards one or more of the market breeds, and, to meet the needs of this part of the business, we understood that any of the "Rock" family were best for the purpose.

Started with 60 Buff Rock Eggs

We purchased an incubator with the capacity of sixty eggs, being fearful of attempting the operation of a larger machine, because, like a great many novices, we had the feeling that an incubator was a very dangerous thing, and that anyone without a vast amount of experience should not attempt to handle it. We placed in this diminutive machine sixty Buff Rock eggs, and obtained a very fair hatch. With



INTERIOR STERILE LAYING HOUSE NO. 3 IN 1910

daily contact our fear of the machine decreased, and we exchanged it for one with a capacity of one hundred and twenty-five eggs, and this, in turn, was exchanged for one holding two hundred and fifty eggs.

We obtained fairly large flocks of youngsters that season, but, as we had the usual hallucination that poultry culture was really a miracle, and required neither work, capital, nor brains, that all you had to do was to accept the profit and the chickens did it all themselves, we did not get so very far. The growth of the birds was so slow they did not reach a profitable weight until the broiler market had dropped the price to its lowest level. The pullets which we carried through the winter never produced an egg, for the simple reason that we had never studied the question out as to how the hen produces an egg. In other words, our lack of knowledge of the right methods was the reason for charging up a considerable loss instead of profit so far as the first season's work with hens went.

We very early discovered there must have been a considerable amount of fiction in the writings on the squab industry. One reads that a pair of pigeons eats nothing like the amount of food which is required for one hen, and that they never eat more than their exact wants require, and that when they have young in the nest, this amount is very slightly increased. We found, however, that they ate in season and out of season. In fact one recalls, in this

connection, and with considerable amusement, the song, in the light opera "Wang," of the elephant who ate all day and the elephant who ate all night.

During our work with pigeons we tried out a number of different varieties: Homers, Dragoons, Runt Dragoon crosses, Homer Runt crosses, Maltese Hens, and the various crosses with Runt Dragoons; also Carneaux. We were led to buy these fancy breeds through the stories of extreme prices paid for large squabs, and we bred some heavy weights only to find, from the commission man who made a specialty of these birds, that it was impossible to pay the price which such birds were really worth, as trade for this class was extremely limited.

Very early in our experience we realized that the poultry side of our experiment was very much more to our liking and offered so much greater and more profitable outlook for our energies that we rang down the curtain on Squab raising—and turned our attention exclusively to the Hen.

While our minds were still running in the line of poultry for market purposes we tried out the Black Orpingtons, the idea being that, on account of their size, they would make ideal roasting fowls. We found, however, that they were a very much inbred variety, and it was almost impossible to hatch the eggs. Out of one hundred eggs, for which we paid twenty dollars, eight chicks hatched, and these were not of sufficient vitality to live.



ENTRANCE TO THE FARM IN 1909

More Money in Eggs

During all this time, however, we were studying the poultry question, and had arrived at the conclusion that there was more money in eggs, properly produced and marketed, than in any other branch. One of the difficulties we met with in our investigations was the fact that so many different writers had such a variety of ideas on the same subject, and practically no two of them agreed on any given part of poultry culture. What seemed to us even more confusing was that, in most cases, the writer summed up his article by contradicting everything he had said in the previous chapters. We were finally forced to the conclusion that the raising of poultry had not yet been reduced to a science, but was almost entirely made up of guesses. In our investigations, however, we found in the writings of the late Prof. Gowell, of Maine, an entirely different condition. He was the first man, so far as our observations went, who worked on the principle that effect followed cause, in poultry as in everything else. We studied his bulletins with great interest, and decided we would endeavor to prove that the same results gotten by him could be duplicated by others.

Adopted White Leghorns

We had also been studying the condition of the egg market, so far as New York and vicinity was

concerned, and had found that this market paid a premium for a white shelled egg. This, then, was the determining factor in the selection of the breed of fowls, and after gathering all the information we could regarding birds which laid white eggs, we were satisfied, taking everything into consideration, that for an Egg Farm, the Single Comb White Leghorn, was the only fowl.

In the Spring of 1907 we collected a breeding pen, from different sources, of thirty Single Comb White Leghorn yearling hens, and three strong, vigorous cockerels. We purchased an incubator holding three hundred and ninety eggs, and three out-door brooders, and built a number of small Colony Houses to move the birds into as soon as they were large enough to be transferred from the brooders. The hens chosen for the initial breeding pen of the Farm were most carefully selected, for even then we had in mind the result which we intended to reach, as to the ultimate type of layer on the Farm. We placed the resulting eggs from this breeding pen in the incubator, using a primitive turning machine to keep them in proper condition until the requisite number was acquired to fill the incubator. Our hatch was a very good one, and we succeeded in raising a fair number of the youngsters hatched.

During the Summer we erected what is now known on the Farm as the No. 1 Laying House. This was built one hundred feet long, by twelve feet wide, and

on the same twenty foot section construction which has proved to be so successful a plan for poultry houses. The one mistake in this house was its width, and that has now been remedied by widening it to the standard, sixteen feet in width, and sixty feet in length have been added to it.

The youngsters on range grew rapidly. We marketed the cockerels at between eight and ten weeks of age, and they weighed from one and a quarter pounds to a pound and three quarters. These were sold "on the hoof," as we had decided for the future to do nothing in the slaughter house line, and to this decision we have strictly adhered, shipping alive also all culls and birds of any age showing imperfections, the majority of our stock finding ready market for breeding purposes when we are ready to dispose of it.

As a correct record of the mortality of our hatching, and the number of cockerels marketed, had been kept, we found that we should have in the Colony Houses about two hundred and twenty-five pullets to place in No. 1 House.

In catching up the birds we found that the number figured on was about right. These two hundred and twenty-five birds went into the House, October 31st. They were already laying on the Range.

First Use of Roosting Closets

It was a very interesting sight to us to watch these birds at work in the first house which had ever been

successfully built without partitions, in other words, one large flock with the run of the entire house. Others had tried it, and had failed. They had had draughts, and had found the house, therefore, very undesirable. We conceived the idea of roosting closets, with a partition extending some little distance beyond the dropping boards, running from the ceiling to the floor, thus breaking the house up so far as extended circulation of air went, and at the same time giving the birds the benefit of the larger area.

It was also a matter of great interest to two novices to watch the egg output in this first house. On the first day of November five eggs were gathered; on the second, seven; the third saw a drop to four. Of course these pullets had been giving us more eggs than this on the Range, but a transfer from one place to another always means a set-back to a layer.

The middle of the month saw the hens producing above seventeen eggs a day. December was started with an output of forty, and from that the birds ran into larger numbers daily until the last of December, when, with the mercury registering well down around zero, they were turning out one hundred eggs a day. The increase in the egg output continued steadily, and we found that March was the record month, but the highest single day was in April, when the pen produced one hundred and seventy eggs.



AS YOU APPROACH THE CORNING EGG FARM FROM THE PUBLIC HIGHWAY.

IN 1917.

Showing 25p Foot Brooder House, Breeding Cockerel House and Office.

We were well satisfied with the result of the Winter's work with these pullets, and, although we did not have the knowledge that has since come to us in feeding for eggs, the output was a most creditable one, and we found a ready market at a good price.

Early in the Fall we had mapped out our plans for a very decided increase in plant for the coming season. The excavation for the Incubator Cellar, sixteen by fifty feet, had been made, and the Brooder House above it was enclosed without difficulty before weather of any great severity overtook us. We were blessed with a very late Fall, and mild weather continued, with only occasional dips, well into December, 1907.

We installed in the Cellar ten incubators, with a capacity of three hundred and ninety eggs each. The Brooder House, with its arrangement for Hovers and Nursery pens, was all completed, and the month of March found us placing eggs in the machines.

In the Fall of 1907 we had enlarged our Breeding House, so that we were able to place in it some two hundred and fifty breeders. Out of our original pen of thirty, we had lost two. From different sources we bought yearling hens, and with our original twenty-eight, made up the breeding pen.

Of course, as we had planned to endeavor to produce some three thousand pullets for the Fall of 1908, we were obliged to very materially supplement

the product of our own breeders, with eggs from other sources, and this we did, buying eggs from different breeders, in widely separated territories.

As the hatching season advanced we added one more incubator to our battery of ten, and we placed in these incubators a total of eleven thousand eight hundred and four eggs, of which two thousand and ninety-six showed dead germs and clear eggs on the fourteenth day test.

The resulting number of chicks placed in the Brooder House was five thousand eight hundred and sixty-six for the entire season.

We found that the eggs purchased did not produce anything like the number of chicks, that is, strong, livable chicks, that did the eggs coming from our own breeding pen, which proved to us that the method of feeding and caring for breeding stock, pursued by others, fell very far short of the results gotten by our own methods.

We Count Only Livable Chicks

The lesson of incubation, which it is so difficult to make people understand, is not so much a question of how many chicks may be hatched from a given number of eggs as of how many strong, livable chicks are brought out. We very early in our hatching experience decided to count only those chicks, which were strong, and apparently capable of a steady growth and a sturdy maturity. Thus, the count of



OFFICE BUILDING

the number of chicks produced, does not really show the number which came out of the shells.

We were extremely fortunate in handling the youngsters in the Brooder House, and our mortality was very low, and when the youngsters were placed in the Colony Houses, which had been built during the early Spring months, and placed out on the Range in readiness for them, they were a sturdy, vigorous crowd.

Percentage of Cockerels Low

The number of cockerels was very low, and these, as rapidly as they developed, were taken away from the pullets and placed in a fattening pen which had been provided, and as our stock was still an "unknown quantity" in Poultrydom, we marketed the larger part of them at broiler size.

The pullets came on finely, and the records show that a large number of them came into eggs when they were a few days over four months of age.

Through the connivance of an employé we made a heavy loss in the way of theft, and, when the final round-up of the pullets came, we found we had one thousand nine hundred and fifty-three.

During the Summer, we had built the No. 2 Laying House, sixteen feet wide by one hundred and sixty feet long, and in this house the first fifteen hundred pullets were installed, the balance going into No. 1 Laying House.

A number of visitors had called at the Farm during the Summer of 1908, and we had listened to the different stories of the ease with which five thousand laying pullets were produced annually, but at the end of this season we had much more respect for the number five thousand than we ever had before, and realized very fully what it meant to produce that number of females each year.

With the placing of these fifteen hundred pullets in this House of one hundred and sixty feet in length by sixteen feet wide, without being divided into separate pens, each hen having the entire run of the House and no more (that is, she did not leave the house for a yard, but stayed right in that space and did her work), we accomplished what, from the standpoint of all authorities on the subject of Poultry, was an impossible thing to do, and have the hen produce anything. And yet each hen had only two and one third square feet of floor space, which included the dropping boards.

The secret of being able to work the hen successfully in such a limited space per bird is in the length of the house. In reality, every bird has one hundred and sixty feet by sixteen feet in which to exercise and roam.

The four hundred and fifty-three pullets which were placed in No. 1 Laying House were given the entire run of this house, of one hundred feet by twelve feet, and yet the Egg Record for the ten months, in which

these birds never left either house, is rather in favor of the house containing the fifteen hundred pullets. The average number of eggs per pullet in these houses, from December 1st, 1908, to September 30th, 1909, was 143.25. Many people who had seen the No. 2 House filled with the fifteen hundred pullets could hardly believe what they saw.

The Great Flock System Succeeds

The extreme health and great vigor of the birds was evident to anyone who looked in through the wire doors. Articles were written in numerous papers stating that the thing was impossible, and that, before many months, absolute failure would result. But in spite of all the prophecies the great flock system, in the Corning style House, proved by its great success, that a decided forward step had been made in economical management and housing of poultry.

We had gone ahead handling poultry in just the same way that any business would be handled, plus the scientific study of the anatomy of the hen, and what it was necessary to breed in order to accomplish a great success as a producer of large, white, uniform eggs, with the ability added to that formula, of turning them out in large quantities.

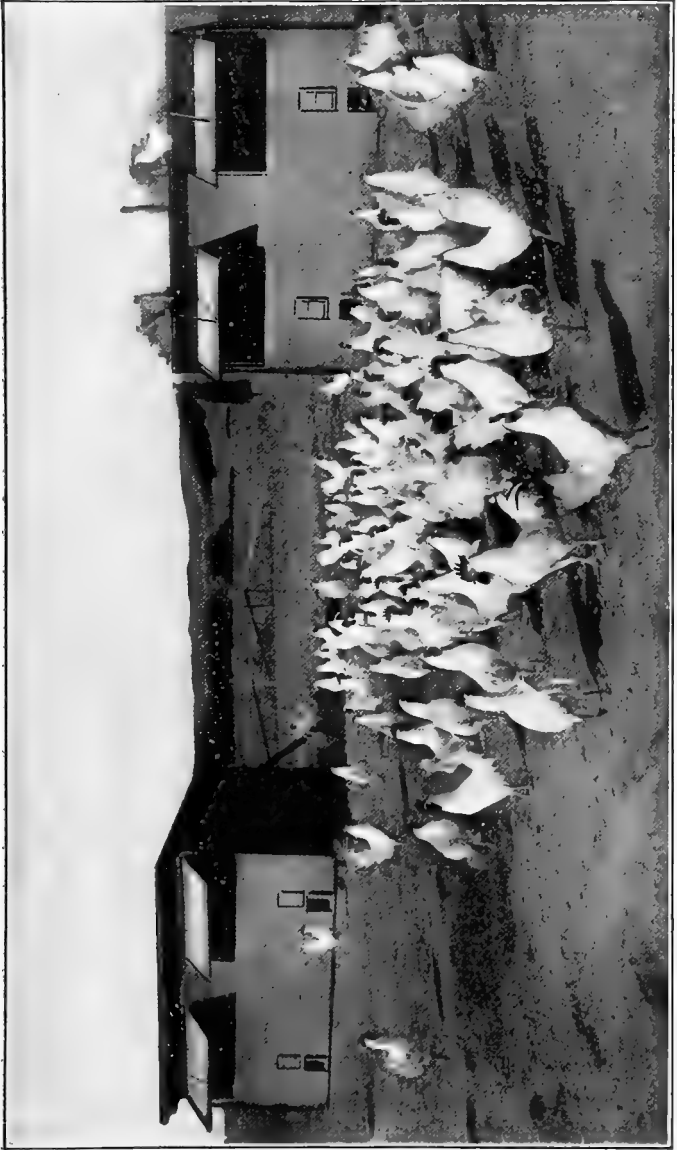
Callers at the Farm brought very forcibly home to us the fact, then quite unappreciated by us, that the methods employed, and the results obtained, were very remarkable from the standpoint of anything

done in Poultry Culture up to that time. It was pointed out that in almost every other case it was not known by the poultryman just where he stood at any time of the year, let alone being able to tell where he stood every day of the year. The success of The Corning Egg Farm really has that feature as its foundation stone.

Before the close of the ten months of laying of the 1953 pullets we had received a number of overtures to put our methods and results into a book, and, after a time, such a book was written. The tremendous sale and success of that book is now a matter of history, and the great number of people who were helped to better things in poultry, and the still greater number of novices who were started on the road, were enabled, through this book, to reach a success which, as many of them testify, would have been impossible without it. In eighteen months over one hundred and forty thousand copies of this first book were sold. Hundreds of people came to the Farm to find out for themselves whether or not the statements in the book were true, and these people found everything, down to the smallest detail, just exactly as represented.

Foreigners Visit the Farm

The Visitors' Register, which is kept at the Farm, shows callers from almost every nook and corner of the Globe. In Scotland, a short distance from Glasgow, there is now almost a perfect duplicate of Sunny



BREEDING COCKERELS, FALL OF 1909

Slope Farm. The owner, who has twice crossed the ocean and come to the Farm, states that if you were blindfolded and taken from Glasgow the three miles out to his property it would be quite impossible for you to tell whether you were in New Jersey or Scotland, so absolutely alike are the buildings in every detail.

In England, a short distance from Tunbridge, the Corning Laying House is again found. At this Farm both White and Black Leghorns are carried, and the owners write that they are meeting with great success in following the Corning Method.

Investigated for Germany

Germany sent a man who spent twelve months investigating the different methods of poultry raising and housing, and he visited all the plants of any note whatever from the Atlantic to the Pacific, including Canada, down to the Gulf of Mexico. He did not make his mission known, and it was only after his return to his native country that his identity was disclosed. His report is of more than passing interest to The Corning Egg Farm, as it states that the Method and System envolved on The Corning Egg Farm surpasses anything that has as yet come under his observation. The investigator is not only conversant with what he saw in the line of poultry breeding during his twelve months' sojourn in America, but he is thoroughly posted in regard to everything in Europe.

The pullets were hardly placed in the Nos. 1 and 2 Laying Houses, in the Fall of 1908, before we began to plan for the Spring of 1909. We had enlarged the Breeding House again, so that we now had housed some four hundred and seventy-five yearling and two year old hens. These were made up from our breeding pen of the year before, and as many of our two hundred and twenty-five pullets as qualified. We bought a few other yearling hens from different sources, and likewise the necessary complement of cockerels.

Selection of Cockerels

We gave great care to the selection of the males heading the breeding pen, every bird having perfect head points, being strong and vigorous, and as large as we could find him, where we felt sure that no outside blood had been introduced.

The Brooder House during the Fall, was materially added to, giving us twenty Hover Pens, three feet wide, and twelve Nursery Pens, each nearly five feet wide, this giving us a Brooder House 118 feet long by 16 feet wide.

We again this year (1909) supplemented our own breeding pen with purchases of eggs from different sources.

Pullets Lay in 129 Days

Our hatches this Spring were very successful, and the chicks which went up into the Brooder House were strong and vigorous. The mortality was low, and when placed on Range they grew rapidly. The pullets came into eggs, as they had in the two previous years, within a few days after they passed the four months' mile-stone.

We had added some six Colony Houses to our range equipment. The building originally designed for pigeons we planned to change over into a Breeding House, for, in the Fall of 1909, we would have a sufficient number of yearling hens to carry quite a breeding establishment. This house was about completed in the month of May, when it mysteriously took fire, and was a complete loss. Fortunately the fire broke out at about ten o'clock in the morning, and, by the timely assistance of the boys of the Wilson Military Academy, under the able direction of the Military Officers of that Academy, we were able to confine it to this one building in spite of the fact that a high wind was blowing, which carried the sparks directly on to the other buildings. The water supply on the Farm proved more than adequate to the necessities of the occasion, and the loss was entirely covered by insurance.

As we desired to recognize the services of the young men, and at the suggestion of the Commanding

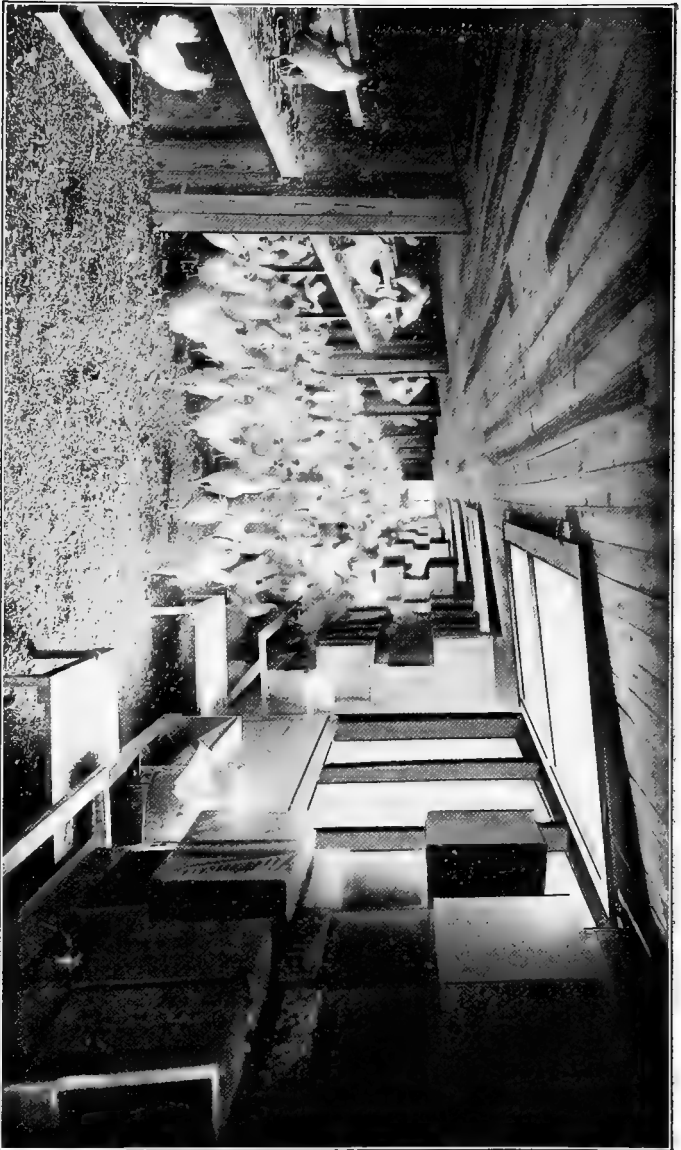
Officer, medals were struck off commemorative of the fire and of the bravery displayed by these young men at this time, and were presented to them.

An addition to the Breeding House, extending over the site of the burned building, was immediately erected, and the small building which had been used as a fattening pen for cockerels was rebuilt, and became the breeding pen for the production of unrelated cockerels.

Also during this season the No. 3 Laying House was built, this being an exact duplicate of the No. 2 House.

Our selection of Breeders for 1910 was of course made from the birds which had completed their first ten months of pullet laying, in the houses Nos. 1 and 2. The mortality during these months had been about 7 per cent. With our method of selection only 950 of these birds qualified to be used as yearling breeders, and these were placed in the Breeding House which had been prepared for them. We had made a most careful selection of cockerels, and these we had reared in two Colony Houses, placed in a large yard, where we were planning to eventually erect a Cockerel House for the housing of cockerels specially selected for breeders.

The balance of the birds from Nos. 1 and 2, together with our breeders of 1909, were sold, and we were able to face the hatching season of 1910 with a very decided step forward towards the realization of



INTERIOR LAYING HOUSE NO. 2 IN 1910

the ideal yearling breeder, which The Corning Egg Farm is working nearer to each season.

We placed in the Laying Houses Nos. 2 and 3 about 2750 pullets, and our respect for the man who could successfully, yearly, produce and raise to maturity five thousand pullets, increased materially.

Keeping Down Labor Bill

The question of keeping down the labor bill on the Farm has at all times been a matter of careful study, and the machinery which is in use is of large capacity, enabling us to turn out whatever may be required in a very short space of time, and allowing the men to get at other work. As an illustration; the Clover Cutter on the Farm has a capacity of 3000 pounds an hour, cut in one-fourth-inch lengths, which enables us, when we are cutting green food, to turn out the amount required for the day, fill the tubs, and have it on the way to the Laying Houses, in less than fifteen minutes.

The question of economy in time in handling the Incubator Cellar had been a problem, which we finally solved by piping gas into the Cellar and Brooder House, from the mains which are laid in the road passing the Farm. Thus we did away with the danger of fire from sixteen incubator lamps (for we now had in the cellar sixteen machines) and the twenty Hover lamps, and the time and labor of cleaning and filling them. We placed a governor on the gas main,

so that it was impossible to increase the pressure at any time of the day or night, and the gas worked most satisfactorily in incubation and brooding.

The extensions on the Farm planned for 1910 were a Cockerel House, for the housing of breeding cockerels, and the widening and lengthening of No. 1 Laying House. These alterations were made in No. 1, so that it was an exact counterpart of Nos. 2 and 3. We also planned, as soon as the breeding season was over, and the 1910 breeding pen was shipped to the various buyers who had purchased these birds for August delivery (and the entire pen was sold early in 1910), to add another section to the Breeder House, and to build a few more Colony Houses. Then we built what we thought would be an adequate Office to handle the business of the Farm, but which has since proved large enough for only one quarter of the present requirements. We increased the size of the Egg Packing Room, and installed a freezer with a capacity of over two thousand pounds of green bone. This practically covers the enlargements on the plant for 1910.

Adopted Hot Water Incubators

For three years we had been investigating quietly the so-called Mammoth Incubators, or in other words, the Coal Heated, Hot Water Incubator, and before the close of the hatching season of 1911 we had decided to install two such machines in a cellar 146

feet long by 22 feet wide — this cellar to be built so as to allow us to extend the present Brooder House to the same length and width as the cellar.

This cellar has since been constructed, with a Brooder House over it, so that we now have capacity for the incubation of 15,600 eggs at one time.

The Hot Water System for heating the air supplying the Hovers has also been installed, and the Brooder House now has a capacity of some 12,000 youngsters, before it is necessary to move any of them to the Range.

The Breeder House has again been enlarged, and, with the addition, a year hence, of another Breeding House, which is planned to be 180 feet long by 16 feet wide, and a larger house for the breeding of unrelated cockerels, The Corning Egg Farm will have reached the limit planned for since the inception of the Farm. We shall then have a capacity of 4500 sterile pullets, 3500 yearling hens for breeding purposes, and housing for 1200 cockerels.

Why Great Farms Fail

One reads of Poultry Farms carrying anywhere from twenty to forty thousand layers. Experience has taught us that the plant that gets beyond the size where those financially interested can supervise and know the condition of the Farm from one end to another daily, falls down of its own weight, as it is impossible to find men, unless financially interested,

who will look after the endless details, which spell success or ruin on a large poultry plant.

The planning and designing of all buildings on The Corning Egg Farm was done by ourselves, and all the construction has been done under our personal supervision. In the first two years we did not contract even the labor, employing simply "handy men" who worked with us under our instructions. Later, with the large amount of routine and office work pressing upon us, we found it to be wise economy to contract the labor, ourselves supplying the material and supervising the work.

The buildings, with the arrangement of all equipment, are built in accordance with ideas thought and worked out by ourselves, on lines which seemed to us common sense, and economical in time and money for the handling of Poultry.

Until within the last two years we had never seen another poultry farm, and those we have seen have only strengthened our conviction that no serious error has been made in laying out The Corning Egg Farm Plant.

CHAPTER II

Egg Farming the Most Profitable Branch of Poultry Keeping

THE profits are surer and larger. The reason this is not more widely known is because, in the past, few people have been able to resist the temptation of attempting to cover a number of the different branches of poultry culture. They have tried to get into the "fancy," and have dreamed of taking a blue ribbon at Madison Square Garden, or at some other large Show. Then the broiler branch has engrossed their attention, and from that they have gone on to soft roasters, and the other phases of the slaughter house side of poultry for market purposes, and they have endeavored to cover all the different branches from which money is made in poultry, while entirely overlooking the fact that this is an age of specialization, and that the person who would succeed in any business must make up his mind to follow one branch of it, and bring that branch up to the highest efficiency.

Developing the Great Layer

From the start the Builders of The Corning Egg Farm, at Bound Brook, N. J., realized these condi-

tions, and were never led into side issues but gave their entire thought and attention to the development' of a great layer, realizing that if this was to be accomplished everything except an egg must be considered a by-product, and disposed of along the line of least resistance: in short carrying out the Scriptural injunction, "This one thing I do." This one thought has been so successfully adhered to that the development of The Corning Egg Farm in five years has been remarkable in its production of the greatest laying type of hen yet produced, the Corning Strain Single Comb White Leghorn, placing the Farm head and shoulders above any other Egg Farm anywhere in the Country.

Egg Farming is profitable not only when carried on in a large way, but, to the suburban dweller, a small number of hens in the back yard is a profitable investment, and the system, as worked out on The Corning Egg Farm, succeeds with a few hens, and enables the owner of a small plot of land to always have sanitary, fresh eggs, to reduce his grocery bills, and materially increase the pleasure of suburban life.

Corning Method in Small Flocks

Two illustrations of the working out of the Corning Method in a small way would doubtless be of interest. While it is true that the 16 feet wide House is the most desirable from all standpoints, the length of the house may be anything from 20 feet to 200

feet, as the house is of sectional construction, 20 feet being a section.

In the back yard of a gentleman living in Bound Brook was kept a small pen of birds, in all eighteen, composed of hens and pullets. These were a mixture of Barred Rocks and Rhode Island Reds. The pullets were of early hatch and should have come into eggs at least in the first week of October. The hens completed the moult much earlier than is generally expected, and still the owner was without eggs.

Different methods, and nostrums of guaranteed egg producing foods, were tried, but all without success. After a call at The Corning Egg Farm, he stated that in one week and three days the first eggs were found in the nests, and the continuance of the Corning Method of feeding and working the hens produced eggs steadily through the Winter months, beginning with the middle of December, and the birds continued to lay more than an average output until they went into the moult the following Fall.

A gentleman, who has a small place within a mile of The Corning Egg Farm, some four years ago purchased hatching eggs from our Breeding Pen, and the following Fall he also bought a small pen of Breeders. He aims to produce and carry through the Winter about one hundred pullets, and for four years now, by adhering strictly to the Corning Method, and with the Corning Strain Single Comb White Leghorns, he has met with a success almost phenomenal.

Before he became conversant with the Corning Method (and with the stock he was then carrying before beginning with the Corning Strain) his success was represented by zero, but to-day his balance sheets, which he displays with great pride, are extremely interesting reading.

This gives a very fair illustration of two small flocks of different size, and of the results obtained.

On Large Farms

Turning now to the story of two egg farms which have been built within the last two years, one in New Jersey and the other in Pennsylvania, we find again most interesting and successful conditions.

The Pennsylvania Farm started its first season by the purchase from us of fifteen hundred hatching eggs. The owner came to our Farm and asked our assistance in planning his campaign of growth. His hatch from the fifteen hundred eggs, and he never had run an incubator before, was some 75 per cent. of all eggs set, and, by following the feeding methods prescribed, his mortality was very low. He placed in his Laying House that Fall some five hundred pullets, and in July, 1910, he had sent us an order for three thousand eggs for the season of 1911.

As he told this story on a visit to The Corning Egg Farm, in the month of February, 1911, he had done the almost impossible, simply by following the Method laid down in the literature published by The Corning



PANORAMIC VIEW OF PART OF THE CORNING EGG FARM. PHOTOGRAPHED IN OCTOBER, 1910



PANORAMIC VIEW OF PART OF THE CORNING EGG FARM. PHOTOGRAPHED IN OCTOBER, 1910.

Egg Farm, and had made money from the second month that his pullets had begun to lay. The quality of his eggs was such that he took over the trade of the largest hotel in a neighboring city, so far as he was able to supply their wants.

The Jersey Egg Farm referred to is owned and run by a gentleman of advanced years. His first season's start was on a very small scale, but he was most successful in bringing his pullets to the laying point, and getting a remarkable output of eggs through the Winter months. In his district he was able to dispose of all his eggs to people who came to the door and paid the cash for them at prices ten to twenty cents per dozen above the market. The Corning Egg Farm received from him a very large order for hatching eggs for the season of 1911, and this Fall he had an elegant flock of pullets ready to house and turn out an ever increasing supply of eggs for the coming Winter.

These four illustrations are a few of the many which The Corning Egg Farm is able to point to as the result of the use of its Method.

CHAPTER III

What is a Fresh Egg? — An Egg Should be Sanitary as Well as Fresh

THE answer one generally gets to this query is, an egg so many hours old, and, as the average grocer prints the card, "just laid." "Fresh" and "new laid," as applied to eggs, mean nothing. Hens improperly fed lay eggs not only often unpalatable, but that are carriers of disease. The hen's productive organs are so constructed that bacteria which she may take into her crop with impure food are passed into the egg.

Manure Drainage to Drink

An egg being eighty per cent. water, consider the effect on eggs produced by the farmers' flocks, where the water supply is mainly pools in the barn yard, which receive the drainage from the manure piles, and where the principal food supply is scratched out of manure heaps, consisting of undigested grain that has already passed through another animal.

A hen must have a large proportion of animal food to lay well, and to produce rich, nutritious eggs.

Diseased Meat to Eat

Consider what in many instances this animal food consists of, carcasses of glandered horses, tuberculous cows, and putrid and maggoty meat. If a dish of putrid beef were placed on the table before people they would shrink back in horror, yet they will eat eggs which have been produced by hens which have been fed on these identical ingredients, apparently entirely oblivious of the fact that the hen performs no miracle in the production of an egg, but simply manufactures the egg from the materials, whatever they may be, which she gathers into her system.

As the Food, so the Egg

The Chief of the Bureau of Chemistry, U. S. Department of Agriculture, says that while such conditions undoubtedly do exist it cannot be proven that such eggs are shipped from State to State, and that, therefore, it does not come under the jurisdiction of the Interstate Commerce Commission, and cannot be controlled under the National Pure Food Law.

What is needed, then, is to know that eggs are not only fresh, but sanitary. The Corning Egg Farm layers are fed the best quality of grains and meals that can be procured. The animal food is supplied by fresh, green bone, cut and prepared daily. This bone comes from inspected cattle only, and the Farm is equipped with a large freezing plant for the purpose

of carrying the bone in a perfectly fresh condition. The hens are housed and cared for under absolutely sanitary conditions.

A Perfect Egg a Rarity

The growing interest in Poultry Culture is bringing the Public to a realization of the fallacy of the old idea that "any egg not rotten must be a good egg." Comparatively few people have ever eaten a perfect egg. With the growth of real egg farms through the country, the time is approaching when the words "fresh" or "strictly fresh" will no longer mean anything to the purchaser, and the word "sanitary" will take their place, and in some way the egg trade will be controlled, and the grocer, and butcher, and peddlers of eggs, will not be allowed to put cold storage eggs out as a sanitary article of food.

Some of the New York papers are now beginning to agitate the question of Sanitary Eggs, notably the *New York Commercial*, which is a leader in this educational line. The day is coming when the person who is operating an egg farm that is known to produce the egg of real quality will have no difficulty in obtaining the price that such an article is really worth.

Unlimited Demand for Quality Eggs

There is an unlimited demand for an egg which can be depended upon as to quality. The difficulty that the seller meets with when going to a hotel or

restaurant is the fact that the proprietor has been fooled many times. As they have put it, "people start well, and for a time keep up the quantity, and the quality is all right, but when the stringent time of year comes they fall down as to quantity, and a little later they have evidently been tempted to keep up the quantity by gathering eggs from other sources than their own, and then we meet with the questionable pleasure of having a patron at our tables return to us an egg just ready to hatch."

When one seeks private trade for the output of his hennerly it is possible to obtain extreme prices, provided the buyers can be convinced of the absolutely high quality of what they are purchasing.

In New York, last year, for a few weeks, a man, gotten up as a veritable "hay-seed" farmer, sold eggs from house to house through the streets running from 45th to 65th, in large quantities. They were all marked in red ink with the date on which they were said to be laid.

He did not last very long, and his liberty was curtailed, and for some time he graced one of the free institutions where iron bars obstruct the view of the surrounding country. It developed that this enterprising crook was buying the culls from cold storage houses, and, in a basement on 43d Street near the North River, he had eight girls steadily at work marking the alleged dates when these eggs were laid.

The difficulty seems to be that when you reach the

question of a "fresh egg," everyone, almost, becomes a fakir. The grocers, many of them, buy case after case of storage eggs, and, when the retail price reaches sixty-five cents a dozen for so called "fresh eggs," they are supplying all buyers with the cold storage product, in quantities practically unlimited. Their counters are always decorated with baskets of these "just laid, perfectly fresh eggs."

Therefore, it becomes necessary for the Egg Farmer to satisfy customers, beyond peradventure, as to his ability to himself supply the goods which he contracts to deliver, and after once doing this his experience will be the same as that of The Corning Egg Farm, not to be able to keep and properly look after enough hens to turn out half the eggs he could sell at profitable prices, because the price he asks does not discourage customers who are willing to pay well for a really satisfactory article.

The following is the basis on which The Corning Egg Farm makes all its contracts for table eggs.

SUNNY SLOPE FARM

(THE GREAT CORNING EGG FARM)

PRODUCES

EGGS FOR THE TABLE

“WHICH CANNOT BE SURPASSED”

THEY ARE: WHITE,
STERILE,
SANITARY,
FRESH,

STERILE.—The hens producing Eggs for the Table are housed by themselves and their eggs do not contain the life germ, giving a purity not otherwise obtained.

SANITARY.—because of the clean, fresh air housing and best quality of pure food and water. People are learning the necessity of investigating the source from which Eggs come more carefully than milk or water, as it is now known that Eggs can be a greater carrier of disease than either milk or water.

FRESH.—because eggs laid one day are delivered the next.

OUR METHODS and feeding formulas give these eggs a delicious flavor, peculiarly their own.

EVERY EGG sold by us is produced on Sunny Slope Farm, and is guaranteed as above stated.

ONCE BOUGHT, ALWAYS SOUGHT

SUNNY SLOPE FARM

BOUND BROOK

NEW JERSEY.

CHAPTER IV

Preparation of Eggs for Market

IF high prices are to be obtained for eggs they must not only be good, but have a look of "class," to the would be purchaser. They must be spotlessly clean, and, as far as possible, each dozen should present a uniform appearance.

One is able to know each day the exact price of the class of eggs which he is selling, for the Egg Market is like the Stock or Bond Market, and one who is in the Egg business is dealing with a commodity which at all times is salable at a price. At The Corning Egg Farm we receive daily the reports from the Exchange, as given in the *New York Commercial*. These are cut out and placed in a scrap book, so that, from year to year, we are able to tell exactly what the conditions were on any given date, and form a very close idea as to what can be expected in regard to prices. And so we have an absolute basis of prices for contracts.

The nearest quotation to the egg which is produced by The Corning Egg Farm is what is termed "State Pa. and nearby Hennery, white, fancy, large." This we take as a basis and arrange our prices from it



30 DOZEN CORNING SANITARY FRESH EGGS
READY TO SHIP

daily, adding the advance which the Corning sanitary table egg brings.

It is quite impossible, with the growth of the country and the demand for better things in all food products, to over-do the production of Sanitary Eggs.

The following pages show the manner in which the quotations are placed in our Scrap Book.

NEW YORK COMMERCIAL

OCTOBER 16 1911

EGGS.—Receipts last Saturday were 8,757; for the week, 41,958, since March 1, 4,004,551 cases. The demand at the close for western was very tame, and sellers found it difficult to sustain late prices. Consumption is fairly good, but receipts have been unable to find an outlet for late receipts that were mostly of irregular quality. Many dealers are drawing upon their fall holdings, and others are inclined to use storage goods. Closely graded western are salable at 20¢-22¢ and firsts at 22¢-23¢. Low grades have no fixed value, each lot selling according to merit. Prime dirty eggs are steady and wanted. Early packed western eggs rarely exceed 21¢. New laid henney eggs were the star feature of the market on Saturday, white advancing 2¢. The receipts are falling off, and buyers were quite willing to pay 40¢-42¢ for the fancy and 21¢ for browns.

State, Pa., and nearby henney
white, fancy large 41 @ 42
State, Pa., and nearby henney
white, fair to good 38 @ 40
Nearby, gathered, white 30 @ 40
Brown, henney, fancy 30 @ 40
Gathered, brown & mixed colors 24 @ 29
Western, gathered, white 24 @ 29
Extras 26 @ 28
Firsts 22 @ 23
Seconds 20 @ 22
Thirds 17 @ 19
Held, fresh, poor to fair 17 @ 19
Dirties, No. 1 17 @ 18 1/2
Dirties, No. 2 13 @ 15
Dirties, poor to fair 10 @ 12
Chicks, prime 10 @ 15
Foot to good 20 1/2 @ 21
Refrigerator, fresh, storage paid 19 @ 20
Seconds, storage paid 18 @ 19
Thirds 16 @ 18
Dirties 13 @ 17

Any im-

time of business

OCTOBER 17, 1911

EGGS.—Receipts yesterday were 7,190 cases. Little, if any change, can be reported. Supplies of really fine eggs are not excessive and for such a fair trade is passing from first hands. But for the great run of the supply, it is a buyers' market. Current receipts are running much heavier than the trade expects at this time of the year, and as the quality is very irregular prices have been hard to adjust. Buyers are taking extra firsts at 20¢-22¢, but in paying the last figure insist upon light losses. Offerings that contain weak and shrunken eggs have to be sold at extremely low trade, as only certain buyers will take hold. Storage eggs are selling slowly. Aprils are offered at 21¢, and Mays at 20¢-20 1/2¢. Small supplies of nearby white and brown eggs are very light, and late advances were generally sustained.

State, Pa., and nearby henney
white, fancy large 41 @ 42
State, Pa., and nearby henney
white, fair to good 36 @ 40
Nearby, gathered, white 30 @ 40
Brown, henney, fancy 30 @ 27
Gathered, brown & mixed colors 24 @ 29
Western, gathered, white 24 @ 29
Extras 26 @ 28
Firsts 22 @ 23
Seconds 20 @ 22
Thirds 17 @ 19
Held, fresh, poor to fair 17 @ 19
Dirties, No. 1 17 @ 18 1/2
Dirties, No. 2 13 @ 15
Chicks, prime 10 @ 15
Foot to good 20 1/2 @ 21
Refrigerator, fresh, storage paid 19 @ 20
Seconds, storage paid 18 @ 19
Thirds 16 @ 18
Dirties 13 @ 17

NEW YORK CITY

OCTOBER 18, 1911

EGGS.—Receipts yesterday were 2,800 cases, which included some 500 cases which are counted as cases. The market shows no important change since our last review. Buyers are not making hold vigorously, many preferring to take small samples, and subsequently adjust values on round lots. The receipts from all sections contain so many weak and shrunken eggs that really fine goods are scarce and command good prices. The great trouble in this market appears to be in the fact that several weeks ago the heavy offerings of fresh eggs caused many dealers to store their surplus. This class of stock is now being used to the extension of current receipts. Fall sales were 25 cases northern Ohio extra firsts on dock at 26 1/4¢, and one car of April firsts storage eggs, buyer 30 days all changed paid at 20 1/2¢ per dozen. Nearby white and brown eggs continue scarce, and the recently advanced prices were readily sustained.

State, Pa., and nearby henney
white, fancy large 41 @ 42
State, Pa., and nearby henney
white, fair to good 36 @ 40
Nearby, gathered, white 30 @ 40
Brown, henney, fancy 30 @ 40
Gathered, brown & mixed colors 24 @ 29
Western, gathered, white 24 @ 29
Extras 26 @ 28
Firsts 22 @ 23
Seconds 20 @ 22
Thirds 17 @ 19
Held, fresh, poor to fair 17 @ 19
Dirties, No. 1 17 @ 18 1/2
Dirties, No. 2 13 @ 15
Chicks, prime 10 @ 15
Foot to good 20 1/2 @ 21
Refrigerator, fresh, storage paid 19 @ 20
Seconds, storage paid 18 @ 19
Thirds 16 @ 18
Dirties 13 @ 17

The Agree-

to be is

OCTOBER 19, 1911

EGGS.—Receipts yesterday were 9,820 cases. The principal feature of the market was a sharp advance of 2¢ in the price of nearby white eggs, fancy, large reaching 42¢-43¢ and fair to good 40¢-42¢. Gathered whites sold at 40¢-42¢, the wide range being due to extreme variation in quality of the offerings. Fancy browns were firmer, but no higher. The position of western eggs is entirely as last reported. Trade receipts are heavy of a selective character, the best collections, such as extra firsts, selling at 26¢-28¢. The under grades are considered very weak and prices are merely the result of negotiation. Storage eggs are dull, and the range in price slightly wider, namely 20¢-22¢ for firsts, and 19¢-19 1/2¢ for seconds.

State, Pa., and nearby henney
white, fancy large 43 @ 45
State, Pa., and nearby henney
white, fair to good 38 @ 42
Nearby, gathered, white 30 @ 40
Brown, henney, fancy 30 @ 27
Gathered, brown & mixed colors 24 @ 29
Western, gathered, white 24 @ 29
Extras 26 @ 28
Firsts 22 @ 23
Seconds 20 @ 22
Thirds 17 @ 19
Held, fresh, poor to fair 17 @ 19
Dirties, No. 1 17 @ 18 1/2
Dirties, No. 2 13 @ 15
Chicks, prime 10 @ 15
Foot to good 20 1/2 @ 21
Refrigerator, fresh, storage paid 19 @ 20
Seconds, storage paid 18 @ 19 1/2
Thirds 16 @ 18
Dirties 13 @ 17

Coffee, "need a

15 points

the coffee

NEW YORK COMMERCIAL

OCTOBER 20, 1911

EGGS.—Receipts yesterday were 11,580 cases, so far as western eggs are concerned the general market shows signs of weakness, and prices are not averaging as high as they did last week. Supplies of fair to medium sorts are far in excess of the demand, and about every receiver is bordered with accumulation. Few of any kind in the extra first class, will now exceed 25c, unless the losses are exceptionally light. Under grades have no fixed value, sales being reported at various prices and of little value in forming a table of quotations. Storage eggs are very quiet, but about steady as quoted. The trade is very much excited over the recent decision of the Board of Health prohibiting the sale of "bakers" which they hold are the same as "baker" eggs. Nearby white eggs are very scarce, and strong at 40c as an inside price. Browns were left at 30c per dozen.

State, Pa., and nearby henney white, fancy, large	45	43
State, Pa., and nearby henney white, fair to good	38	40
Nearby, white, badly mixed	30	32
Brown, henney, fancy	24	26
Gathered, brown & mixed colors	20	21
Western, gathered, white	20	21
Extra, first	26	28
Second	22	24
Third	17	19
Field, fresh, poor to fair	15	16
Dirties, No. 1	12	13
Dirties, poor to fair	12	13
Dirties, poor to fair	12	13
Chicks, prime	18	19
Poor to good	10	11
Refrigerator, first, storage paid	30	31
Second, storage paid	19	19 1/2
Third	18	18 1/2
Poor	18	18
Dirties	18	17

COUNTRY PRODUCE MARKETS.

WHEAT—Free 4.50

OCTOBER 21, 1911

EGGS.—Receipts yesterday were 10,515 cases. Nearby henney eggs were the star feature of the market, prices jumping fully 5c per dozen on whites, and 1c on browns. There has been growing scarcity of these nearby fancy eggs since the week opened and as certain buyers must have them it has been an easy matter to send prices skyward. Large sizes of chills white are now quotable at 47c, and browns 24c. These are regular winter prices, and the trade seems to think dangerously high for free movement. Western eggs are weak and prices still unsettled. Late receipts have been of very irregular quality, few lots containing enough new laid to enter the highest classifications. Storage eggs are in buyers' favor, in about the former range of prices.

State, Pa., and nearby henney white, fancy, large	47	49
State, Pa., and nearby, selected white, fair to good	38	40
Nearby, white, badly mixed	30	32
Brown, henney, fancy	24	26
Gathered, brown & mixed colors	24	25
Western, gathered, white	24	25
Extra, first	26	28
Second	22	24
Third	17	19
Field, fresh, poor to fair	15	16
Dirties, No. 1	12	13
Dirties, poor to fair	12	13
Chicks, prime	18	19
Poor to good	10	11
Refrigerator, first, storage paid	30	31
Second, storage paid	19	19 1/2
Third	18	18 1/2
Poor	18	18
Dirties	18	17

on The L...

OCTOBER 24, 1911

EGGS.—Receipts yesterday were 1,450 cases. The market was quiet, and there were no signs of any improvement in late conditions. Many accumulations were reported from last week and as the quality was more or less irregular prices were adjusted according to merit. Near by whites are still very scarce, and closely graded lots that will enter the classification of extra firsts sell quickly at a ruling price of 25c. A very good grade is offered at 26 1/2c. Lots that are badly mixed with fresh and old eggs, and are more or less weak bodied, compete with refrigerators, the latter receiving preference. The agreement however, in storage, from first hands, has been interfered with during the past 10 days by unfavorable weather. Nearby white and brown eggs are so scarce winter prices prevail. Whites, large also, go quickly at 47c. Fancy browns, however, rarely exceed 25c.

State, Pa., and nearby henney white, fancy, large	47	49
State, Pa., and nearby, selected white, fair to good	38	40
Nearby, white, badly mixed	30	32
Brown, henney, fancy	24	26
Gathered, brown & mixed colors	24	25
Western, gathered, white	24	25
Extra, first	26	28
Second	22	24
Third	17	19
Field, fresh, poor to fair	15	16
Dirties, No. 1	12	13
Dirties, poor to fair	12	13
Chicks, prime	18	19
Poor to good	10	11
Refrigerator, first, storage paid	30	31
Second, storage paid	19	19 1/2
Third	18	18 1/2
Poor	18	18
Dirties	18	17

OCTOBER 23, 1911

EGGS.—Receipts last Saturday were 5,777 for the week, 55,551 since March 1, 4,070,002 cases. The demand at the close was very firm, and no efforts were made by the selling interest to revise late prices. The tone has been weak in bulk of the receipts of western, only small firms reaching prices quoted for extra firsts. Under grades have had no fixed value. Buyers still insist upon taking samples, and subsequently adjust prices on the entire offering. Storage eggs are quiet. Nearby white and brown eggs are very firm and active.

State, Pa., and nearby henney white, fancy, large	47	49
State, Pa., and nearby, selected white, fair to good	38	40
Nearby, white, badly mixed	30	32
Brown, henney, fancy	24	26
Gathered, brown & mixed colors	24	25
Western, gathered, white	24	25
Extra, first	26	28
Second	22	24
Third	17	19
Field, fresh, poor to fair	15	16
Dirties, No. 1	12	13
Dirties, poor to fair	12	13
Chicks, prime	18	19
Poor to good	10	11
Refrigerator, first, storage paid	30	31
Second, storage paid	19	19 1/2
Third	18	18 1/2
Poor	18	18
Dirties	18	17

BETTER PRICES FOR

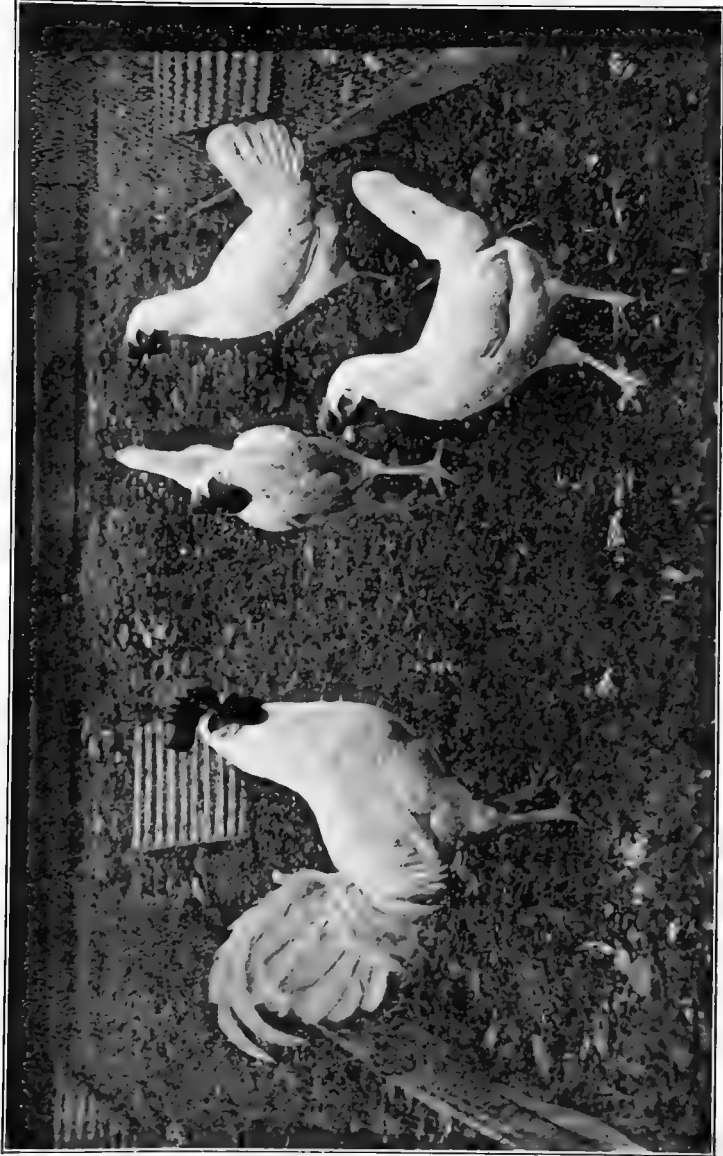
CHAPTER V

The Selection of the Breed — The Strain is of Utmost Importance

To a man engaging in any branch of Poultry Culture the selection of the proper breed is of grave importance, but to the man who is planning an Egg Farm it is without doubt of graver importance than where any other branch of the poultry business is to be carried on.

For many years different localities have believed that there was very decided merit in the different colored egg shells. The Culture of Boston was certain that the dark shell contained an egg with a richer flavor, while New York and vicinity would believe in nothing but the white shelled egg. It is, however, noted with interest that the Culture of Boston has discovered that the color of the shell really has nothing to do with the flavor of the egg, and to-day the rigid adherence to a premium paid for the dark shelled egg, generally throughout the New England States, is rapidly passing into history.

As The Corning Egg Farm was located within a few miles of New York City the breeds which laid the white shelled egg were the only ones worthy of consideration, and, in the study of the question, it was



THE STRAIN THAT MAKES THE CORNING EGG FARM FAMOUS

found there was another important matter confronting the egg farmer, as to the breed which he should keep, whether a setter, or a non-setter. On an egg farm, where hundreds of layers are to be kept, if any of the Asiatics, or so called American Breeds, were kept, they would be a source of considerable added expense, first, in the way of loss of eggs during their numerous broody periods; second, in the necessary buildings in which to carry the "broody biddies" until they have become sensible, and are in a proper frame of mind to be returned to the Laying House. This might look on its face a small affair, but success to The Corning Egg Farm has come through watching every corner, and while sparing no needed expenditure, avoiding unnecessary and foolish outlay.

So, to the man who would really meet with a large success, all the breeds which lay the dark shelled egg, because of their setting propensity, must be eliminated.

All the members of the Mediterranean family are layers of the white shelled egg, and are what is termed "non-setting."

S. C. White Leghorns Outclass All

Before deciding we looked the different members of this family over with considerable care, and we found that the Single Comb White Leghorn is the fowl that out-classes all the others for the purpose of

an egg farm. It is a bird, where properly bred, of great hardiness and stamina. It readily adapts itself to all conditions of climate, and, where the right "strain" is procured, it is never a disappointment as to the number, size, and the class of eggs which it produces. We, therefore, decided to adopt the Single Comb White Leghorn, and we have outlined, in a previous chapter, how we went to work to build up the unequalled Corning Strain, by the most careful selection, and scientific mating.

Prof. Gowell, at the Maine Agricultural Station, carried on his breeding with Barred Plymouth Rocks, and it is interesting to note that his average for some eight years, taking his star performers, was 134.27 eggs per hen for twelve months, while at The Corning Egg Farm the flocks of fifteen hundred pullets averaged per hen, for ten months laying, 143.25 eggs in 1909, and 145.11 eggs in 1910. Here was a difference of two months in time, and yet the large flocks, taken as a whole, not weeding out a few star performers, surpassed the twelve months' record of the Barred Plymouth Rocks at the Maine Station by almost nine eggs in 1909, and ten eggs in 1910. This significant fact made considerable impression on a number of breeders in the neighborhood of Boston, with the result that, in the last two years, The Corning Egg Farm has supplied a large number of hatching eggs and considerable breeding stock for farms in New England.

As one gentleman from Boston pointed out, even with the difference in price between the brown and the white egg, he found that he could not really afford to continue with the breeds laying the brown egg, for the Leghorn, in numbers, more than made up for the slight difference in price between the two colors, in the Boston Market. And, as he still further pointed out, it took less food to supply the Leghorn than it did any of the larger breeds, and this, of course, was another source of economy.

It should be remembered that the "Strain" of any breed is most important. One may purchase White Leghorns where the inbreeding has been so great that they are not capable of laying eggs in large numbers, and the percentage of fertility from the hatching standpoint in such birds will be a most uncertain quantity. Such chicks as may be hatched will be far from strong, and the mortality will run into figures which will dishearten anyone.

Line Breeding — Not Inbreeding

In the building up of a great strain of birds it is necessary to "line breed," for, if the old theory of introducing new blood to prevent inbreeding, and the method of introducing the new blood, was, as is done in so many places even to-day, by introducing males from other sources, the entire system falls down. Nothing is accomplished and time is worse than wasted. The possibility of handing down the virtues

of mother to daughter, and of father to son, is eliminated. If all the qualities of a given "Strain" are to be handed down line breeding must be adhered to in the strictest sense. Inbreeding, however, must be avoided, or disaster will follow.

How Corning Farm Produces Unrelated Cockerels

The Method of The Corning Egg Farm is as follows: a pen of carefully selected yearling hens is set aside in what is known as "the pen for the production of unrelated cockerels." A most carefully selected cockerel to every twelve hens is placed in the pen. Incubators are run with eggs from this pen only, and the resulting chicks are marked before being placed in the Brooder House. The cockerels which appear with this marking are grown to maturity, those coming up to our standard being selected to head the breeding pens for the following season. The marked pullets are placed in the Laying Houses with the other pullets, but are never selected for yearling breeders on our own Farm. In pens sold to others we always furnish unrelated cockerels.

Having hatched a sufficient number of chicks to produce about four hundred cockerels, no further eggs are set from this pen, and, at the end of the season, all the birds comprising this pen are sold.

This Method of line breeding hands down the laying quality which has been so developed, and which is being increased from season to season in an unbroken

line, but inbreeding is absolutely avoided, and the vigor of the stock is maintained.

Perhaps, in closing the chapter, nothing could be more apt than a letter received from a Breeder of Crystal White Orpingtons, in the neighborhood of one of the large Western Cities. The letter-head, in large type, states, "Breeder of Crystal White Orpingtons, the Great Winter Layer." The contents of the letter is as follows:

"As I am now planning to go into the Egg business, and desire to follow your method as closely as possible, and, while in this locality there is not such a marked preference for the white egg over the brown, still the White Leghorn, of a good strain, doubtless outlays any other breed known, and the shape of its egg is such that it is superior for table use, to any laid by the dark shelled family. It, therefore, is my purpose, as rapidly as possible to work into a large flock of Leghorns, with Corning stock as a basis."

It will be noted that the gentleman is a breeder of Crystal White Orpingtons, and prints in large type on his letter-head, "The Great Winter Layer," but that when it comes down to "brass tacks," from the standpoint of the hen which will produce an egg for table use, and the hen that will give you the requisite number to make the dollars, the Breeder of the Crystal White Orpingtons wants to put in the Corning Strain of Single Comb White Leghorns.

CHAPTER VI

Advantages of the Large Flock System — Reduces Cost of Housing and Economizes in Time and Labor

FOR many years the floor space per hen has been an interesting study to anyone reading poultry literature, either in books or in magazine articles.

Some fifteen years ago it was generally considered for a hen to do at all well she must have at least twenty square feet of floor space. Later, the number of feet was divided by half, and for some time ten square feet was considered to be the very least a hen could possibly do with. Then we come to the four square feet period, and this created a great deal of controversy. Many writers declared that it was impossible for any hen, no matter how housed, to do well in such a restricted space. At times, some visionary writer pictured a flock in one house, of what was then considered an enormous size. One Professor of poultry went so far as to state that he had successfully kept some three hundred hens in one flock, and had obtained most satisfactory results. This statement, however, was denied by others, and the Professor wrote an article in which he set forth



THREE STERILE LAYING HOUSES CONTAINING 4500 PULLETS, WITH A
FLOOR SPACE OF 7680 SQUARE FEET

that, while he had done this, he would never think of suggesting that the average poultry-keeper attempt it. In his statement there were some truths that it is well to remember, namely, that the average poultry-keeper would not give the flock the care and supervision necessary to keep it in health. In other words, the poultry-keeper would not attend to the necessary cleanliness, and disease would break out, and, in the average poultry house, under such conditions, this would mean the total annihilation of the flock.

Draughts the Stumbling Block

As economy of space and labor is one of the main factors in getting a commercial profit where poultry is operated with, the large flock system appealed most strongly to The Corning Egg Farm. Long houses, under one roof, without divisions, had been attempted by others, and the endeavor to discover the reason for the failures, where this had been attempted, was a very interesting study. It was found that the main stumbling block in houses of this type was draughts. To eliminate the draughts was the problem we then undertook to solve. It was found that if the houses were built in sections of twenty feet, and the partitions which divided the house into roosting closets were extended twelve inches beyond the dropping boards, and were carried from the floor to the roof, the air currents were broken up, and the difficulty of draughts was overcome.

Houses, as we believed in constructing them, were expensive, unless it was possible to carry a very large number of layers successfully in them. In studying the two hundred and twenty-five pullets as they worked contentedly in the No. 1 Laying House, which was but twelve feet wide, we became convinced that it was perfectly possible in a house sixteen feet wide by one hundred and sixty feet in length to carry fifteen hundred layers. This, to be sure, allowed the hen only a little over two square feet of floor space, with the dropping boards included. But, as we figured it, the hen also had the entire house for floor space, and, while it is true that fourteen hundred and ninety-nine sisters were her near neighbors, they all enjoyed the same large space to roam in. A house, then, of this size, accommodating fifteen hundred layers, was not an expensive house per bird, and, when you consider that the construction was such that the up-keep was practically nothing, it became not only not an expensive house, but really a very cheap one.

The success of the fifteen hundred layers in one house proved itself at once, and we never have seen the slightest necessity for altering the plan of the Laying House, as we first laid it out.

2,000 Birds to a House

The large flock system works economies, then, in housing, in the amount of labor necessary to care for

the birds, and in gathering the eggs. And there is no doubt but that a house of considerably greater length, with a flock ranging as high as two thousand birds, could successfully be handled. In fact, on one farm which has been in existence over twenty-five years, a Corning Method Laying House of two hundred feet in length has been in operation now for twelve months, and the owners write us that it is the most successful house on their entire farm, and that as rapidly as possible they are rebuilding all their Laying Houses, and making them of this type.

CHAPTER VII

What is the Winter Layer? — The Properly Hatched and Reared Pullet

MANY people have a very erroneous idea with regard to getting Winter eggs. They seem to think any hen should produce eggs in Winter. The hen generally moults in the early Fall, and Nature has provided this time of rest for her. The egg organs cease to produce, for the hen finds she has all she can do to supply the necessary material for her new dress, and this is a very serious drain on her system. The natural time, however, for a pullet to begin to lay is when she reaches maturity, and, as the pullet hatched in the early Spring, properly cared for, should come into eggs in the early Fall, the pullet, then, is the Winter layer.

It must still be remembered that the domesticated fowl of to-day is a bird of evolution. In its wild state a pullet did not begin to lay eggs in the Fall, and neither did she lay a large number of eggs at any time. With the coming of Spring, and an abundance of succulent green food, and large quantities of animal food in the shape of a great variety of worms and insects, she laid and hatched her brood. There-



INTERIOR LAYING HOUSE NO. 1 IN 1910

fore, to have successful Winter layers, it is necessary to produce as nearly as possible the Spring-time conditions.

Must Feed Green Food

On The Corning Egg Farm, when the pullets are brought up from the Range into the Laying Houses, the majority of them have already been laying on the Range, and they are in fit condition to be brought strongly into eggs. They are fed a large quantity of succulent green food, in the form which, perhaps, is more delicious to the hen than any other, that is, Sprouted Oats. The quantity of animal food in their mash is increased, and, with the vigorous digging for the grain in the deep litter, the problem of Winter eggs is solved, and from day to day, the number of eggs coming from the pullet houses, increases very rapidly.

On the other hand, the pullet which has completed its first ten months of laying is well advanced in the moult, and is becoming a yearling hen. Those qualifying under the drastic examination for perfect type are selected for the next year's Breeders, and are removed to the Breeding Houses, which have been thoroughly disinfected and put in the most sanitary condition to receive them. Those not reaching the Corning Standard are marketed, as we sell culls only to the butcher.

The aim in handling the yearling hen is not to get

eggs from her during the Winter, but to give her a long rest, and to build her up, and put her in the pink of condition for the coming breeding season, and it is the aim at The Corning Egg Farm to have as few eggs produced as possible from the breeding pens until about the first of January, when an increased amount of animal food is added to the daily ration for the purpose of bringing the hens into eggs, and within a few days there is a very rapid increase in the number of eggs from these pens.

It must be remembered that the profit in Winter eggs is made from pullets, and to be successful in this line the Laying Houses must be well stocked with them.

Yearling and two year old hens are the proper breeding females. The Corning Egg Farm Method is one of continuous rotation, as follows:

Incubator to Brooder House.

Brooder House to Range.

Range to Laying House. Those selected as coming up to the Corning Standard go to the Breeder House.

At the end of the second year the Breeders are all sold for foundation stock.

This gives an opportunity to the public to procure the very best Breeders at a most reasonable price.

CHAPTER VIII

A Great Laying Strain — The Selection of Breeders to Produce It

THE first requisite is to breed from a mature animal, from a real yearling hen. The term "yearling hen" is a misnomer, for, when she is twelve months of age she has not as a rule developed into a true yearling hen. The female has five months of growth, ten months of laying, and then she moults, which process varies in duration from eight to ten weeks.

Eighteen Months Old

When she has completed the moult, her entire anatomy has undergone a change, and she is a mature animal, about eighteen months of age, a fit specimen to reproduce her kind, and her off-spring will be strong and vigorous youngsters.

The great mortality one reads of among chicks can be traced more to breeding from immature females than to any other cause.

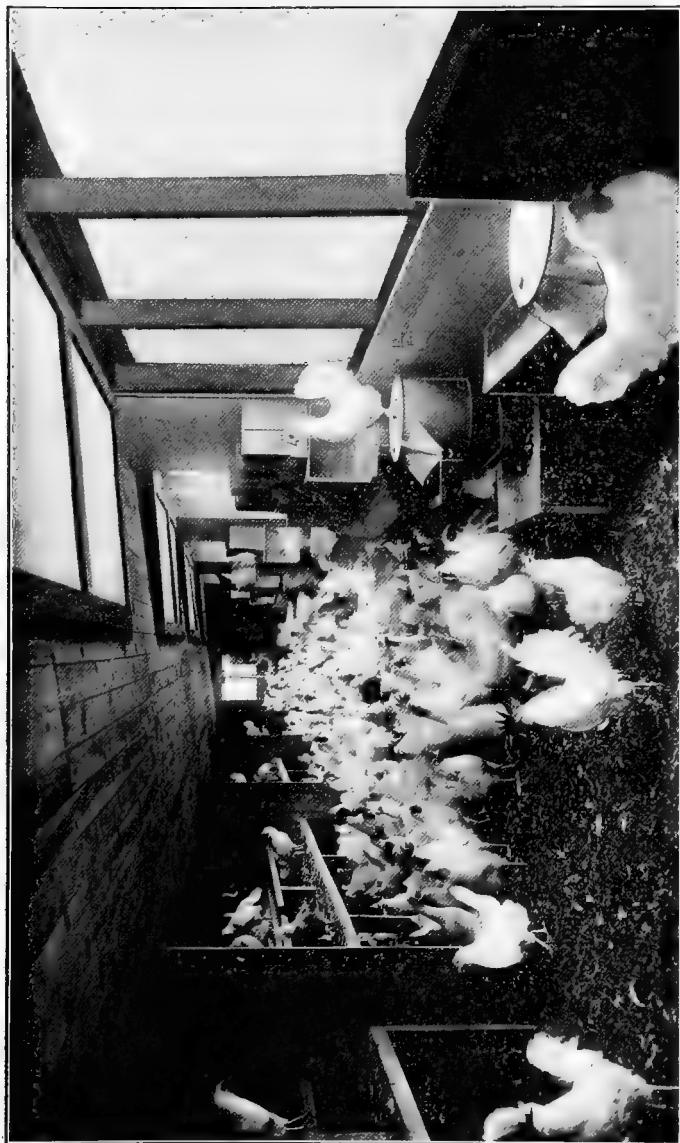
The general method of selecting breeders for a great many years has been by the use of "trap nests." Surely the use of a mechanical device is a poor method

to determine what hens are proper for breeding purposes, and really the trap nest tells you nothing.

In every pen there are daily a number of eggs which are not laid in the nest at all. To what particular hen does the attendant credit eggs found in hollows scooped out in corners under the dropping boards? It is a peculiarity of "Biddy" that where she sees an egg she almost always decides it is a good and proper place for her to lay another. Thus, on some days, where trap nests are in use, it may be necessary to make a great number of guesses as to which hen did not lay in the traps, but on the floor.

Trap Nests a Failure

There is another reason why trap nests really tell you nothing. Take two females of a pen whose numbers are one and two. For the first few weeks No. 1 surpasses her sister No. 2 in the production of eggs. To this pen, clover has been the green food fed, and of this ingredient the farm has run short. The shipment has been expected daily but did not arrive, and, because of that failure, for four or five days no other green food was provided. Then cabbage was resorted to to take the place of the clover. The pen having been without green food for a number of days was fairly greedy for it, and good, crisp cabbage suits the palate of many hens exactly, and they are very apt to overdo the matter in eating it. A great layer must be a large eater, and so hen No. 1 gorged



ONE OF THE BREEDING HOUSES JUST AFTER MATING 1910

herself on the cabbage. Her digestive organs were upset, and for a number of weeks she ceased laying, while hen No. 2 continued to shell out a fair number of eggs. The owner of these birds, when it came time for the selection of the breeders, expressed his great disappointment over hen No. 1. She had started so well, and then had blown up entirely, and so she is passed up, and hen No. 2 is accepted as a breeder.

Now, if the anatomy of these two birds had been studied, it would have been found at once that hen No. 1 was much better qualified to take a place in the breeding pen than hen No. 2. The mere fact that the trap nest record of any female shows a phenomenal number of eggs laid in ten or twelve months does not necessarily prove that she is a proper animal to breed from. Post-mortem examinations show in many cases that they are freaks, and, while they have laid a great number of eggs, there was much to be desired in regard to the eggs, as to their size, shape, and color. As a matter of fact it would have been a great mistake to have bred from such an individual.

Type Reproduces Type

It must be remembered that type produces type, and the only proper way to select birds for the breeding pen which will produce progeny capable of great egg production is to thoroughly understand their anatomy. It is impossible to produce a great performer

in any line unless the animal is of a build capable of the performance. No one would expect to breed a two-minute trotter from a Shetland Pony.

The hen which is capable of becoming an ideal layer must have a deep keel, a long body, and, as she faces out, she must have an appearance of broadness, and must be the shape of a wedge back to the point where the wings join the body.

The Large Flock System is carried on in the Breeding Pen on The Corning Egg Farm, and it has been most successful. It has been found that the small pen does not produce the high fertility continuously which the Large Flock System does. During the season of 1910, for long periods, the fertility ran as high as 96%, and as early as the first of March it was above 90%. In the season of 1911, eggs incubated in the early part of February, ran above 91%, and during the season there were times when the fertility reached 97%.

The Breeding Pens are mated up two weeks before eggs are to be used for incubation, and early hatched cockerels are used to head these Breeding Pens. It has been found that the mating of cockerels with yearling hens produces a very decided predominance of pullets, and the youngsters are strong and vigorous from the start.

The proportion of mating is one to twelve, and the records of The Corning Egg Farm show that by this method of mating the number of cockerels produced,

through the years that the Farm has been in operation, has been as low as one-quarter, and as high as one-third.

The males to head the pens are selected with the same care that the hens are. They are all perfect birds, of large size, and conform as closely as possible to the standard requirements, without interfering with the paramount aim of producing a Great Layer.

CHAPTER IX

What is the Best Time to Hatch?

THE question which is the title of this chapter is asked over and over again. You see it propounded to the editor of almost every poultry paper in the country. And it is a difficult one to answer, because the various needs of different people are so diversified. April and May are doubtless the natural hatching seasons for all varieties. Climatic conditions are then kinder, the food which is necessary for the production of many eggs, and eggs of the strong hatchable kind, is supplied by Nature in great abundance, and the young chick coming into life in these months finds a great variety of natural food of the very best kind for growth awaiting it. In Spring eggs run strongly fertile, and in every way Nature seems to lend herself to successful hatching, and the starting of the young chick properly on its journey.

The man, however, who is operating an egg farm, and has made contracts for the delivery of a continuous supply of eggs to exacting customers, cannot well afford to wait until these months to hatch in, for it is necessary for him to have a large number of pullets reaching maturity and beginning to lay,

before his last year's pullets reach the moulting period and stop egg production. To accomplish this it is necessary to have in his brooder house, by not later than the first week of March, a goodly number of yellow babies. From that time on he must keep them coming, so as to have a sufficient number a few weeks apart to take the place of the yearling hens going into the moult. In this way he will succeed in keeping up a continuous flow of eggs.

It is true there is a danger in these early hatched pullets. They may go into what is called the Winter moult, after laying well into the month of December, but they will not all moult, and before there is a marked shrinkage the later hatches will be laying strongly.

The moult which occurs with early hatched birds does not last as long as the moult coming in the regular season. The birds soon return to the nest, and the house rapidly jumps back to a very large output of eggs for the coming Spring months. Thus the great increase in numbers helps to offset the decrease in price, and to equalize the bank account.

It must be remembered, however, that Leghorns hatched up to the 25th of June make good Winter layers provided they are properly cared for, and given the food and attention which produces a great growth, and under such conditions one will find no difficulty in getting them into laying eggs readily by the time they are five months of age.

An Interesting Experiment in Late Hatching

In the season of 1910 The Corning Egg Farm made a very interesting experiment, in a large way, so far as late hatching goes. We incubated two large batches of eggs, the first being set so that the chicks hatched from the 18th to the 26th of July; the second batch completed incubation August 15th. The resulting pullets from these two hatches were some fifty odd over twelve hundred. We carried them on Range until December 1st, and then placed them in a Laying House by themselves. They had not begun to lay on Range so far as we were able to discover, although many of the pullets had the appearance of eggs. Almost from the start, after they were placed in the Colony Houses, we fed them, in addition to the regular Range ration, a good supply of Sprouted Oats each day. This was done for the reason that of course the succulent green food had passed away, and we consider it of vital importance that growing birds be given the opportunity to gather a large supply of succulent green food. The records show that within three days after the pullets were placed in the Laying House we began to gather from one to three eggs a day. Before December was over the house was producing 10%; January saw 35% output of eggs, and before February was very far advanced we were doing better than 60%. There was a time in March when the House was yielding a 75% output.



· SPROUTED OATS CELLAR

These birds laid strongly all Summer, and we were interested in noting when they would start to moult. We had seen the statement made a number of times that late hatched pullets were very late moulters. In our experience, however, this did not prove to be true, for this pen of birds moulted at just about the same time, and in the same proportion, as the earlier hatches did.

We had frequently seen it stated that birds hatched in the very last week of August, or the first week in September, would produce eggs at the same time that the June hatched pullets would begin to produce them. Our experience with June hatches, and we have had four years of it, disproves this statement absolutely. We find that the June hatched pullet, properly cared for, comes in quite as rapidly as those hatched in April and May.

We do not wish to go on record as advocates of July and August hatching, but we simply wish to show what could be accomplished if a Breeder met with some misfortune, and was compelled to hatch late or not at all.

CHAPTER X

Succulent Green Food — Satisfactory Egg Production Impossible Without It

A GOODLY supply of green food is necessary to all birds, the growing chicken as well as the yearling hen, for it is a great aid to digestion, helping to properly assimilate all foods as they are taken into the crop, and passed through the great grinding mill of a chicken.

There is no possible hope of a full egg supply from any Laying House where a large quantity of green food is not fed daily. It may be fed in many forms. Clover or Alfalfa (and we are now speaking first of the Winter supply of green food) may be procured in a dry state, and by properly scalding it with hot water it may be made to almost live again, so far as its freshness and delightful odor go. In many cases the preparation of Clover or Alfalfa spoils it. The water should be quite at the boiling point, and it should be poured over, preferably it should be put on with a sprinkling can. The method at The Corning Egg Farm is to place whichever we are using of the Clover family in pails, a given number for each Laying House, and as they stand in rows the hot water

is applied with a sprinkling can. The contents are not allowed to steep, but as soon as the second wetting of the long row of pails is reached they are placed on the delivery wagon and at once taken to their destination. When the contents are emptied from the pails they will be steaming hot, too hot for the birds to take at first, and you will find them standing in a ring around the Clover, and from time to time testing the heat. As soon as it is cool enough they will devour it with great avidity.

Where Alfalfa is fed some flocks give considerable difficulty at first as they do not seem to relish it, but after a short time they seem to acquire the taste, and become very fond of it. It contains a higher amount of protein than the ordinary Clover which can be bought in the market, but in purchasing Alfalfa products one should be careful not to buy a large quantity of dirt, but get what is known as "short cut," and have it carefully sifted.

By many people cabbages are considered a most excellent green food for Winter use, but if they are chopped up and fed to the layers considerable caution should be used in the feeding. They are very apt to upset the digestive organs of the birds, and that means a very decided decrease in the number of eggs. This is equally true of Mangle beets and other roots which in many cases are used.

Sprouted Oats Best

At The Corning Egg Farm we are strong believers in Sprouted Oats as a green food, and we now maintain a cement Cellar, with good drainage, which is used for nothing else. The method of sprouting oats is really very simple, and does not require the arduous labor which one would imagine from numerous articles written on the subject.

How They Are Grown on the Farm

We have frames three by six feet in size, built of ordinary boards, but not matched material. The sides are about four inches high. These frames are laid on the floor of the Cellar, and each frame is filled with forty-eight quarts of oats spread evenly over the bottom. We have a large sprinkler attached to the hose, and the oats are thoroughly wet as they lie in the trays, and this wetting is repeated every morning. In a temperature from fifty to sixty degrees we find that the oats have started to sprout about the third day, and from this on the growth is very fast. Parts of the oats in the frame will swell two or three inches in places, above the surrounding mass of oats, and we make it a practice to place the sprinkler directly on top of this swelling, and it is found by so doing that the frame in a short time will present a very even growth.

If the Sprouted Oats are fed when the green tops

are from one and a half to two inches in length the chemical quality of the oat is not lost, and we really get a double ration when it is fed. If allowed to go beyond this length, they are then just an ordinary green food.

In many instances we have noticed writers advocating soaking the oats overnight, and then, for the next few days, to periodically stir them. And in other cases writers advise, when they are placed in the frames to turn the oats over. This is a serious mistake, for anyone can readily see that the tender shoots, which grow most rapidly after the third day, would be broken off, and where this occurs the oats will rot.

Oats, of course, can be sprouted in sheds, or even out-of-doors, if they are covered up so that the sun will not dry them out too rapidly.

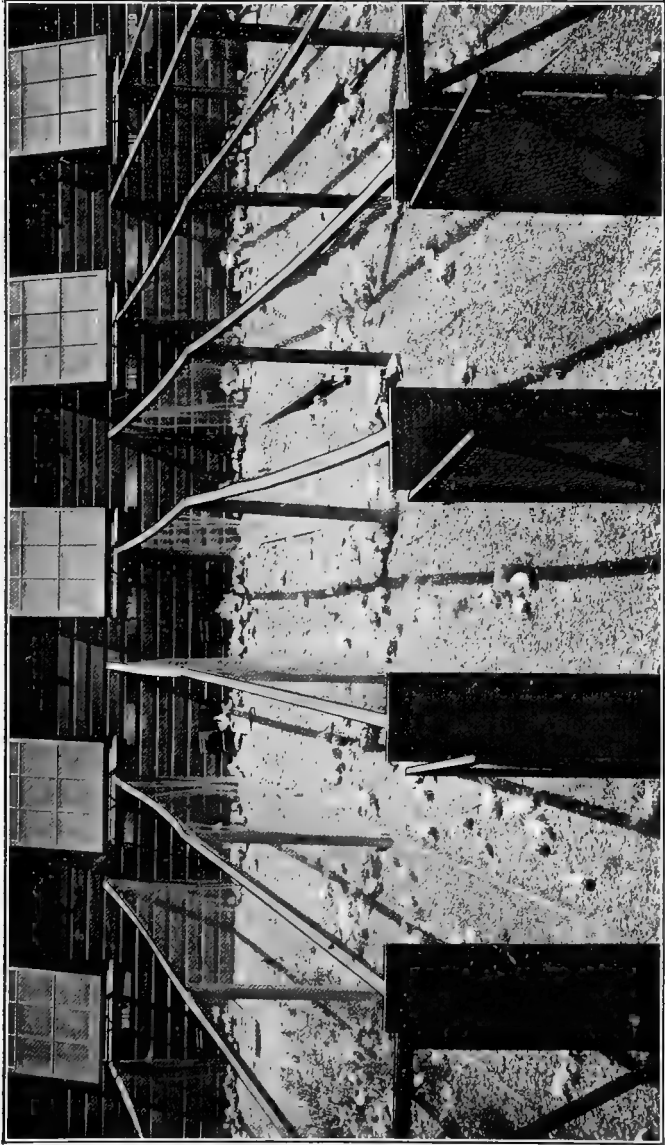
A frame should be made in such a manner that the water sprayed over the oats will slowly drain away. There are a number of different contrivances now being placed on the market for sprouting oats, and we have no doubt that, on small plants, some of them would prove quite satisfactory. Where it is desired to sprout oats in a small way, in the Cellar of one's house, a rack can be built with run-ways for the trays to slide on, with a space of two inches between the trays. By thoroughly sprinkling the top tray the water will run down through from one tray to another, and, as the growth progresses, the more advanced ones can be moved up from the bottom of

the rack, as they require less water than those in a less advanced stage.

The oats sprout more quickly if grown and sprinkled in a fairly dark place, and it must be remembered that too warm a temperature will rot the mass after the growth has reached its fourth or fifth day.

Timothy and Clover Cut Green

As one enters The Corning Egg Farm, on the left of the drive, there is about an acre of Timothy and Clover. This acre has been very heavily fertilized and brought up to a high state of cultivation. The Timothy and Clover grow so rapidly, and the growth comes in such abundance almost before the snow is off the ground, that cutting it as we do, so many rows each morning, it is impossible to cross the entire plot before that which was first cut has almost grown beyond the succulent point. To make a change for the hens we cut this in the early Spring, and pass it through the Clover Cutter, reducing it to quarter inch lengths, but we find that after the first few days of feeding the hens show a decided preference for Sprouted Oats, and now we make it a rule to feed the Timothy and Clover one day and the Sprouted Oats the next. This works very well, and the "Biddies" seem to enjoy the different rations on alternate days.



TWO WEEKS OLD CHICKS IN BROODER HOUSE RUNS

The Colony Range is so cared for and fertilized that the growing pullet, for the Spring and Summer months, finds an unlimited supply of succulent green food at her door.

CHAPTER XI

Anthracite Coal Ashes — A Substitute for Many More Expensive Necessities

THE feather of a bird is composed almost entirely of phosphorous, and phosphorous is a great aid to the bird in digesting food. In fact, there are manufactured "grits" offered on the market, which base their efficiency on the amount of phosphorous they carry.

Anthracite, or hard, coal ashes, carry a considerable quantity of phosphorous, and this is the reason chickens in all stages of their existence are so fond of them. Our attention was first called to this fact by observing the large number of pullets on the Colony Range, where some loads of ashes had been used the previous season in mixing with the fertilizer for the growing of potatoes. It was noticed that these small heaps of ashes were very soon consumed, and when they were replenished the pullets were never absent from the piles. The experiment was then made of placing a small heap at the extreme end of the chick runs from the Brooder House, and to our surprise we found one was unable to see the ashes because of the moving mass of yellow which covered them. It was necessary to replenish these heaps al-

most daily. As ashes are perfectly sanitary we decided to cover the entire chick run with them, which we did, and every few days, through the brooding season, a fresh coating is necessary, as the youngsters consume so much of the surface constantly.

Better Than Charcoal

Next, we sifted ashes and filled the hoppers in the Laying Houses with them. The layers ate them in the same way in which they consumed wheat. For an experiment we stopped feeding charcoal entirely, and found that the ashes supplied everything that the charcoal did, with none of the dangers, for there seems to be no doubt that where hens consume large quantities of charcoal they are very susceptible to colds.

Large heaps of Anthracite ashes are now kept within a short distance of every Colony House on the Range, and the use of these ashes has very materially reduced the quantity of Grit and Shell consumed, thus representing a considerable economy.

Until the use of Anthracite ashes came in on the Range we placed Grit in receptacles near each Colony House, and the amount consumed was really remarkable. As soon as the ashes were placed there the Grit was deserted, and there practically was no consumption of it at all, and after a few weeks we ceased to supply it and have not done so now for years.

Since the use of the sifted ashes in the Laying

Houses a soft shelled egg is almost a curiosity on the Farm.

In the Brooder House runs, beside supplying the phosphorus to the youngsters for their digestion, and the making of their feathers, it does away with the fear of contamination of soil, of which so much is now written, and it presents a surface which dries almost before the rain storm is over, and there is no possibility of the youngsters being let out into a muddy run.

CHAPTER XII

Eggs for Breeding Should be Laid by a Real Yearling Hen

HAVING heard many stories told by Breeders who were sellers of eggs for hatching, and also the tales by purchasers, we were somewhat loath to embark in this branch of the Egg Trade. The Breeders told stories of letters which would "raise your hair" from people who had purchased from them and met with poor success, and of course, from their point of view, the only person at fault was the man who sold the eggs.

For the season of 1910 our breeding pen had reached a size which allowed us, for the first time, to offer eggs to the public, and we decided to try it out. To everyone we stated that we would not guarantee fertility, but, as they were getting eggs from exactly the same pens which were supplying our own incubators, we were able, at all times, to tell what the customer was receiving. But we went further, and agreed that anyone claiming a low fertility, if he would send us the eggs which he claimed to be clear, and prepay the expressage, we would, if his claim was

substantiated, send him another lot of eggs and pay the expressage both ways.

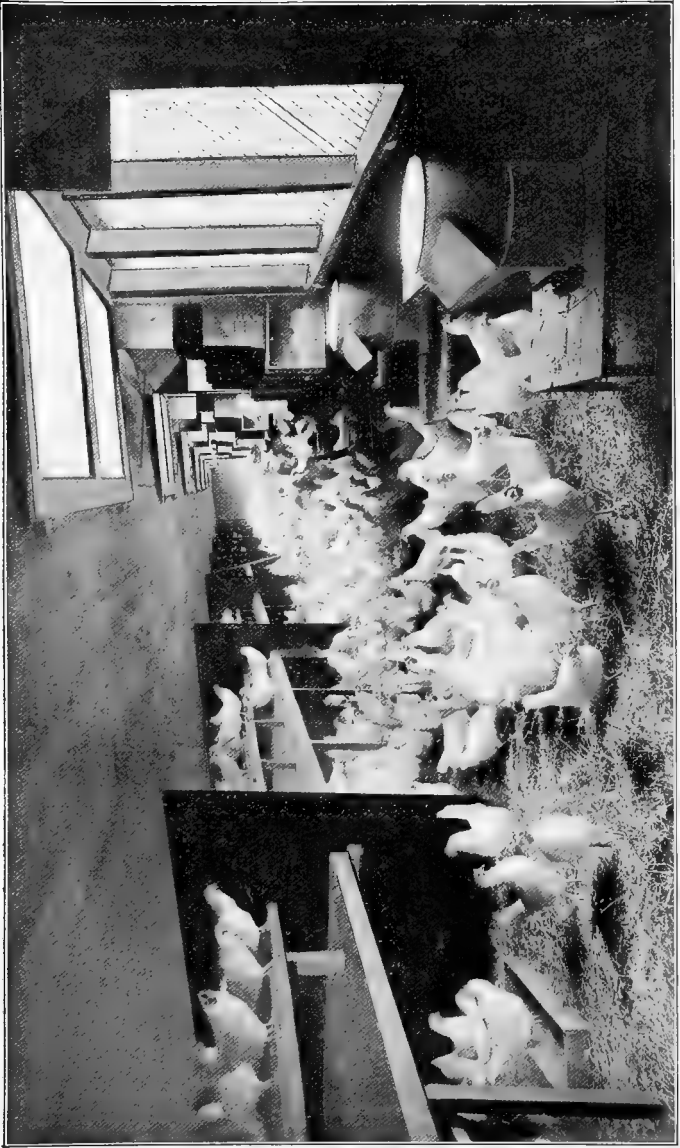
90,000 Orders for 40,000 Eggs

During the season of 1910 we sold something over 40,000 eggs and returned money for about 50,000 beyond our ability to supply. The result was that many people who were disappointed booked orders at very early dates in 1910 for hatching eggs for the season of 1911.

Our experience was quite the reverse from the stories we had been told. Of course, in doing a large business, it is not possible to satisfy everyone, and then, unfortunately, there are some people who are extremely fond of attempting to get something for nothing, and you receive statements regarding orders which have been filled, which when investigated, prove to be somewhat different from what you were at first led to believe.

The fertility of our eggs was such that it was almost impossible for anyone to make a complaint, and the hatching season of 1910, both at the Farm and for our customers, was a most successful one.

For the season of 1911 we were able to increase our breeding facilities considerably over 1910, but we were even more unable to meet the demands upon us for hatching eggs, than in the previous season. The results of this year were quite as satisfactory as for the previous, and for the season of 1912 the Farm



YEARLING HENS IN BREEDER HOUSE BEFORE MATING READY FOR 1912

will be in a position to fill more orders than ever before, as we have been able to make a still greater increase on the breeding side.

Orders for hatching eggs are booked by such a system that people receive them when we agree to deliver the goods, and the illustration herewith plainly shows the plan.

\$..... **SUNNY SLOPE FARM** No.

THE GREAT CORNING EGG FARM

BREEDERS OF THE STRAIN OF S. C. WHITE LEGHORNS

WHICH CANNOT BE SURPASSED

BOUND BROOK, N. J.....191

Received of.....

..... **Dollars**

FOR.....S. C. W. LEGHORN EGGS FOR HATCHING. THESE

EGGS ARE TO BE SHIPPED BY EXPRESS ON OR ABOUT THE

.....**DAY OF.....191....**

THE CORNING EGG FARM

BY.....

CHAPTER XIII

Policing the Farm — With Bloodhounds, Searchlights and Rifles

IN the Fall of each year, from almost every part of the Country, come reports of what seems to be organized thieving in the poultry line. Both large and small farms are generally sufferers. For a number of years people in the vicinity of the The Corning Egg Farm have met with losses, and in the year 1910 an organized gang was unearthed, which had a camp on the adjacent hills, and made nightly raids, then shipped the birds by crossing the Watchung Mountains and reaching railroad communication on the other side, sending their stolen feathered plunder into the New York Market.

Shoot First — Investigate Afterwards

The Corning Egg Farm takes a great many precautions in regard to efficient policing, and has earned a reputation for straight shooting, not with a gun carrying bird shot, but with rifles. It is thoroughly understood for miles around that we shoot first and investigate afterwards. The farm carries some of the finest Blood Hounds in the Country, all trained



"SOCRATES," THE GREAT BLOODHOUND WHICH HEADS THE CORNING
KENNELS

man-trailers, and it is thoroughly understood that if the rifle fails to stop a thief, and it becomes desirable to see him, the hounds will take up the trail the next day, and no matter where he may have gone there will be no difficulty in reaching him. Should he take train the dogs will tell the fact, and then it will be only necessary to try each station until the one is reached where he left the train. Should he leave by means of a horse, when he either gets into the wagon, or mounts the horse, the hound will take the scent, and carry it until he again takes to the ground.

Socrates, the Great Bloodhound

The head of the kennel, "Socrates," No. 127320, (his registered name is "Ottawa's Major") is a direct descendant from Rosemary and Delhi, the two great dogs of Mr. Burgh, of England, who for years has been the leading breeder of man-trailing Blood Hounds. Altogether the Farm to-day is carrying seventeen dogs. Fifteen of them are pure and grade Blood Hounds; two are Fox Terriers. The Fox Terriers are kept for a breed of thieves other than the two-legged kind, and rats have no place on which to rest the soles of their feet.

The dogs, every night, are distributed at different points of the Farm, and one of the great qualities of the Blood Hound is its marvelous nose, which works just as well in the dark as in the light, and as watch dogs, because of this peculiarity, they are most effi-

cient, giving notice of anyone approaching the Farm long before he could possibly be detected by a dog of another breed. When they give tongue there is no doubt in the mind of anyone but that he is approaching a very dangerous zone.

On the Foreman's Apartments there is a Tower which connects with his room, the windows of which command a view of every part of the Farm. In this Tower there is a searchlight, and at any time of the night, if the dogs give warning of a possible disturber, any part of the Farm can be instantly flooded with light. Back of the search light is the high power rifle.

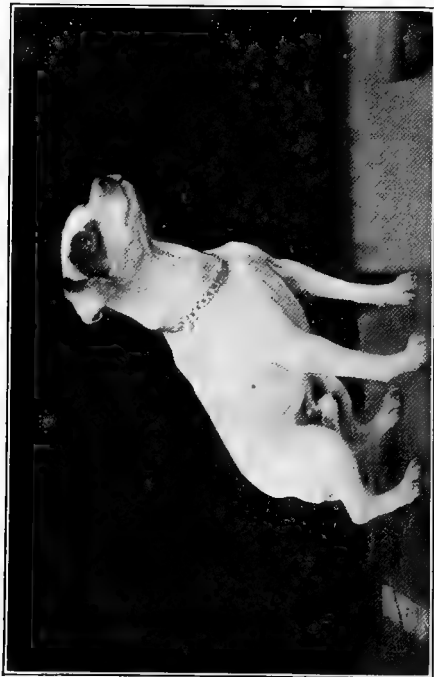
Throughout the Range there is a trolley system which is used, the overhead wire being so divided that each dog has a run of one hundred feet, and the leash attached to the sliding pulley gives him twenty feet on either side of the wire. This makes a complete circuit of the Colony Range, so that it is impossible for anyone to cross in among the Colony Houses without being reached by one of the dogs.

We have been breeding some grade hounds, which make a rather more ferocious animal than the pure breed, so far as natural disposition goes. The nose quality, however, is all retained, thus enabling these grades to become perfect trailers.

It is well on any egg farm to establish a reputation for being in a position to always place a marauder



SOCRATES II AND DIOGENES
Sons of the Great Socrates



BUSTER, AMERICA'S GREATEST RATTER

behind the bars, and nothing so insures protection as the knowledge that on the Farm there are carried dogs which are capable of trailing a trespasser wherever he may go.

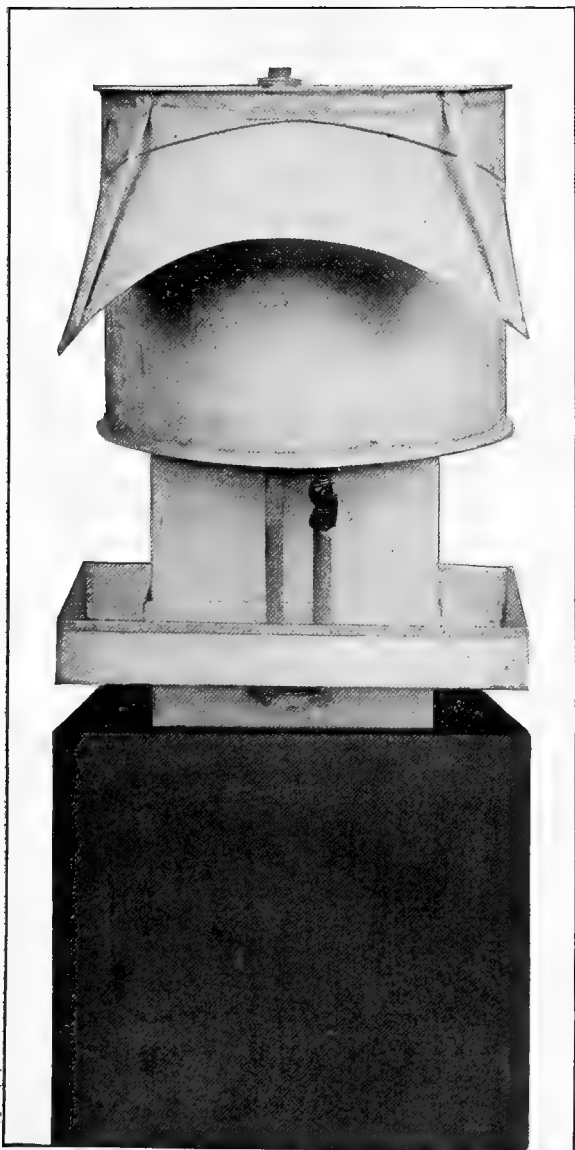
CHAPTER XIV

The Necessity for Pure Water — An Egg is Chemically 80% Water

EIGHTY per cent. of an egg is water. If a sanitary egg is to be produced it is most essential that pure water should be accessible to the hens at all times, and not only should the water be pure, but the drinking fountains must be of such a nature that they can readily be kept in a pure state, and that the cups, into which the water flows from the main fountain, cannot be fouled by the birds.

Automatic Fountains Essential

On The Corning Egg Farm the supply of water is placed before the birds in automatic fountains, which work on air pressure, and contain five gallons each. The water feeds down through a pipe into the cups, the feeding pipe shutting off by the turning of a small cock, thus permitting the removal of the cup, so that it can be thoroughly cleansed each day at the time of filling the fountain, by the use of a small brush, or swab. Once a week a quarter of a teaspoonful of Potassium Permanganate is put into each fountain, just enough to give the water a slight



CORNING AUTOMATIC DRINKING FOUNTAIN

coloring. It is a mistake to have the color so deep that it verges on the purple. This purifies the fountain and acts as a preventive of colds.

It is a very good practice also to occasionally put a few drops of Kerosene oil into the bottom of the cup and then allow the water to run in. The Kerosene will run over the entire surface of the cup and then rise to the top of the water. As the birds dip their bills to drink a small amount of the Kerosene is taken up on the bill, and, when the head is thrown back to swallow it runs into the nostrils.

The drinking fountains are occasionally thoroughly cleansed with a strong solution of Washing Soda. This, of course, is carefully washed out of the fountains before they are filled up and placed in the Laying Houses.

Hot Water in Cold Weather

In the Breeding and Laying Houses during the cold months, hot water is placed in the fountains. On The Corning Egg Farm a large boiler, with a hot water attachment, is maintained for this purpose, and water is taken to the Laying Houses at as close to boiling point as it is possible to get it there.

Hens Drink More in Afternoon

At first the watering was done early in the morning, but now the watering hour has been changed to the first hour of the afternoon. The reason for this is

because, by sitting in the Laying Houses and watching the birds, it was discovered that from one o'clock to roosting time more water is consumed than at any other hours of the day. At first it was thought that Bidy, on leaving her roost, immediately sought the drinking fountain, but we find the first act, generally speaking, is to endeavor to fill the crop with grain, and she vigorously starts to work in the litter.

By placing the hot water in the fountains during the hour after noon, we find that with the closing of the house for the night, the water retains its temperature to a remarkable degree, and it is not at all chilling to the birds in the morning of ordinary cold weather. If the night has been an extremely cold one we make it a practice of going through the Houses with boiling water, emptying out what may be in the cups, and refilling them from the hot water can, thus giving any bird which may desire a large quantity, warm water to drink at this time in the morning.

The supply of water for all the stock on The Corning Egg Farm comes from the deep well, already described in the chapter on "Building the Farm."

CHAPTER XV

Hard Coal Ashes, Oyster Shell, and Grit

As stated in the chapter on "Anthracite Coal Ashes," ashes have entirely taken the place of charcoal on The Corning Egg Farm. They are fed in hoppers with the Grit and Oyster Shell. These hoppers are divided into three compartments, and are automatic in feeding down the ingredients, in small quantities at a time, for Bidley's use.

It is very essential to supply the hen with the proper grinding material for operation in her mill, for, from the crop, what she takes into her system in the way of grain, etc., is passed into the gizzard, where she places a certain amount of hard, sharp stones, to use as mill stones, and this great muscular organ then puts the food into the proper condition for her to assimilate it.

The Grit placed in the hoppers is hard and sharp. Ordinary pebbles are of no use to Bidley in preparing her food for digestion. There are a great many different grits on the market sold through Poultry Supply Houses, and by the manufacturers themselves. Where it is possible to procure Grit having the essentials as already described, and carrying a good per-

centage of lime, it adds very materially to the desirability of the Grit.

Oyster Shell occupies the third compartment of the hoppers, this supplying the hen with the lime necessary for her own system and for the shell of the egg. It should be seen to that the Oyster Shell is free from dust, and rather coarse as to its size. This represents an economy because there is so little waste by the fowls when the Shell is fed to them in this condition. The lack of lime in the system of the hen is one of the reasons for soft shelled eggs, and the lack of lime in the ingredients fed to a young chick means soft bones, which shows most decidedly in leg weaknesses.

Where the hen is supplied with the full quantity of the ingredients which give her lime, she turns out eggs which you might term "well shelled" and this adds materially to the appearance of the egg, and, consequently, helps to give it a better grading.

CHAPTER XVI

Beef Scrap and Green Bone Substitutes for Nature's Animal Food

UNDOUBTEDLY the ideal animal food for the hen, if it were possible to procure it in sufficient quantities the year round, would be angle worms, grasshoppers, and other members of the insect family, which the early Spring supplies in such liberal quantities. It must be remembered that in these different worms and insects there is a large amount of phosphorous, which adds very greatly to the ability of the hen to successfully digest the large quantity of food which is necessary, if she is to produce a large quantity of eggs.

Green Cut Bone Nearest Nature

The thing, perhaps, nearest in an artificial way to Nature's animal food, is green cut bone, and it is certainly relished by the hens, and a great assistance in producing Winter eggs. The exercise of great care, however, in the selection of bone is very necessary, for, if salt bone, or tainted bone, is cut up and fed to the fowls, it will prove most detrimental, and in many instances will mean the loss of the hen.

For those who do not find it possible to set up the necessary bone-cutting machinery there are numerous brands of "Beef Scrap" on the market. This is made from green bone and meat which is then cooked, ground and pressed, so as to preserve it fresh and sweet. This also is a most successful way to supply the hens with the necessary amount of animal food. It is readily mixed into the mash, just as the green cut bone is, and, where the proper mechanical mixer is used, it is possible to thoroughly coat the entire meal mixture with the oily condition coming from the beef scrap, and until one has seen beef scrap mixed into the mash by such a mixer he has no idea how successful the operation is in preparing a high grade mash. The beef scrap and also the fresh cut bone carry a high percentage of phosphorus, and in fact have about all the ingredients found in animal food secured by the hen while running on Range.

There are now appearing numerous advertisements of a prepared fish, to take the place of other animal foods, but The Corning Egg Farm is unable to give any opinion as to the efficiency of this preparation. It has been the rule at the Farm, when we have thoroughly tested and found satisfactory any article of food, not to experiment with the various substitutes which at all times are so widely advertised.

CHAPTER XVII

A Time for Everything — Everything on Time

IN any business, or occupation, that one attempts to carry on successfully there must be system. Nature teaches system, and the hen, as a part of Nature, is a very regular performer. She does everything on time, and at a given time, and if her routine is broken in upon she is a very much upset individual. The owner who rudely disturbs her routine suffers in the loss of eggs.

The schedule of work among the fowls on The Corning Egg Farm is without variation each day. In Summer the houses are always open and need no attention in the morning, but in Winter the drops are raised in ordinarily cold weather, as soon as it is light enough to enable the hens to work in the litter for grain. On very cold mornings the raising of the drops is deferred until the Sun is up, and when this is done the drinking cups in the fountains are filled with hot water.

Fixed Feeding Hours

As close to eight o'clock as possible green food is fed to all the hens, and, if the ground is in a reason-

bly dry condition, the green food for the cockerels is scattered outside their pen, and the entire flock is driven out of the House, where they are soon busy consuming the green food and whatever grain may have been left on the ground from their outdoor feeding of the previous day.

For a number of years it was the method at The Corning Egg Farm, between the hours of nine and ten o'clock, to make a gathering of eggs. This has now been abandoned for the reason that so many birds were disturbed on the nests during such an early visit to the House for gathering, and the first gathering now on the Farm is made at eleven-thirty.

In the study of feeding, extending over a term of years, it has been found that a considerable economy in time can be made, with exactly as advantageous results from the layers, by the following routine. Fresh water is placed in all the laying and breeding pens at one o'clock, P. M., and it is boiling water during the Winter months. Directly following the watering the mash is placed in the troughs, and the grain ration is scattered through the litter, both in Summer and Winter. It has been found that the hens work just as hard, and continue to do so, as they did when the mash and grain fed were given at hours which practically followed the Sun, that is, earlier in Winter, and later in Summer. In past years, the oats were fed to the flocks as a separate ration, at eleven-thirty o'clock. This we have dis-



PART OF THE OLD INCUBATOR CELLAR

The New Building with the 15,600 Egg Machines was not Sufficiently Completed for Interior Photograph

continued. The grain ration is made up of cracked corn, wheat and oats, in varying proportions according to the season of the year.

Four Collections of Eggs Daily

At three o'clock another collection of eggs is made, and at five o'clock eggs are again collected, and at this last collection all the corners of the litter under the dropping boards are carefully searched for eggs laid by the wayward Bidy, who prefers her own scooped out corner to a good nest.

The Houses are closed for the night, according to the condition of the weather, and at this time still another collection of eggs is made. At seven-thirty the Houses are again visited, and all birds not roosting as they should be are removed from the nest boxes or windows and placed upon the perches.

Mash Fed in Afternoon

During the Summer months, when the birds are on Range, they are fed their mash and grain ration between the hours of two and three in the afternoon.

Throughout the year nothing whatever is allowed to interfere with the Schedule, and, if one would succeed with poultry a rigid adherence to regularity is most necessary.

CHAPTER XVIII

Incubation on the Corning Egg Farm

WE find, in studying Artificial Incubation, it has been in vogue, one might almost say, for centuries. The Chinese practiced artificial incubation by the use of hot sand and ovens, for it must be remembered that the Pekin Duck, which comes from China, is a non-setter. Therefore, ages ago, the Chinese were driven to the necessity of artificial incubation in order to maintain their large flocks of ducks. In studying the art one cannot help wondering that the progress in its development has been so slow, and the advance, year by year, has been almost nothing.

Hen Reigns Supreme

The Owners of The Corning Egg Farm were somewhat taken aback one day by the statement of a young man that he must evolve a theory of incubation for himself, and carefully carry it out. In incubation one does not want theory, but the knowledge which comes from long practice and the most scientific study of the art. After all these years, the hen, as a hatcher, reigns supreme. There is nothing which ap-

proximates her ability to turn out strong, vigorous chicks, and yet it is unfortunately necessary to abandon the hen when large numbers of chicks are to be produced. So Man has struggled in his vain efforts to reach something which will, at least in a measure, become a competitor of the hen.

Livable Chicks — Not Numbers

In 1911, the readers of advertisements in the Poultry Magazines were confronted with the statement that a certain incubator was the only competitor the hen had. But, it is sad to state, there must have been some mistake, for this incubator could not live up to the claim in the advertisement, nor, so far as it is known, is there any incubator which approximates that claim. Some marvelous hatches are written of, but the question is not one of marvelous hatches, so far as it means the number of chicks which manage to come through the strenuous act of exclusion, but the real question of incubation is as to the number of strong chicks, capable of living and growing into an animal which will become a money maker for the man who hatched and raised it.

Many people stand in great awe of an incubator, no matter what its make, and have the feeling that to hatch a fair number of chicks in a machine is almost a miracle. The fact is, however, if the purchaser of any incubator will realize that the manufacturer knows more about the proper way to run it than Tom Jones,

or Bill Smith, who may be neighbors, and will follow the instructions as given by the manufacturer, with good fertile eggs, it will be almost a miracle if he does not get at least a fair hatch.

There are so many different makes of machines it is quite impossible to write a chapter on incubation which will cover the needs of all phases of it. The above advice, however, if followed, will certainly be more apt to bring about successful hatches than anything else that can be done.

On The Corning Egg Farm the problem of incubation has been most carefully studied from the inception of the Farm.

Uniform Temperature Most Important

A thermostat and regulator which will absolutely insure an even temperature in the egg chamber, and a thermostat so sensitive, with an adjustment of the regulator to such a nicety, that it will insure the maintaining of an equal temperature in the egg chamber even if there is a variation of atmosphere in the Cellar of from 10 to 20 degrees, is perhaps, the first great essential in incubation.

Ventilation and Moisture Next

Ventilation and the retention of moisture undoubtedly come next. The growing embryo must be fed a large quantity of oxygen, and there must be a sufficient amount of moisture to prevent a too rapid dry-

ing out of the egg, under the temperature which, if a chick is to result, must be maintained. So far as moisture goes, it is not a question of moisture at the time of hatching. If the proper amount of moisture has been always present during the period of incubation there will be no difficulty at the time of exclusion.

Where a large amount of incubation is going on, and the ordinary style of lamp heated machine is being used, oxygen is of necessity constantly absorbed from the atmosphere, by the fire. While it is quite possible, nay, even probable, that any of the mammoth machines of the day are far from what might be desired, still, they do solve the difficulty of a great number of individual fires sucking the vital oxygen.

Of the mammoth machines now on the market there are two which produce better chicks than any of the others, so far as we can see. There are features in the one which we finally decided upon, which, from our point of view, made it more desirable than the other. We feel, however, that in the construction of these machines there is much to be desired, and we suggest to any would-be purchasers to make most thorough and complete stipulations with any company from whom they purchase, as to the workmanship and finish of the machine, and also the proper fitting of one part to another, especially the proper working of doors and egg trays through all the different periods of incubation. All trays should be absolutely interchangeable, and there should be a sufficient amount of

play in the runs, so that, with the swelling of the wood from the moisture, there would never be a possibility of their binding. While the doors should shut air-tight, their dove-tailed joints should so fit as to allow their coming away without a particle of stick, or jar, to the machine.

Hot Water Machines Best

When it had been fully determined by The Corning Egg Farm to put in Hot Water Heated Incubators, the capacity desired being about sixteen thousand eggs, it was concluded to divide this capacity between two machines.

It was also decided to build an entirely new Incubator Cellar, and the dimensions were 146 feet long by 22 feet wide, 7 feet from the concrete floor to the bottom of the floor joists, these latter being 12 inches in width, making a full height to the floor of the Brooder House overhead, 8 feet. The floor joists on the under side of the floor of the Brooder House are planed and painted white. The Cellar is constructed of concrete blocks, made rock faced, and showing in the interior of the Cellar. The two incubators are also painted white enamel.

So as to eliminate any question of the consumption of oxygen by fire in the Cellar the heaters are placed with a concrete block partition between them and the incubators, the hot water pipes passing through this concrete wall, and connecting with the incubators.

In this separate part of the Cellar, where the heaters for the incubators stand, are also the two heaters for the Brooding System, upstairs, and also the large auxiliary heater which cares for the hot-water system which allows the Brooder House to be carried at an even temperature, day and night.

In the heater part of the Cellar there are three large windows, and an entrance is made into this Cellar through a vestibule which is ten by nine feet. The doors leading into this are large, double, glass doors, and from the landing just inside there is a staircase leading to the Brooder House, above. Entrance is made into the Heater Cellar through another pair of glass doors, five feet wide. The Incubator Cellar itself is reached directly in the center by a four foot door, also of glass. The two side alleys between the incubators and the outer walls, are also reached from the Heater Cellar by narrow, glass doors.

Corning Incubator Cellar Unequaled

It is believed this Cellar, with its plan of equipment, is unequaled, anywhere, as to the convenience of its general arrangement. Ample light and ventilation are supplied in the Incubation Cellar proper, by twelve windows on the north and east sides, the south wall being blank, as the chick runs from the Brooder House go out on that side.

It is impossible, owing to the necessity of the narrow alleys between the incubators and the walls, to use

the V-shaped window drops, which have been so successful on the Farm for the prevention of draughts. The windows work on sash-weights, both top and bottom. A Spring Roller Shade device, covered with sheer muslin, with a screw eye on the window sill, is so placed that the cord may be passed through it, holding the shade rigid. Thus, when the prevailing wind creates a draught, the window may be opened to any desired width, and the draught prevented by the shade.

In operating the incubators they are run empty for a sufficient number of hours to adjust the regulator, and to know they will maintain a temperature of 103 degrees exactly.

Eggs Turned from Third to Eighteenth Day

After eggs are placed in the incubators the process of turning does not begin until the third day, after which they are turned regularly twice a day until the completion of the 18th day, when they are left undisturbed.

103 Degrees Maintained

The temperature at which the incubators are carried for the first week is a matter of wide difference of opinion. In many cases 102 degrees is the maximum temperature for the first seven days, after which 103 is maintained as closely as possible during the remaining period of incubation. In operating the incubators on The Corning Egg Farm it has been found

(and this is particularly true of early hatches) that, if the eggs are not brought up to 103 degrees for the first week, a retarded hatch is the result. A hatch which drags over its time usually means a lot of weaklings. It is our practice, therefore, to bring the eggs up to 103 degrees as soon as possible after setting them, and to continue this temperature as nearly as possible.

Cool But Never Cold

Cooling the eggs is of course practiced on The Corning Egg Farm. For the first week, five or six minutes will usually be found a sufficient time, but as the embryo grows the length of time should be increased.

It is quite impossible to give any exact length of period for cooling, and it must be determined by the feel of the egg to the hand. They should never reach a point where they can be termed perfectly cold, but should feel slightly warm as the palm of the hand is laid upon them. In cooling, the egg tray should be placed on top of an incubator or table so that the bottom is completely protected, otherwise the eggs will cool too rapidly. In other words they should lie as they do in the nest of the hen. According to atmospheric conditions, cooling, during the latter part of incubation, will sometimes reach from forty to sixty minutes. It is a practice with us to give the eggs a very long period of cooling on the 18th day, before they are placed in the incubator for the last time.

After closing the incubator on the 18th day it is not opened again until the chicks are removed on the 22d day.

To open the door and reach in to assist some chick out of difficulty means allowing the moisture to escape, and, while the one individual which was seen to be in trouble might be rescued, by the lack of moisture in the egg chamber, many others would be held fast in the shell.

Cover Glass Doors

When the chicks begin to hatch we make it a practice to throw a cloth over the glass door, so as to prevent the youngsters crowding toward the light, and piling up on top of each other, either in the egg trays or in the nurseries below.

All Good Chicks Hatch in 20 Days

Many people have an erroneous idea in regard to the time required for hatching. If the temperature has been carried at a correct point during the entire period the eggs will begin to pip on the afternoon of the 19th day, and the morning of the 20th day should find the youngsters coming out of the shells like Pop Corn over a hot fire if the eggs have been of proper strength, but on the morning of the 21st day the hatch should be completed. Generally speaking, chicks which hatch later than the 21st day are weak, and while they may come along for a time, when

placed in the Brooder House they generally snuff out, and add to the list of mortalities.

Set Incubators Toward Evening

It is our belief that there is a best time in the twenty-four hours in which to set an incubator. As a rule, it requires about eight hours after the eggs have been placed in the machine for it to come up to temperature. Therefore, if the eggs go into the chamber late in the afternoon, and anything goes wrong with the regulator, the eggs cannot have been in a detrimental temperature for any great length of time before the operator is making his first morning round. We observe the temperature in the egg chamber three times a day as a rule, the first thing in the morning before the eggs are turned; at noon, or a sufficient number of hours after turning and cooling the eggs, allowing a sufficient time to elapse for coming up to temperature; and again late in the afternoon, before the final turning for the day. At these hours of observation any slight alteration of regulator, to meet changes noted in the temperature, is, of course made.

The Hot Water, Coal-Heated, Incubator is a great step in advance, and these machines are now built in sizes from twelve hundred eggs up.

With the old style lamp machine, people who were running a small plant did not need an Incubator Cellar, but the Insurance Companies would not allow the placing of an incubator in the cellar of a house with-

out a special permit, and in many cases would not issue such a permit at all. The hot water machine will, of course, go into any cellar without vitiating the insurance, and, what is more, the machine itself is insurable, just as is any hot water plant in a house.

Tested Only on Eighteenth Day

Until this season, on The Corning Egg Farm, we had made it a rule to test the eggs on the 14th day. Many operators believe in testing the eggs from the 5th to the 7th day, again on the 14th, with the final test on the 18th day. In operating one of the old style machines, with the large trays, it was expedient to remove the clear eggs and those with dead germs to facilitate the turning of the eggs in the trays, but all this arduous labor is done away with in the hot water machine. The trays hold seventy-five eggs, and are so constructed that one tray fits on top of another, and then the trays are simply reversed and the turning is accomplished. This makes it necessary to have a full tray to prevent the eggs rolling and breaking when they are turned in the manner described. Testing the eggs is, therefore, deferred until the 18th day.

When one sees the tremendous saving of time which the coal-heated, hot water machine accomplishes for the operator, it produces a feeling bordering on mirth in the man who has labored with the old style machine and big tray, when thousands of eggs were

turned by hand twice a day. Ten thousand eggs in one of the modern machines are handled with less effort and in less time than three thousand could possibly be cared for in one of the other styles of incubator.

Moisture

On The Corning Egg Farm moisture is provided in the Cellar by thoroughly wetting the floor with a hose twice a day, the floor sloping gently to a drain in one corner. Large earthen-ware vessels, of about three inches in depth and eighteen inches in diameter, are stood at different points throughout the Cellar, and are constantly kept filled with fresh water. This is done, not so much for the purpose of increasing the humidity of the air, as it is to take up the impurities. As an illustration, if you stand vessels filled with water in a freshly painted room, the odor of paint is almost entirely absorbed by the water.

As even a temperature as possible is carried in the Cellar, and at all times there is a constant flow of fresh air, but it is so controlled that it does not produce a draught. It should be remembered that while a moist cellar is desirable, unless it is well ventilated, it is utterly unfit for the purpose of incubation.

Chicks Handled Only Once

The chicks, at the end of the 22d day, are counted out of the incubator into large baskets lined with Can-

ton Flannel, and in these they are carried upstairs to the Brooder House.

The last act of the chicken, before pipping the shell, is to absorb into its system the yolk of the egg, which supplies it with a sufficient amount of nourishment to last at least forty-eight hours. This supply of nourishment is what really makes possible the tremendous business carried on in "baby chicks." But, as The Corning Egg Farm views it, the Society for Prevention of Cruelty to Animals should step in and stop this business. After exclusion is accomplished the chick is thoroughly exhausted, and for a number of hours, if left to its own devices, it lies in a deep sleep.

Baby Chick Business Cruel

Consider then the torture that this small animal is put through when it is taken out of the warm egg chamber, or nursery, as soon as it is dry enough, packed like a sardine in a box, and then hustled to an express office, placed on a train, and, by the swaying of the train, kept in constant motion.

The sellers of day old chicks in many cases guarantee the arrival of the small "puff ball" alive. Unless the distance is extreme this is not such a difficult feat. They are alive on arrival, and perhaps continue to live in apparently fair strength for some days, but somewhere between the 7th and 10th days the mortality usually runs into such numbers that the purchaser finds the remaining number of youngsters

has cost him about a dollar apiece. As the season advances many more of them drop off, one by one, from causes which, to the unsophisticated, are unknown.

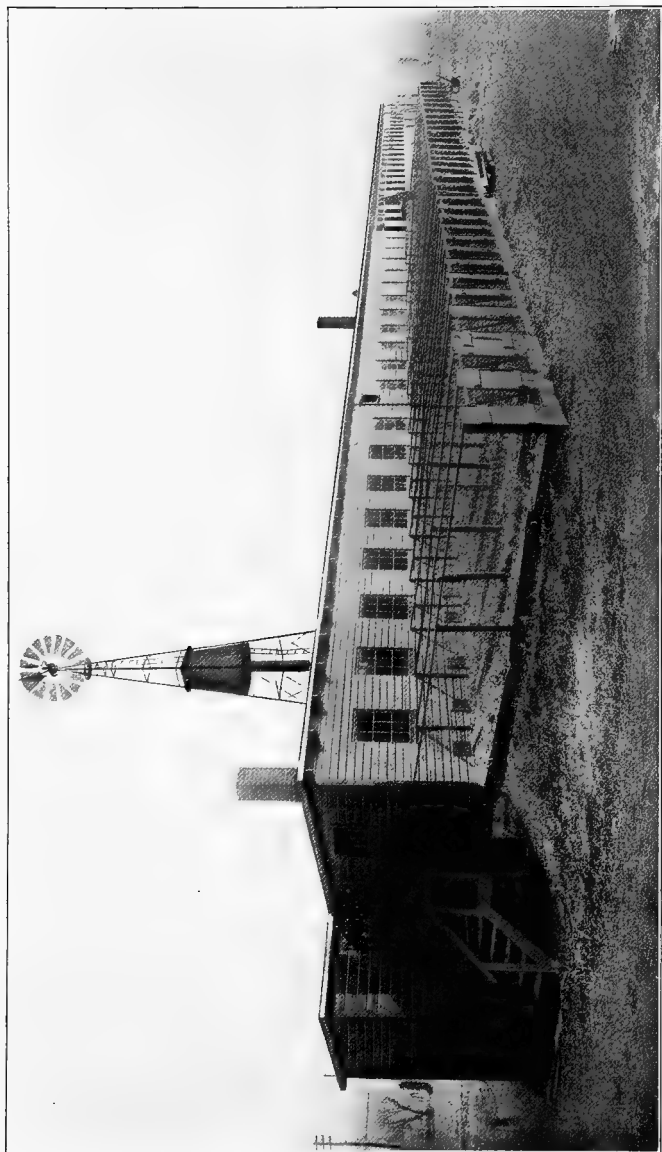
A short time ago a gentleman who has been engaged in the Baby Chick business for a number of years was making a call at The Corning Egg Farm, and expressed his regret at having placed an order with a breeder of White Rocks for eggs at too late a date to insure their delivery before the first day of May. The breeder, however, had offered him some day old chicks. Our amusement was considerable when he remarked that he would not accept a day old chick as a gift if he was expected to pay the expressage.

The man who expects to procure strong, healthy youngsters would much better place his money in eggs for hatching, from reliable breeders, than to make himself a party to the suffering of these helpless mites.

If the humane side of the argument does not appeal to him, certainly the money expended will.

Correct records, on cards designed by us for the purpose, are kept on The Corning Egg Farm, showing the results from the incubators. These are filed, giving the Farm a record which, as the years go by, becomes invaluable, when planning for a year's work in incubation.

INCUBATOR NO.			HOVER NO.	
Set	P. M.	191		191
Eggs Clear Dead <hr/> Hatchable			Chicks	
Chicks			on	191
			Moved to Colony House No.	
Turn		P. M.		
14th day				
18th day				
21st day				



BROODER HOUSE SHOWING CHICK RUNS
Extension of Building Nearing Completion

CHAPTER XIX

Rearing Chicks in Brooder House — The Following Two Years Results Depend Upon Success in Brooding

THE Brooder House is built over the Sprouted Oats Cellar and the Incubator Cellar. Its total length is 264 feet. 118 feet of this is 16 feet wide, and the balance is 22 feet wide.

Incubation might be termed a mechanical operation, and, as outlined in the previous chapter, a very fair hatch is usually obtained. But after all is said and done artificial rearing of young chicks is the most difficult problem which a poultryman has to solve.

Chicks running with a hen will stand climatic conditions, and in fact thrive under conditions, which, if they were being handled in a Brooder House, would mean a tremendous mortality. The hen will feed her brood on substances which would mean the annihilation of ones' entire flock of youngsters, should one attempt it, and, perhaps, the most curious feature of the feeding part is the fact that one may give the brood, running with the hen, food Nature never intended a small chick to eat, and many of the brood

will thrive on it, and the mortality will, in most cases, be confined to the weak ones.

Corn Not Proper Chick Food

In past decades, wet corn meal seemed to be about the standard ration which the chicks were fed on by the farmer's wife, and in fact this practice has not yet entirely gone out. Naturally, it brought about a large mortality which everyone deplored but could not understand. Corn in any form was never intended for a chick to eat, but when you place it before them in the form of meal, and this made into a sloppy mass, the wonder is, not at the largeness of the mortality, but rather that any of them live at all.

But the advance in Poultry Culture has brought about feeding of whole grains, to a large extent. For years the proper feeding of chicks, even on farms with modern brooding equipment, has been a stumbling block, causing serious loss, and, in many instances, failure, to those attempting to raise chickens either in large or small numbers.

Follow Nature's Teaching

In Poultry Culture, in order to succeed it is essential to study Nature, to find out how the hen in a wild state cares for her brood, and then bring the artificial conditions as near to Nature as possible. In almost every chick food put on the market the main ingredient, namely corn, was never intended for a

young chick to eat. Consider for a moment, and you will realize that the hen in a wild state could not possibly feed corn to her young. For the sake of argument, however, suppose that corn did ripen at a time when it would be possible for the hen to procure it for her brood, the size of the kernel is so great that the small chick could not possibly swallow it. Thus Nature plainly points out that corn, for young chicks, is not the proper food.

A Balanced Food

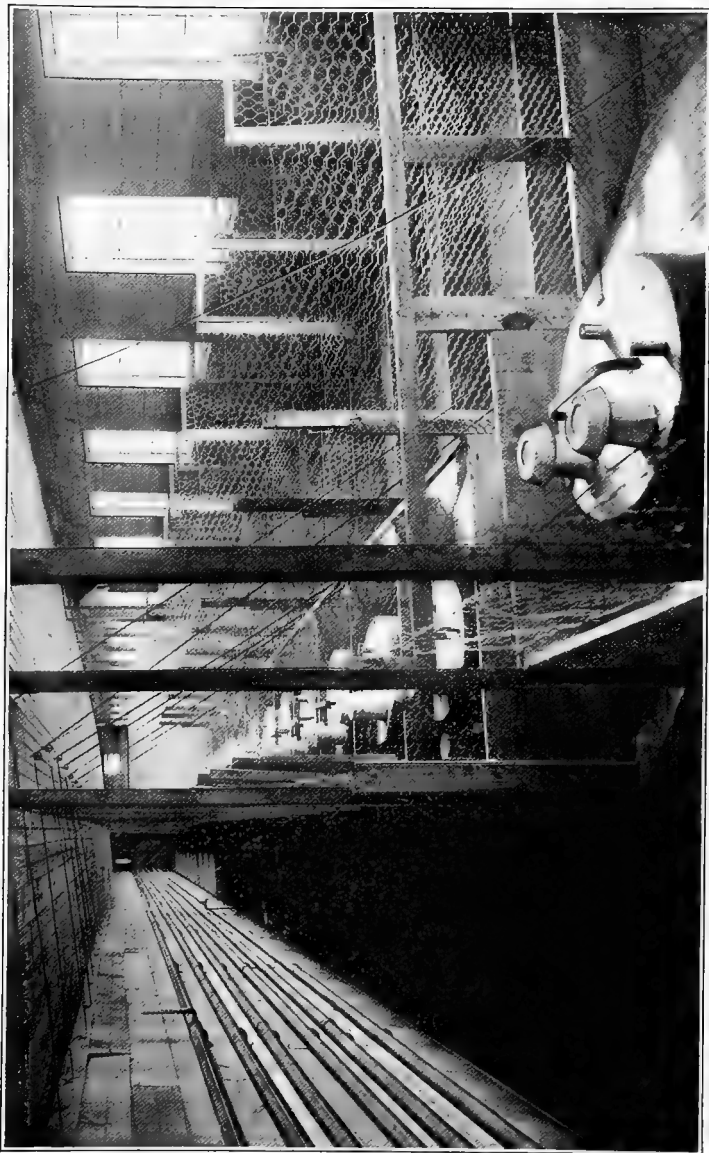
On The Corning Egg Farm the question of chick food that could properly be called "chick food" has been a study for years, the problem being to procure a balanced ration containing, as closely as possible, the ingredients intended by Nature for a young chick to eat and thrive on. Many experiments were made with different mixtures, both with chicks running with natural mothers and with those being reared in the Brooder House, and it was found that in all cases where corn was fed in the mixture the results were bad. The youngsters running with the hen did not show the large mortality which those did in the Brooder House, but even the broods running with the hen did not do nearly so well where the corn was fed, as did those not having this ingredient in their food.

The great mortality in young chicks is produced by the upsetting of their digestive organs. Corn is

very heating, and as soon as the chick's blood is over-heated its digestive organs fail to work properly, and what is now known as "White Diarrhoea" almost invariably develops. It is claimed by some authorities that this difficulty comes from a germ which is in the egg before incubation. This may be the case, but it is certainly true that wrong feeding will bring this germ into active life, and snuff out the existence of the chick.

Another phase, which has been a special study on The Corning Egg Farm in the brooding of chicks, is an abundant supply of fresh air, not only in the room itself, but also to have the oxygen fed to the chicks properly when they are under the hovers. The use of gas for heating the hovers was found a decided improvement over the lamp, so far as the freshness of the air went, but, for procuring the purest hot air, to flow up into the hovers, we are now installing a system of hot water pipes.

In a dwelling house, properly constructed, the entire heating apparatus is a hot air furnace, with a cold air box connected with outdoors constantly bringing in a fresh supply of pure air to be heated. If it were possible this would be the ideal way of supplying the heat to the hover, but of course in a long Brooder House it is impossible to do this. The nearest approach to this system of heating is a trunk line of hot water pipes, extending beneath the hover floor, with the pipes enclosed in a long box, standing some two



OLD ARRANGEMENT OF BROODER HOUSE
New House not Completed in Time for Photographing

inches from the floor, and with orifices of proper size to allow the fresh air to circulate around the pipes, and then, through the radiating devices, to flow out underneath the hover, and thus to be diffused over the backs of the chicks. On The Corning Egg Farm this box is constructed of galvanized iron, and covered on the top and sides with asbestos board, with an air space between the asbestos board and the hover floor. Through this floor comes a thimble which connects with the radiator above. The top of this radiator is a spiral screw, which works like a piano stool reversed, and with a tripod device which carries the thread but allows the hover itself to be removed without changing its position on the screw. As the chicks grow the hover can be slowly raised away from them, until it is finally removed entirely, and the chicks learn to do without it for a considerable time before they are moved to the Colony Range. The thimble is most thoroughly insulated with asbestos, so that there is no possibility of the much dreaded heat on the hover floor, which, when it does exist, tends to dry up the chicks' legs.

From the hover floor there is an inclined runway down to the main floor of the Brooder House, which is covered with a fine litter, preferably short cut wheat straw, to a depth of about two inches.

The inclined runway is hinged to the hover floor and works with a cord passing through a pulley on the ceiling, enabling the operator to raise it and retain

the chicks directly around the hover. The trough surrounding the trunk line of hot water pipes is closed by a partition corresponding to the width of the hover run, which prevents the heat from flowing by the radiator in each section, and in this way equalizing the heat in every hover.

Never Build a Double House

The Corning Egg Farm is much opposed to what is known as the Double Brooder House, which is advocated by many builders of Brooder House equipments, and, in which, in the majority of cases, the use of concrete floors is also practiced. The advantages in the supposed economy of this construction are more than off-set by the disadvantages. The proper place for the windows of the Brooder House is on the south front, and likewise the south side of the building is the proper place for the chick runs. The roof should be a shed roof sloping to the north, thus carrying all the water to the back and allowing none of it to drip down into the runs. The north side of the Brooder House should be absolutely tight, for, from this quarter, comes the great majority of cold storms, and the tight wall means an economy in fuel. And every item of expense must be carefully watched on a poultry farm.

In these different respects let us look at the double house. First, it must run north and south; second, it must have windows on the east and west, and the chick runs must go the same way; third, it must be

built with a peaked roof, the drippings from storms thus falling directly into the yards.

Must Drain Chick Runs

In the Corning plan of Brooder House the yards are sloped toward the south, and, as there is no possibility of dripping from the roof, in a few moments after a hard storm the slope and the sun combined put the yards at once into a usable condition, so that the youngsters can be let out. All day long in this style Brooder House the yellow babies enjoy the sunshine. In the double constructed Brooder House the yards are bathed on the east side with sunshine for a short time, and the west side receives the Sun for a few hours before sunset.

Concrete Floors Mean Dampness

An added menace in this double style of construction is the concrete floor generally used. It is almost impossible, with the greatest care and forethought, to produce a piece of concrete which does not constantly take up and give off moisture, and one thing to be absolutely avoided in poultry houses, little or big, is dampness.

The dollars saved in the construction of double houses are usually dollars which would have been made ten times over by the expenditure necessary to build a proper house.

The chick yards on The Corning Egg Farm are

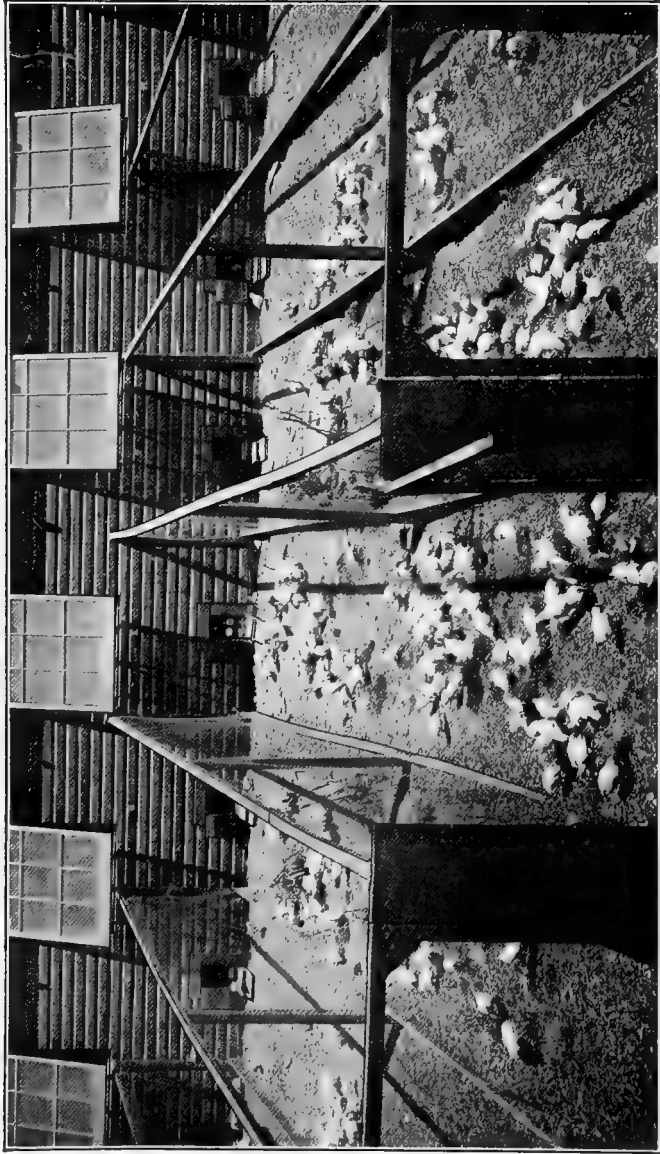
sloping, and are twenty feet long, and correspond in width with the hover runs inside the house, which vary from three to four feet in width. The diameter of the hover varies with the size of the run, from 26 to 30 inches. The sloping runs of the Brooder yards are covered with Anthracite Coal ashes, which have been found to entirely eliminate the much talked of danger of contamination of soil, the surface being constantly renewed as the ashes are consumed by the chicks.

Each hover is numbered, and directly back, on the north wall of the Brooder House, is a corresponding number, and a nail, on which is hung the record card. When the chicks are carried up in baskets from the Incubator Cellar, they are carefully examined, all weaklings being excluded, and counted into the hover compartments. Careful selection and the "survival of the fittest" begin at this point with the stock on The Corning Egg Farm.

Before speaking of the number of chicks carried in the hover compartments, it must be understood that running along the north wall of the Brooder House is a coil of hot water pipes, capable of maintaining a temperature of 85 degrees, three feet from the floor, and in zero weather.

Corning Heated Brooder House

The Corning Egg Farm believes absolutely in Brooder Houses heated beyond what is supplied by



CHICKS SIX WEEKS OLD IN BROODER HOUSE RUNS

the hovers, and this is the reason it is possible to carry such a large number of youngsters in each hover compartment. In large hatches, when we have been crowded for room, two hundred chicks have frequently been carried in one compartment of four feet in width.

Corning Feeds Dry Food Only

When the chicks are first placed in the hover compartment the inclined plane is drawn up and they find two drinking cups ready—the style that feeds itself into a small cup, into which it is not possible for the youngsters to get. They also find waiting for them their first meal of Corning Chick Food. For the first twenty-four hours the inclined plane remains up, and the hovers are visited every two hours. If the amount of Chick Food has been well cleaned up, another feeding is evenly distributed over the boards. It must be understood that litter is never placed on the hover floor, though it is kept two inches deep on the floor of the pen.

Three Feeds Daily

The following morning the inclined plane is let down, about five handfuls of Corning Chick Food to every hundred chicks is thrown into the litter, and a little is scattered just at the top of the inclined plane to entice the youngsters down. No more food is given until the noon hour, when, into the litter is thrown two handfuls to every hundred chicks, and

again a small quantity is placed at the top. No more feeding is done until four o'clock when five handfuls of Corning Chick Food are again thrown into the litter.

For the first two or three nights, or more if necessary, the chicks are quietly driven up to the hover, and the inclined plane pulled up after them, it being let down the first thing in the morning.

Fresh water is supplied in the drinking cups each day, morning, noon, and night, and, with the night filling, a brush on the plan of those made for the cleansing of milk bottles, is used to give the cups a proper cleaning.

On the back of the record cards, hung behind each hover, the mortality is kept.

The hovers are raised every morning to learn the exact condition of the entire brood after the night.

Green Food Third Day

On the third day green food is added to the ration, in the form of the tops of Sprouted Oats. Never feed the rooty mass to the youngsters for it is almost sure to upset them. The smallest chick has no difficulty breaking up and getting away with Oat Sprouts from one and a half to two inches long, and there is nothing they like so well.

Animal Food Tenth Day

The regular ration is continued with judgment, for in feeding it is to be remembered that judgment must

be exercised at all times. After the tenth day animal food is added to the ration, commencing with a small handful of The Corning Egg Farm Mash, thrown on top of the litter. Where beef scraps are used to supply the animal food they may be fed alone, and this was done at first on The Corning Egg Farm, but for the last three years we have fed the green bone in the mash mixture. It, however, must be fed with great care, and the bone used for this purpose must be most carefully selected, and must be absolutely fresh.

It must be remembered that even one or two ham bones, or corned beef bones mixed in the ration would mean the loss of a great many chicks. Shank bones and briskets, when obtainable, are ideal for this purpose, and during the Brooding season these are selected out and kept for what is termed the "baby's mash." With the introduction on the tenth day of the Mash, the noon-day feeding of Corning Chick Food is discontinued.

By the time the youngsters are four weeks old the hovers have been removed entirely, and one finds that the little fellows will lie very contentedly, spread out on the floor, so long as the temperature in the Brooder House is kept up to 85° three feet above the floor, as before indicated.

Avoid Moving Chicks Often

The removal of the chicks from the hover runs into the nurseries, as formerly practiced on The Corning Egg Farm, has been entirely discontinued. A chick in many respects resembles a flower; every time it is moved or transplanted it receives a certain setback. For this reason the great Brooder House has all been turned into hover runs, and the chicks make one move from the Brooder House to the Colony House. A moving generally represents not only a slight setback, but some mortality through accident and the change itself.

The small chick doors into the outside runs are opened, if the weather is propitious, about the fifth or sixth day in the early part of the hatching season, and on the third or fourth day later on. The chicks are never driven into the yard, any more than they are driven down the inclined plane, but it is always our method to allow the youngsters to seek a new field for themselves, and slowly. When they go out into the yard they are watched, and if there is any inclination to huddle up against the warm side of the building they are driven back into the Brooder House.

Another great advantage of the heated Brooder House (and we speak of this as entirely separate from the heat under the hovers) is that it allows the chick to seek different degrees of temperature. There is one temperature under the hover; another tem-

perature outside of the hover, on the hover floor; still another degree on the main floor of the Brooder House; and, then, there is the outdoor temperature.

When the chicks are first placed under the hovers, during the first day, we carry the temperature at 95 degrees, and then slowly decrease this by raising the hover. Where an adjustable hover is not used this may be accomplished by turning down the lamp.

CHAPTER XX

Handling Birds on Range — The Youngsters Must Be Kept Growing All the Time

THE birds leave the Brooder House for their permanent Summer home on the Colony Range, so far as the pullets in the flock go, at eight to nine weeks of age.

The Colony Houses are prepared for the new tenants by being thoroughly sprayed with a solution of Kerosene and Carbolic Acid, in a proportion of one to five — one Carbolic and five Kerosene. Before spraying, the canvas drops to the windows are let down, and after spraying the House is left twenty-four hours in a perfectly closed condition, before the drops are raised. The floor is then covered with straw litter to the depth of four inches; the five gallon drinking fountain is filled and placed on its stand close to the door; the feed box receives its quantity of mash, and the grain is scattered over the litter.

We practice the filling of from six to eight Colony Houses at a time, and with this coming season of 1912 we shall increase that number to ten.

The Colony Houses are raised about eight inches from the ground, by blocks, and, as it is not advisable

for the small birds to get under the House for the first few days, we have sets of boards which fit around the House to prevent their making the mistake of huddling under the House at night, instead of going up into it.

A Corning Wrinkle

Another preparation, on the outside of the House, is the digging of a ditch, in the shape of a crescent, about two feet back of the House, the ditch tapering out to nothing at the two ends, the dirt being thrown to the side away from the Colony House. All houses face due south. The heavy storms of the Summer come rushing up, as a general thing, from the west and northwest, and this ditch, together with the mound of earth back of it, prevents the rush of wind and rain getting under the Colony House, protecting the large number of chicks, that, on occasion of sudden storm, collect there for shelter. It has been found that this materially reduces the mortality resulting from these heavy Summer showers, accompanied by a strong wind. The ditch also keeps dampness entirely away from the ground under the Colony Houses, which is also a very great advantage.

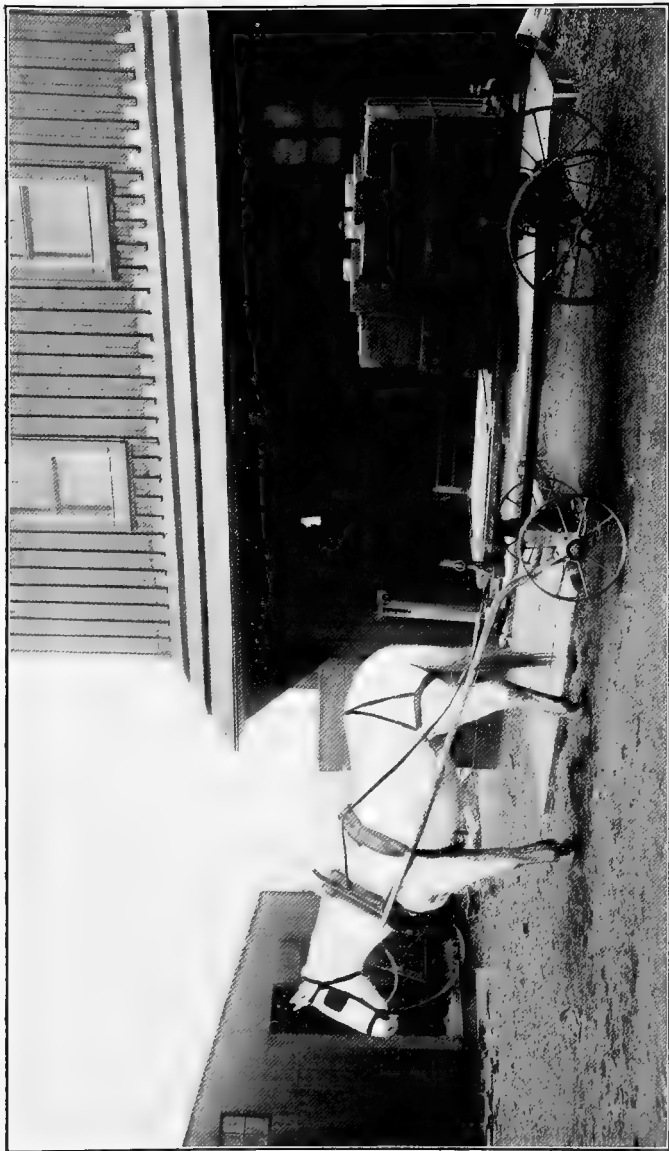
All being now ready at the Colony Houses, a large wire cage (the one now in use being eight feet long and two and a half feet wide, and eight inches high, with sliding doors at each end, and two soft leather handles to carry it by) is placed at the door opening

into the chick runs from the Brooder House, and the youngsters are quietly driven into the cage. When a sufficient number to carry safely has been driven in, the cage is carried out, placed on the wagon and driven to the Range. The birds at this time are from eight to nine weeks old, we having found it is better to have a sufficient amount of brooder room to carry them to this age before placing on Range, as they are then much better feathered, and are less affected by changes of atmosphere.

When the cages reach the Colony House the sliding door is placed directly in front of the small chick door, and both slides pulled up, and the chicks gently coaxed, by patting the box on the top and sides, to leave it for the Colony House. We place in each of these Colony Houses from two hundred and fifty to three hundred birds of this age.

As the cockerels develop they are separated, and those which are perfect in formation, and as to toes, five pointed combs, etc., and give promise of growing into proper Breeders, are placed in the Cockerel House, and given the Range of the large enclosure surrounding this House.

Until well along in the Summer, when the youngsters are first placed in the Colony House, we make it a practice to hang, directly in the center of the House and within about three feet of the floor, a large barn lantern, and with the window drops closed this produces a very considerable amount of heat, and



COLONY RANGE FEED AND WATER WAGON WITH "BILLY" IN THE SHAFTS

helps materially to give a feeling of comfort and contentment to the birds in their new quarters.

The afternoon following the day in which chicks are put into the Colony Houses (which means that they have been confined for about twenty-four hours), they are let out, but not until four o'clock, and they find their grain ration scattered close to the door of the House. In fact, it is not scattered until the small chick doors are opened for them to come out, and then it is thrown on the runs, and through the doors, as well as on the ground directly in front. The grain lying in the runways acts in a double way; it entices them out, and as they see it on the ground they eat very little on the runs, but later, after they have cleaned up all on the ground, that lying on the chick runs attracts them on back into the House at night.

The reason for letting the birds out so late in the day for their first outing is that a chicken, late in the day, will never go any great distance from where it has been confined, but works around close to the quarters in which it has spent the previous hours, and naturally returns there for shelter as the Sun goes down. The following morning the chick doors are opened and the birds allowed to roam at will.

Grain and Mash Once a Day

From this on the regular routine of Range feeding is followed. The Range Feed Wagon is low geared and broad tired. On the rear of the wagon there is

a large, square tank, carrying some two hundred gallons of water. The faucet for drawing the water is placed on the bottom and center of the rear, the tank being placed on the wagon with a slight incline, and is of inch size so as to facilitate the rapid filling of the drinking fountains, which are placed directly underneath it. The front part of the wagon carries the tubs of mash and the grain ration. As the Colony Houses are laid out symmetrically the broad tires of the wagon soon wear smooth roads in front of them, and heavy loads are readily pulled over the Range streets. The Houses are placed from side to side about eighty feet apart. From the front of the Houses on one street to the rear of the House on the next street is about one hundred feet.

The question of shelter on the Range was quite a problem at first, and to meet it in a measure we set out shelters, which were constructed by stretching roofing over frames about twelve feet square, and set up some two and a half feet on stakes driven into the ground.

It had been planned to carry the Colony Range in Timothy and Clover, but we lost the catch, and as the ground had been very heavily fertilized with the litter from the Laying Houses, a very rank and luxuriant growth of all kinds of Flora sprang up, and we found that what seemed to us a piece of very hard luck in losing the catch, was really a blessing in disguise, for this rank growth of Flora, even in its first year, was

of sufficient height to give very considerable shelter to the large flocks on the Range, and with the Colony Houses just off the ground, the improvised shelters were practically abandoned by the birds, and so they have been removed.

Plenty of Shade

With the yearly scattering of the increased amount of litter as the Farm enlarged, the growth on the Range is becoming more and more luxuriant, and now the entire Range has a succession of changing Flora from month to month, and with some varieties, almost from week to week. There is a considerable growth of Timothy and Clover, and many other varieties of the grass family, which produce a varied diet of succulent food, and of course the constant change in Flora also supplies a varied diet of seeds which the birds harvest for themselves. Any oats and wheat which have been missed in the litter from the Laying Houses sprout here, and the birds also harvest this crop for themselves. The condition of the Range under this method of handling, as we view it, is absolutely ideal for the growing youngsters.

Fresh water is supplied daily to the Houses, and the grain ration consists of two-thirds wheat, and one-third cracked corn. The amount of grain fed to each Colony House depends upon the cleaning up of it by the tenants of this particular House. The mash box is filled daily, with what is now known as the Corning

Range Mash, which consists of wheat middlings, bran, ground oats, corn meal, and a sufficient amount of green bone, when mechanically mixed in a machine which has been designed by the Farm for this purpose, to give the mash a slight feeling of moisture, which is derived entirely from the juices of the bone.

There is not so great a proportion of animal food in this Range Mash as in the mash for the layers, and it should be noticed that there is in it no gluten or oil meal. The early hatches particularly are not forced along quite so rapidly, and are less liable to go into a Winter moult than if they get these ingredients, and should they moult it comes at a later date and does not extend over so long a period.

On such a range it is not necessary to have so great a proportion of animal food in the mash, because the floral growth harbors myriads of worms and insects, which supply a large part of the animal food needed.

Removed to Laying House Middle of September

It is now our plan to allow the early hatched pullets to remain on the Range until the first or second week in September, according to the weather and the way they are laying.

The time has now arrived for taking up the first fifteen hundred pullets.

The Laying House has been previously prepared for their reception, by removing all the old litter, the nest boxes having been scraped and brushed out, and



FEEDING ON THE COLONY RANGE

the House then thoroughly swept, and all the corners cleaned out with a scraper, after which, with all the doors and drops closed, it is subjected to a most thorough spraying with Kerosene and Crude Carbolic, in the same proportions given in the earlier part of this chapter. This spraying covers every part of the House, and is done with a force pump, so that the solution is forced into every nook and cranny. The House is then bedded down with about eight inches of fresh straw, the nest boxes made ready with excelsior, and the mash for that day placed in the two mash boxes in each section, under the dropping boards. The grain is scattered in the litter, this being all done before the birds are brought to the house, so as to obviate the necessity of disturbing them more than is absolutely necessary for the first twenty-four hours in their new quarters.

The birds having been left shut up in the Colony Houses, a wire hook is used to catch them, and a man who is accustomed to using it, standing at the door, reaches in and easily catches one pullet after another by the leg, gently pulls her to the door and hands her out to the man in waiting, who drops her quietly into a large box, on the Farm Wagon, with an opening, provided with a slide at the top. These boxes are carried right into the Laying House, when the entire front slides out, thus releasing the birds all at once, and any chance of struggling through a small opening and injuring themselves, is done away with.

The method used in accustoming the birds in the Colony Houses to get on without artificial heat is as follows: for the first three or four nights, depending on the coolness of the weather, all canvas drops are down, and a large, lighted, stable lantern is hung in the House. For the next few nights after the lantern is removed the drops are left closed. Then one drop is propped out an inch or two, and from night to night the opening is increased, until the drop is left up altogether. After that, for a few nights, one drop is left up and the other closed. Next, the second drop is slowly worked up in the manner described, until it reaches the height of the hook. After this they are never lowered again so long as the birds remain on the Range.

CHAPTER XXI

Feeding for Eggs — Wholesome Nourishment — Not Destructive Stimulants

UNLESS a hen is properly fed she may have been purchased from the greatest strain of layers that it is possible to imagine, and still you may have an empty nest so far as eggs go.

The food which the hen takes into her system goes first to supply her bodily wants, the surplus she turns into eggs, and if properly bred she will turn that surplus into profit very rapidly.

Easy Assimilation

She must be fed, then, so as to have what is generally termed a "balanced ration," which really means a ration supplying all her different wants.

She must be fed so as to be able to assimilate her food with ease. She might be fed a ration which she could easily digest, but the ration might not so assimilate and combine as to be an egg maker.

The greatest factor in assimilation is proper green food, and the hen should have this in a crisp, succulent state, and plenty of it. The egg being to such a large extent formed of water, unless she is sup-

plied with all the drinking water she will take, your labor will go for naught, and the hen will not be able to lay eggs.

Her grain ration must be of the best, and it should be fed in such a way that she is forced to work for it.

Perfect Health or No Eggs

If Bidly is to lay, she must be kept in perfect health, and without exercise that is impossible.

She must live in a house without draughts but in which the air is always fresh by means of perfect ventilation, and she must have sunshine.

Her quarters must be kept clean and sweet, and a good supply of coarse oyster shell, sharp grit, or sifted, hard coal ashes, should be always accessible in quantities.

Abundant Animal Food

She must have an abundance of animal food, either in form of green cut bone, or beef scraps, and this should be mixed as we feed it in The Corning Egg Farm Mash, which is a mixture of different meals in which the animal food is thoroughly distributed. Of grain, to one hundred hens, eight quarts of a mixture of wheat, corn and oats, should be given; in Summer, about two-thirds wheat and one-third cracked corn, reducing the wheat to a third and increasing the corn to about two-thirds in cold weather, adding to this mixture at all times two

quarts of oats. That is to say, six quarts of wheat and corn and two quarts of oats.

The Corning Mash the Secret

The amount of Mash fed in the troughs varies in accordance with the way the birds clean it up. The point aimed at being to feed in each House the quantity that the birds will about clean up, by roosting time. The intention is that their first food in the morning shall be obtained by their vigorous scratching in the litter. All the grain is fed at one time, in the afternoon, and is not forked into the litter, as the birds have worked all day up to this time, it is desired that they fill up rather easily from feeding time till dark. As they move and scratch they bury the surplus grain most effectively in the litter, thus saving considerable labor, which is expended on many poultry farms, by using the pitch fork to place the grain deep in the straw.

When the pullets are first put into the Laying House, about ten pounds of Mash is placed in each trough, this being estimated as sufficient for each one hundred birds. If it is not cleaned up, the amount, the next day, is decreased, but if entirely consumed the quantity is increased.

Over and over again it is stated in articles that large quantities of animal food and rich meals in the mash are very stimulating and wear the hen out. This is a great mistake. When the hen is being sup-

plied with the proper ingredients for a large egg production she is not being stimulated, but rather helped and sustained in the natural way.

“Egg Foods” Kill Layers

On the market, to-day, is found an ever increasing number of preparations advertised as “egg foods”; “foods” warranted to produce eggs without fail and in record breaking quantities. An analysis of almost any of these concoctions discloses the fact that Capsicum, or in other words red pepper, is the basis of the preparation, or at least it is the ingredient in the mixture which is counted upon to produce the advertised results, namely, the certain and great output of eggs. If fed in sufficient quantities to actually stimulate the egg organs of the hen it must in a short time kill her, but if it should not have this effect, it certainly does put her in such a condition that she is worthless as a layer. It must be constantly borne in mind that the production of eggs is not a question of stimulation, but is the putting of the hen into a perfect condition of health, keeping her in that condition, and supplying her with foods which are egg making substances, and which nourish her completely, and allow a surplus to be turned into eggs.

On The Corning Egg Farm, this plan has always been the line along which we have worked, supplying the hen with the natural ingredients from which,

CORNING EGG FARM BOOK

SEE PAGE 147 ON MUSTARD.

By an error in printing, the paragraph giving the proportions of mustard was omitted:

If highly concentrated mustard is used, one teaspoonful for every six hens. If mustard bran is used, three teaspoonfuls for every six hens.

Mustard Increases Egg Laying

For the last three years experiments have been carried on with mustard. It had been accidentally noticed that table scraps, containing some of the leavings of a salad where mustard had been used, and which had been thrown out to a few barn-yard hens, were greedily devoured. It was further observed that, after a few days, the egg production increased. Following this interesting discovery, quite an exhaustive test was carried on with eighteen hens, running over a period of twelve months. The Corning Egg Farm followed this experiment with considerable interest. Six of the hens were fed an ordinary ration; six of them were given Red Pepper, and the other half dozen were fed mustard mixed in their food. At the end of the test all the hens were killed and carefully examined. The organs of the six hens which were fed an ordinary ration were found to be in fair shape, and those fed red pepper had enlarged livers. The six hens which were fed the mustard were found to be in perfect organic condition, and they had been in good healthy shape all through the entire twelve months. They had produced a considerable percentage of eggs beyond either of the other two pens. As a matter of fact the hens fed on the pepper laid fewer eggs than those fed the ordinary ration.

Now, the mustard used in this experiment was highly concentrated table mustard, and while the cost, where only six hens were being fed with it, amounted to very little, on a large plant like The Corning Farm, the question of cost becomes a serious item. Whether to feed concentrated mustard or a mustard bran was found to be worthy of careful consideration, because it was impossible to get nearly as perfect a mixture in the Mash, with a small quantity of highly concentrated mustard, as with a mustard not so strong but running three times the amount in bulk. As an illustration of the advisability of introducing the mustard in form of bran we might say that, by using a small quantity of one certain meal carrying a very high percentage of protein, it would be possible to introduce into the Mash the amount of protein desired, but by using a number of meals, each carrying a small percentage of protein, a much better Mash results, and every bird is able to get its due and necessary proportion of the ingredients.

Mustard Increases Fertility

The three pens before mentioned, after being fed as described through the Winter months, were mated in the month of March, and it was found that the fertility of the eggs of the mustard fed pen far exceeded that of either of the other pens, and that the resulting chicks were much stronger, developed better, and were altogether more desirable than the

chicks produced where the birds had been fed merely the ordinary ration, and where the attempt had been made to stimulate the egg production by the use of red pepper.

The exact action of mustard, in the animal or human being, is a somewhat disputed point, but the Medical Fraternity seems to agree that it increases the secretion of gastric juices, and very decidedly promotes good digestion.

A great layer must be a large eater, but she cannot be a large eater unless she is kept in perfect health, and has the necessary appetite which only comes when in a strong, robust, vigorous condition.

The Corning Egg Farm has fed mustard in a way that it has never been fed before; the egg production has increased very materially; the percentage of fertility has run considerably higher; the germs have been strong, large, hatchable germs, and the resulting chicks, have come into existence with a jump and, where they have been properly handled, have rapidly grown into sturdy youngsters.

4,000 Layers Fed Mustard

We started to feed our breeding pens with mustard in the Mash just at the time we desired them to come into eggs, and they responded at once. That is to say, after the Mash containing mustard had been fed to them for about a week, the egg output increased daily, and not only did it increase, but the high marks

which were reached were steadily maintained. Four thousand layers have been fed mustard in their Mash daily, and after months of this feeding the flocks have never been in better health, and the egg production has never been equaled even on The Corning Egg Farm.

The Mustard Bran is about twenty-five per cent. of the cost of table mustard.

Mustard Maintains Health

The experiment with mustard, with the eighteen hens, was carried on over a term of twelve months. We do not believe, however, that it is wise to feed mustard to the layers and breeders after June 15th, unless the early months of Summer should prove to be exceptionally cool. The mustard nourishes very strongly and puts an immense amount of red corpuscles into the blood, so that if continued into warm weather the hen is not in best condition to stand extreme Summer heat.

It is not necessary to gradually decrease the mustard, but it may be simply cut right out of the Mash without any detrimental effect.

Keep Appetite Keen

The great thing, then, to be remembered, when one is feeding for eggs is constant watchfulness of the flock, to so feed that the appetite is always keen, but yet the necessities of the bird fully satisfied; to be



most watchful as to the exercise the bird is forced to take for its grain ration, and to keep the litter deep. Right in this connection we may say, a deep litter does not necessarily mean one that is so broken up and packed together that the grain cannot readily sift through it. The litter straw should be constantly added to so as to offer a surface that the grain will readily sift through.

For the past years, in feeding the layers, The Corning Egg Farm Mash was prepared on Sundays and fed exactly as on any other day of the week. With the increase of the work on the Farm it has been a study to lighten Sunday labor as much as possible.

On investigating the litter around the Mash Boxes there will always be found a certain amount of Mash that has been scratched out of the troughs, and to a certain extent neglected. The experiment was therefore made of omitting the Mash on Sunday, and at once Biddy became extremely energetic in her efforts to extract from the litter every particle of Mash which she had wasted through the week. It is quite possible that by continuing the Mash ration on Sunday a trifle higher egg average might be maintained throughout the week. When the cost of feeding is figured in, however, it is found that there is a real saving in discontinuing the Mash for one day. The plan has now been in operation for over eight months, and there is no reason, so far as can be seen, why the

old method of preparing the Mash seven days in the week should be returned to. The economy lies in the fact that Bidy cleans up what might otherwise be a considerable waste, and in this way supplies herself with a fair mash ration for the one day.

Of course the green food and the grain ration are fed exactly as on any other day.

The original experiments in mustard feeding, referred to in this chapter, were conducted by Messrs. Ralph R. Allen, Editor of *Monthly Hints on Poultry*, and Mr. A. J. Odam, at Llangammarch Wells Poultry Farm, Great Britain.

CHAPTER XXII

Breeding Hens During Moults — Coming Breeders Must be Kept Exercising Through This Period

THE hens which are to be breeders and the producers of the hatching eggs for the coming Spring are selected as early in the Fall as possible. The quarters into which they are to be moved would have been most carefully cleansed, and then disinfected with Kerosene and Crude Carbolic. After this, fresh, clean litter would be put in, and for these yearling hens we make it a practice to place eight inches of straw on the floor, for they have well learned the lesson of digging in the litter and very rapidly knock the straw to pieces.

The tendency of a hen during the moult is to be inactive. In many cases she feels far from comfortable. The growing of her new dress is a process which drains her system of an immense amount of vitality, still she must be made to take a certain amount of exercise, and therefore the litter must be constantly looked after, and kept in a condition which will compel her to work persistently for her grain ration.

Do Not Overfeed

The Mash Boxes are most carefully watched, and the moment there is the slightest inclination not to clean the Mash up thoroughly, the quantity is cut down.

It would be somewhat easier if all the hens would moult simultaneously, but this they do not do, and so the needs of the different individuals during the moulting period have to be looked after.

With the Leghorn, the combs shrink, and almost go down to nothing in many cases. It is quite impossible, in looking over a large number of yearling hens at this time in their lives, to believe that the great, red comb will ever return, and it is a curious fact that, in the majority of cases, the yearling hen's comb is never as large as it was in her pullet year.

As the combs begin to redden and their size increase, the flock becomes more active, and it is necessary to add to the amount of Mash, and, if it had been found expedient to reduce the grain ration, this also must be brought back to the full eight quarts to one hundred hens.

From day to day the Mash consumption increases rapidly, and the nests begin to receive a good deal of attention, and very shortly the output from the breeding pens becomes a very decided item in the gathering of eggs.

By the second week in January, the pen having

been handled in the best possible way, the egg output has reached a point where it will be safe to mate the pen, and in two weeks after this the eggs should be running strongly fertile.

CHAPTER XXIII

Feeding the Breeding Cockerels

THESE birds are fed green food about eight o'clock in the morning. In good weather it is fed in their large range yard, where the attendant scatters it in small bunches over a wide area. At 11:30 is fed to every hundred birds, six quarts of corn, wheat and oats, two-thirds corn, the wheat and oats making up the other third. This is also distributed widely over the yard. In this way the cockerels are kept busy hunting for food, and they are less likely to get into broils with each other for entertainment.

At 1:30 o'clock they are allowed to return to their House, having been shut out during the morning hours. The Mash is fed daily at 1:30, and a sufficient amount is placed in their troughs for them to thoroughly clean up by roosting time.

Sufficient grain is fed in the litter in the House to make the quantity for the day's rations about eight quarts for one hundred birds.



BREEDING COCKERELS FALL OF 1911

CHAPTER XXIV

Preparing Surplus Cockerels for Market

THE growing cockerels, fed in the same way as the pullets up to six or eight weeks of age, will be, in the majority of cases, in prime condition to have the finishing touches applied to round them out into the best possible weight at the age for market.

We, of course, do not go into the various liquid foods which are fed with a pump, but simply the most inexpensive and rapid way of putting the birds in a condition to return the most money in the shortest possible time. Corn, in its different forms, is, perhaps, the most fattening food which can be fed, and for the cockerels intended for market, the grain ration consists of nothing but corn, and as much of it as they will clean up.

If it is possible to give the time to it, the mash, fed three times a day, will produce the finest quality flesh. A mash made from corn meal, ground oats, gluten meal, middlings and bran, in equal parts, with beef scrap, or green cut bone, equal to the total of the meals, and moistened so that the birds can choke it down in large quantities, will produce the result better, perhaps, than anything else.

Must Have Green Food

Green food, however, should be given the bird at the most convenient hour in between the other feedings. If to save time in feeding was an object, a very good schedule is to feed corn first thing in the morning, green food at about ten o'clock, and, between two and three, the exact quantity of mash as described. If mash alone is fed, it is best to feed each time only what the birds will clean up in from thirty to forty minutes, the troughs in which it is placed then being removed.



NO. 3 LAYING HOUSE FILLED WITH 1500 PULLETS TWO WEEKS FROM
THE RANGE

CHAPTER XXV

\$6.41 Per Hen Per Year

Corning Method and Strain Enabling Others to Better \$6.41

THE figures at the head of this chapter have become famous, and, perhaps, in the way of small things, represent as great a bone of contention as has been squabbled over for many a year. And yet there really was nothing so extraordinary in the profit. It represented a large amount of careful work and study, a keen business administration, a careful looking after of all the little details, the preserving of all by-products and selling them at a figure which was actually under their true value, as was proven in later years by better prices obtained.

For instance, the fertilizer made on the Farm has been so handled that its returns to the owners are much greater than when these figures were given to the public. The Corning Egg Farm was very much criticised in numerous statements made in the different papers throughout the country as to the authenticity of these figures, and, to put it in clear Anglo-Saxon, many writers indulged quite freely in the word so much used by one of the distinguished Presidents of the United States, and threw the lie indiscriminately

at everything and everybody connected with The Corning Egg Farm.

After a time the humor of the situation dawned upon those who were being so adversely criticized. The fact is, the critics were people who wanted to gauge everything in the World by their own little yard stick. They did not themselves know how to make \$6.41 per hen per year, and, therefore, they reasoned it out that the man did not exist who could. One fact entirely overlooked by these profound writers on poultry subjects was that two dollars of this profit was made by the sale of the hen at the end of ten months of laying.

In the last few years there have appeared in the advertising columns of numerous publications, claims by a man selling a book in which he asserts he made \$120.00 per hen, in twelve months, in a back-yard. Another individual blossomed forth with a statement of ten dollars and fifty odd cents profit per hen per year, but these statements did not excite widespread criticism. They were statements of men who were doing a back-yard business, with from ten to twenty hens, and were, therefore, simply looked upon as ridiculous and not entitled to serious consideration.

\$6.41 Not Extravagant Claim

But The Corning Egg Farm "\$6.41 per hen, per year" was not an extravagant claim, and the figures showing just exactly how it had been accomplished

were plainly set forth. It was not done with twenty hens in a back-yard, but on a large, commercial scale, and an extensive business was in active operation.

The methods were so entirely new, and the results so unprecedented, that poultry writers and lecturers hastily declared them fantastic, without the careful investigation to which they were entitled, and proceeded to wholesale condemnation of the figures, the methods, and everything else connected with the Farm.

However, later, the majority of our critics have visited The Corning Egg Farm, and have seen what we have, what we are doing, and satisfied themselves thoroughly that every statement made was well within the facts.

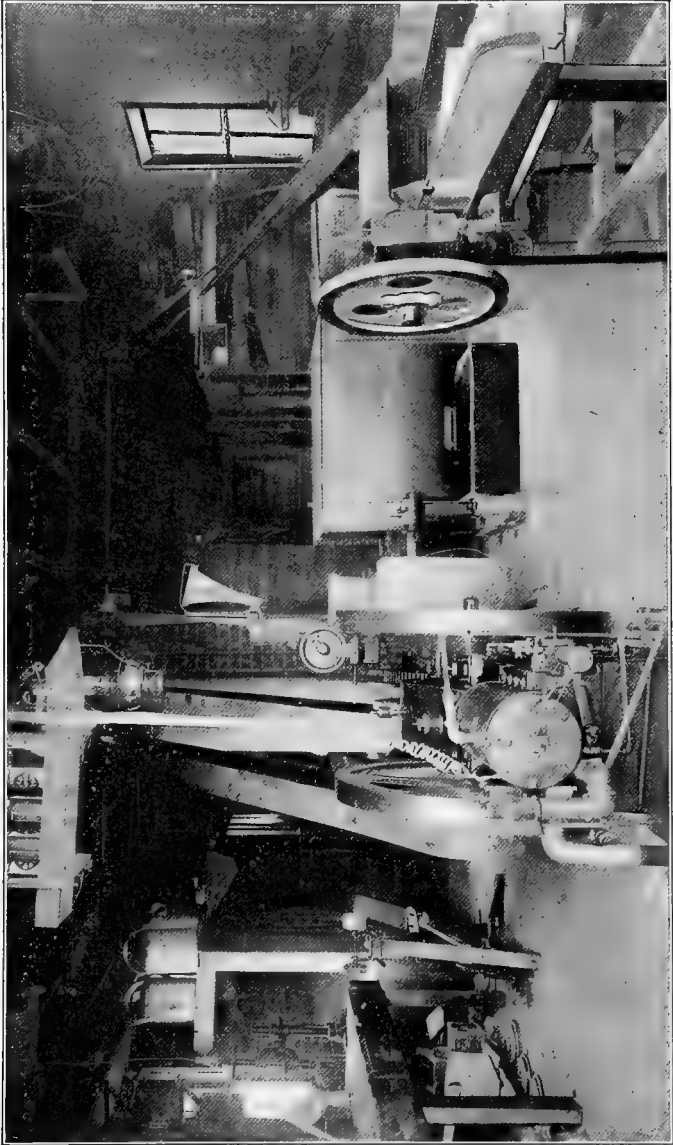
It will be noticed that the profit of \$6.41 was figured with the cockerels selling at the live weight price of broilers, and when no hatching eggs were sold.

Corning Farm Making More Than \$6.41

At The Corning Egg Farm, to-day, the hen is making considerably more than \$6.41 per year. A large number of cockerels, which formerly brought merely the live weight broiler price, are now being reared and disposed of for breeders. Hatching eggs are sold in large quantities, but, it must be remembered, before one can reach this point, his Strain of birds must be brought to a high point of perfection, he must establish his reputation, and his customers must find his claims are substantiated. As an illustration, purchas-

ers of hatching eggs from The Corning Egg Farm, in the season of 1910, came back with orders for the season of 1911 increased by the multiple of ten, and these same customers are already booking large orders in September and October, 1911, for the hatching season of 1912.

This chapter is written to emphasize our statement that anyone possessed of the ordinary qualifications to succeed with poultry, can, by following The Corning Egg Farm Method, surely build up a large and profitable business.



THE WORK SHOP ON THE CORNING EGG FARM

CHAPTER XXVI

The Buildings on the Corning Egg Farm

THE Buildings on the The Corning Egg Farm, at the close of the year 1911, were as follows:

- No. 1 — Brooder House, with Incubator and Sprouted Oats Cellars underneath.
- No. 2 — Work Shop, Grain Bins, Egg Packing Room, Refrigerator Room, and Quarters for the Resident Foreman, all under one roof.
- No. 3 — Breeding House.
- No. 4 — Laying House No. 1.
- No. 5 — Laying House No. 2.
- No. 6 — Laying House No. 3.
- No. 7 — Line Breeding House.
- No. 8 — Breeding Cockerel House.
- No. 9 — Horse Stable.
- No. 10 — Wagon Shed.
- No. 11 — 41 Colony Houses Scattered over the Range.
- No. 12 — Office Building.

To give an idea of the magnitude of The Corning Egg Farm, there are under roof 18,455 square feet of floor space.

No. 1. Brooder House, Incubator and Sprouted Oats Cellars

This building is 264 feet in length, and consists really of two buildings. When this structure was first erected it was sixteen feet wide and fifty feet in length. The Incubator Cellar is entirely of concrete construction, with a Brooder House one story in height above it. The floor joists were all beam filled, making the building rat proof. The second year it became necessary to enlarge the Brooder House, and an extension was built, sixty-eight feet in length, and set up on cedar posts, with concrete filled in on top of the sills between the floor joists, making this part of the building also rat-proof.

After using this Brooder House and Incubator Cellar for three seasons a still further enlargement became an absolute necessity. Sixteen feet has been, and still is, the standard width of Laying Houses on The Corning Egg Farm. It has been found, however, with the Brooder House, an additional width is desirable in order to give the chicks more roomy runs when confined by bad weather to the House alone. Mainly for this reason, the 1911 addition to the Brooder House has been made twenty-two feet in width. This new building is 146 feet in length. It is joined on to the old building in such a way that the alley-way merely widens at the point of connection, thus making one continuous House.

The interior arrangement of a four foot alley-way, the entire length of the building, along the north wall, greatly facilitates the feeding, watering, and general care of the chicks, without disturbing them by passing through the pens.

The raised hover floor starts at the south side of this alley-way, and is raised about a foot so as to allow the passing underneath of the hot water trunk line, with its perfect insulation. Attached to this hover floor, by hinges, is an inclined runway, which is raised or lowered by a cord running through pulley wheels and fastened by cleats to the north wall.

The division wires between the pens are of inch mesh, four feet high, brought down to a ten inch board which is securely fastened to the floor.

The ventilation is acquired by the use of V-shaped window drops, placed just under the plate, full detailed drawing of which is given in the back of this Book. The bottom of the windows, on the south front of the building, are three feet above the floors, and these windows are forty-four inches in length and thirty-six inches in width. They are hung at the top, and are opened and closed by the same sort of device used in churches for the "Cathedral" window. The holes in the fastening irons are about two inches apart, allowing the window to be firmly held open to any degree desired.

There is a slide board at the back of the hover, which is easily raised, materially assisting in the quick

and perfect cleansing of the hover floor. Hanging above this, and using the slide board as a sill, is a gate which extends to the height of the wire division, and swings out, giving the attendant ready access to the hover, drinking cups, etc.

The whole Brooder House is heated by hot water coils, extending along the entire length of the north wall of the building. These are of two inch pipe, and in the sixteen feet part of the building there are six, while in the twenty-two foot extension there are eight pipes.

As stated, the Brooder House is built over the Incubator and Sprouted Oats Cellars. The Sprouted Oats Cellar is entirely of concrete, and the floor slopes to one point, where drains carry off the water, allowing the frames to slowly drain themselves, and preventing the oats from rotting from an over supply of moisture.

Access is given to the Incubator Cellar by a vestibule in which are located broad stairways, enabling one to go from the Cellar to the Brooder House without going outdoors.

The heater room occupies the first 30 feet of this Cellar, and is divided from the incubator room proper by an eight inch concrete wall. In this heater room is the large hot water boiler which heats the Brooder House, above. There are also two automatic heaters, controlling the trunk line pipes for the heating of the air passing up under the hovers in the Brooder House. The incubator heaters also stand in this room,

the pipes passing through the division wall, connecting with the incubators on the other side.

The floor is smooth surface concrete, there being a gentle slope in the heater room all to one corner, where a drain carries off the water used in flushing the floor. This same arrangement exists also in the Incubator Cellar proper, allowing the hose to be used in flooding the floor twice a day to give the proper amount of moisture for incubation.

The concrete blocks used in the construction of this Cellar are what is known as rock faced, and the face is on the inside, pointed up in black. The floor joists overhead are dressed lumber, and are painted in the following manner: the priming coat is almost pure oil with just enough lead to give it a whitish tinge; the next coat is dead white, flat finish, and the third is white enamel of the best stock obtainable. The incubators are finished in the same way, allowing the whole Cellar to be literally scrubbed with a brush.

This Cellar has no duplicate, anywhere.

Building No. 2, Work Shop, etc.

The Work Shop proper is twenty by thirty feet, on a concrete foundation, with a cement floor. The height from the floor to the rafters is ten feet in the clear. In this room stands a ten horse power Gasoline Engine, and a large Mixer, the second Mixer designed by The Corning Egg Farm, which produces a mix in less time, and with less power, than any

other machine to-day on the market. With the necessary meals and green cut bone, in seven minutes the juices from the bone are so uniformly distributed throughout the entire mass that it is almost impossible to believe that no water has been added. The weight of a mix will average about five hundred pounds. In experiments with beef scrap in The Corning Egg Farm Mash, in ten minutes' time the meals are completely coated with oils which come from good beef scrap when properly mixed. This Mixer is now being made by Wilson Bros., Easton, Pa., in different sizes, from hand to horse power, to meet the needs of large and small plants. *

The Bone Cutter is also made by Wilson Bros., and, in our opinion, is the best Bone Cutter on the market, and we have tried all the different designs. Wilson Bros. manufacture these cutters in all sizes, from hand power up to the large one which they first built for The Corning Egg Farm, and we have graduated in size, during the past years from a hand power to the Large Cutter now in use.

There is also a large Clover Cutter, which will cut in various lengths from a quarter of an inch to an inch and a half. The necessary pulleys and hangers for this machine are placed in the rafters above.

Built into the rear and sides of this room are the various grain bins, compactly arranged to reduce the labor of handling to a minimum.

In the Work Shop is also a bench, with vices, etc.,

and cupboards, built into the walls, where complete kits of tools for carpentry, plumbing, hot water fitting, etc., are kept, in order that the mechanical work, so far as repairs and keeping up the efficiency of the plant go, is done without calling in outside labor.

Back of the Shop, and connecting with it, is the Egg Packing Room, with its necessary arrangement of shelves, tables, etc., for the work carried on there.

To the rear of the Egg Packing Room, but having no connection with it whatever, is the room in which the large Freezer stands, for the preservation of green bone. The concrete floor in this room is sloped to a drain so that it may be thoroughly cleansed every day after the bone is taken out or put into the Freezer. The Freezer itself has a capacity of 2500 lbs. of bone, but the room, under ordinary conditions of weather, maintains such a temperature that there is no difficulty in carrying bone in barrels, standing around the room, which increases our storing capacity to more than double the quantity.

On the second floor of the Work Shop is a complete and modern apartment in which the working foreman lives.

Building No. 9, Horse Stable

This is constructed on the general plan of all the buildings on the Farm, with capacity for four horses, and with necessary room for hay, etc., in the loft above.

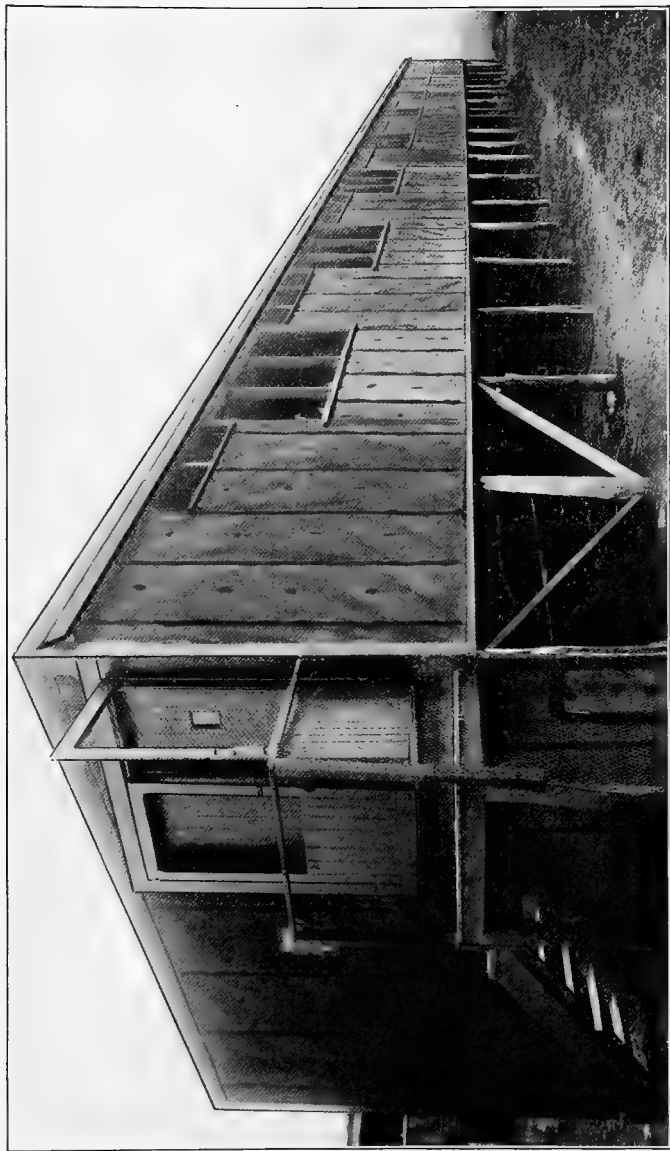
A large shed is built at the rear of the stable, in which bins are constructed for the carrying of grit and shell, and also for the storage of packing crates for eggs.

Building No. 10, Wagon Shed

This is conveniently placed to the stable, and is twenty by forty feet, with four sets of double doors, allowing the placing of vehicles without interfering with those already inside.

Building No. 12, Office Building

Conveniently arranged in three rooms covering a floor space of nine hundred and twenty-five square feet, hot water heated, and with electric lights.



THE CELEBRATED CORNING LARGE FLOCK LAYING HOUSE NO. 3 CARRY-
ING 1500 PULLETS

CHAPTER XXVII

Construction of Laying, Breeding, and Breeding Cockerel Houses

THE Breeding and Laying Houses, on The Corning Egg Farm, are all built in the manner described in the remainder of this chapter, and are each 160 feet long. The Breeding Cockerel House is 60 feet in length. These Houses are all fifteen feet, nine inches, in width, the drawing in of them being three inches for the purpose of making the roof rafters, which are sixteen feet in length, readily reach out to the end of the plates, on the slant which they carry. The height of the buildings from the ground, over all, is twelve feet, two inches at the back and fourteen feet, two inches in front.

The interior of these buildings is divided into 20 foot sections, by partitions extending out from the north wall of the buildings, seven feet, and forming the roosting closets. These partitions run from the floor clear to the ceiling, breaking the draughts, which but for them, would make the long Laying Houses utterly impracticable.

The north wall of the Laying House is five feet high in the clear, the south wall being seven feet. This

makes a sufficient height for walking through the building without stooping, and, as the bottom of the windows is carried up three feet from the floor, the window itself going up to the plate under the roof, the Sun reaches every part of the House of practically sixteen feet wide.

Nearly Six Feet from Ground

The buildings are all set on posts, three feet in the ground and five feet above. The floor joists are ten inches in width and two inches thick, and, instead of the usual sill, two by ten planks are spiked at both ends of these floor joists resting on the posts which support the building. This construction is much simpler than the ordinary sills, and is also less expensive.

The posts are eight feet apart and well braced. They are cross tied at the corners, and about every fifty feet throughout the building; they are also braced at the ends.

The floor joists are placed three feet apart, and the uprights are made of two by four joists, placed three feet apart. At the corners of the House the upright supports are doubled, making the corner posts equivalent to four by four.

The construction of these buildings without any projections over the top of the roof has two advantages. First, there is a saving in the quantity of lumber used and in labor expended; second, all the joints of the roof and walls are made tighter, and the lapping of



LAYING HOUSE PREPARED TO RECEIVE 1500 PULLETS FROM RANGE

the roofing over the edges of the building and cementing it make all joints absolutely air and water tight.

Double Floors

The floors are all built double. The under floor may be of any kind of rough boards, and carefully covered over with one ply roofing of any good quality, the laps, as elsewhere in the building, being carefully cemented and nailed down with large, flat headed, galvanized nails made for the purpose. The upper floor should be of a cheap quality of tongued and grooved boards, well driven up and securely nailed. Preferably this upper flooring is laid crosswise of the building.

The outside of these buildings is covered with any cheap, rough boards obtainable. These should be securely nailed over the studding of the building, and then covered with a good grade of two ply roofing paper. On the sides and ends of the building the roofing should be put on upright, but on the roof it is better to lay it lengthwise of the building and lapped, on the plan of laying shingles, the joints all being securely cemented and nailed down, and then the joints and nails painted over with cement, to make sure against any possible leaks.

The inside walls of the building are lined with one ply roofing, with the joints carefully nailed and cemented, and then both walls and ceiling are covered with matched flooring. This gives four inches of dead air space to all the walls of the building, making

them cooler in Summer and warmer in Winter than any other known construction. Owing to the roof rafters being ten inches in width, the dead air space under the roof is of course ten inches.

The three outsides of the building, north, east and west, are covered with roofing down to the ground, there being, of course, no inner lining below the floor under the House. To the south the House is entirely open from the floor to the ground. Each House, raised five feet from the ground and open to the south, gets the sunlight underneath clear to the back of the building, which eliminates all dampness, and, being so open prevents rats and other vermin making any attempt to get into the House.

The window openings are nine feet long by three and a half feet in width. As the studding is three feet apart this permits the making of the openings without cutting the studding, and so weakening any of the supports under the roof. These openings are spaced off so that their total length comes as near as may be to one-half the length of the south front of the House.

Canvas Windows

Ventilators, one foot in width and occupying the space between the window openings, have recently been constructed in these Houses, which permit the closing of all canvas windows tight at night, when the weather



ONE OF THE BREEDING HOUSES IN 1911

is very cold, letting the air come in through these ventilators, at the top, without bringing any draughts down upon the birds. Detailed plans of these ventilators will be found at the end of this Book.

The frames of the curtained windows are made of one by four inch boards, with two center supports dividing the window frame into three foot sections. These frames are covered with medium weight cotton duck, from which the dust must be brushed at regular intervals to permit the air to circulate through them freely.

Outside of the Office, Brooder House, Work Shop, Stable and the Resident Quarters, no glass is used in any of the buildings, with the exception of one small pane in the door of each Laying House, through which a view of the interior may be had.

A hood, extending out eight inches, is built over the windows and ventilators, the whole length of the buildings. This prevents the rain from southerly storms beating into the Houses.

The windows are hung on hinges, and open inward from the top, and are fastened to the ceiling with wooden buttons.

The front of all of the window openings, on the outside, is covered with one inch mesh wire netting, to prevent the birds from flying out, and also to prevent sparrows and other birds from flying in to consume the grain provided for the fowls.

Double Doors

There are double doors at both ends of each House, swinging inward, the opening being six feet in width. These doors are made of two thicknesses of matched boards, one side being vertical, and the other diagonal, with a lining of roofing paper between. These are kept closed only in cold and stormy weather.

A board, twelve inches wide, is fastened to the floor a little over three feet back from the door opening. This board runs across the width of the House for six feet, and at that point a board of the same width, three feet long, is fastened to it and carried down to the end wall of the House. This makes a clear space in which the doors can be swung open without being blocked by the litter, which the hens would otherwise be sure to bank up against the doors. A vestibule of wire netting, on sectional frames, is fastened to the ceiling and baseboard, with wire hooks and eyes. See details shown in drawing, at the back of the Book.

The second pair of doors, which open outward, are covered with inch mesh wire down to within three feet of the floor, and are used during the Summer months and in mild weather in Winter.

A small glass window, about eight by ten, is placed in one of the solid doors at a convenient height. This enables one to observe the conditions in the Laying Houses without being obliged to open the door.

At the west end of all the Laying Houses there is

a flight of stairs with a platform at the top, five feet square and with a hand rail around it, giving easy access to the House through the end from which the least number of violent storms comes. The east ends of the Laying Houses do not have steps and platforms.

The dropping boards are placed three feet above the floor in all the Houses, except in the Cockerel House, where they are thirty inches from the floor, as we found the growing cockerels needed additional space overhead to prevent injury to their combs. This leaves abundance of room in the Laying Houses for the birds to work in the litter, and is also of sufficient height to allow a man to get under the dropping boards to search for the eggs which the hens often deposit in the litter.

This height also gives the Sun an opportunity to reach every nook and corner of the House at some time during the day.

Draught-Proof Roosting Closets

The partitions dividing the twenty foot sections of the roosting closets, as previously explained, are seven feet in width, extending out one foot beyond the dropping boards, which are six feet wide, and thus giving absolute protection to the hen sitting on the roost, from any draughts which may be blowing through the House.

Two sets of roosts are placed in each roosting closet, each consisting of five perches, of two by two

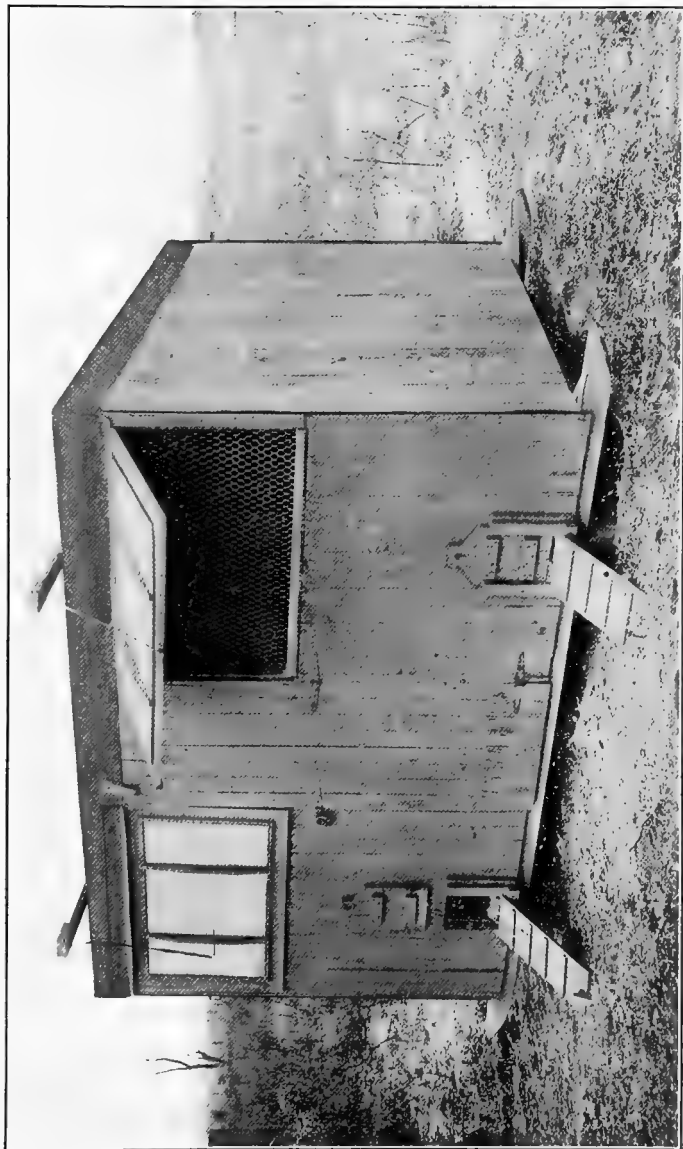
spruce, nine feet, ten inches long, rounded at the top and nailed to a cross piece of the same material. The first perch stands nine inches from the back wall; the others are thirteen inches from center to center. Birds larger than the Leghorns require more space between perches than here specified. The two sets of roosts are placed side by side, and are fastened at the back with a bolt, as shown in the plans. When the dropping boards are being cleaned, the roosts are raised up and fastened to hooks suspended in the ceiling. They are supported in front by a piece of joist one foot high securely nailed to the cross pieces of the roosts.

There are openings under the dropping boards in all the Houses for the egress and ingress of the fowls, with a runway leading to the ground underneath. These openings are securely boxed and are covered at top and bottom to prevent any draughts. The detail of these openings is shown in the plans at the back of the Book.

The nests are all made of boxes bought from grocers and other dealers in the neighborhood, and are much cheaper and better than any nests laid out and built by mechanics. They are put up in three tiers, and fill up the spaces between the windows, as shown in the detailed drawing.

The boxes are cut down to twelve by fourteen inches, which makes the best sized nest.

In the floor of each Laying House there are three hatchways dividing the length of the building into



THE CORNING COLONY HOUSE

four equal parts. These hatchways are for convenience in removing the litter, and greatly facilitate the operation and reduce the necessary amount of labor, because a wagon can be backed directly underneath. If the wagon should be too high, shovel out a runway for the wheels.

These hatchways are made of two thicknesses of boards with roofing between and are rabbited and securely fastened.

The nesting material used is fine excelsior. This is better than straw or shavings as it does not offer a convenient home for lice, and, if the nests be thoroughly disinfected with Crude Carbolic and Kerosene, there is no danger of having any.

CHAPTER XXVIII

The Colony Houses — There are Forty-one on the Farm

THESE Houses have a floor space 6x10 feet, are six feet high in front and five feet in the rear, with a shed roof. The frame work is built on three skids. The outside skids are made of 3x4 timbers, rounded at the ends to facilitate the ready sliding of the Houses when it becomes desirable to move them, and 12 feet in length, making a projection of a foot at either end beyond the sides of the House. Two by four studding is used for the center skid. The three skids are securely fastened together by four pieces of 2x4 studding. To this frame is nailed the floor, of inch, matched boards. The upright studs are made of 2x3's. In the first Colony Houses we built, 2x4's were used, but it was found there was an economy in using 2x3's, and, as they answer every purpose, the frame being absolutely stiff, they were substituted for the 2x4's, and they have been used ever since.

The frame work is covered by a cheap grade of matched flooring, the boards running perpendicularly. The roof is covered with cheap, twelve inch, rough boards, and over this is laid two ply roofing, this be-

ing carried over the front, back and sides three inches, well cemented and securely nailed down, then all the joints are again cemented, covering the nails thoroughly.

Cotton Duck Windows

The door, for the use of the attendant, is in the front of the House, being two feet wide and the full height of the inside of the building. On either side of the door, hanging by hinges from the plates, are two windows 45x27 inches. These are covered with a medium weight cotton duck, and open outward. A device which carries a long hook readily allows them to be fastened so as to practically form an awning, which materially assists in maintaining a cool condition inside the House during the Summer. Two doors for the use of the birds are placed on each side of the main door, and are fitted with slides. On the inside of the window openings one inch wire mesh is securely nailed, preventing the birds from flying out, and also keeping night prowlers from going in. Over the outside of the window frames also inch wire mesh is nailed. The main reason for this wiring of the outside is to prevent the birds, as they develop and fly up on top of the Colony House, from breaking through the canvas.

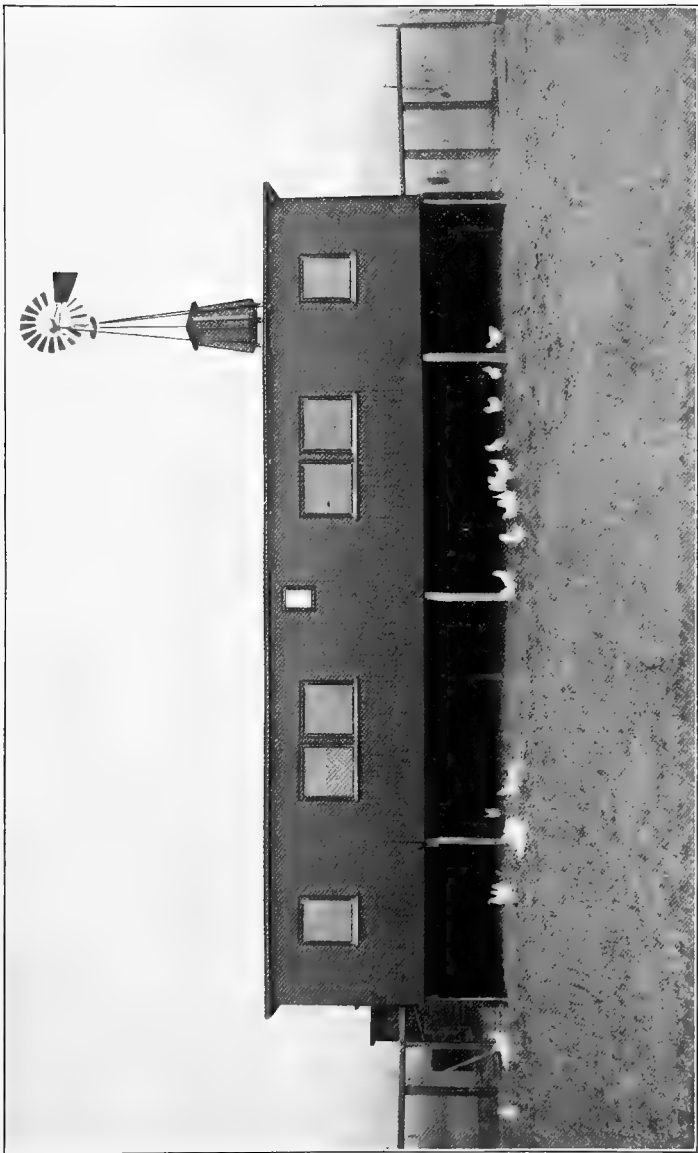
From the detailed drawings which will be found at the end of the Book, and the photograph of the Colony House, a very clear idea is given of its construction.

CHAPTER XXIX

Materials Required for Laying House

Bill of material for the construction of 60 feet, being three sections of the Corning Laying House.

- 14 Posts, 8' long, 4" top diameter.
- Cross Braces at ends, and Corner Braces — 5 pieces, 2" x 6" x 16'.
- Floor Joists and Roof Rafters, 42 pieces — 2" x 10" x 16'.
- Under Floor, 1000' cheap, wide boards.
- Upper Floor, 1200' #4 flooring.
- Inside Ceiling, 2500' #4 flooring.
- Outside Covering and Roof, cheap wide boards, 2400'.
- Uprights, 38 pieces, 2" x 4" x 12'.
- Plates, 10 pieces, 2" x 4" x 12'.
- Dropping Boards, 450' #4 flooring.
- Dropping Boards supports, 3 pieces, 2" x 4" x 20', and 3 pieces, 2" x 4" x 12'.
- Lath, 500 lineal feet 1" x 2".
- Partitions, 100' #4 flooring.
- Hoods, 60 lineal feet, pine, 1" x 8".
- Sills, 3 pieces pine, 1" x 10" x 10'.
- Window Frames, pine, 1" x 4"; 2 pieces, 10' and 1 piece 12' long.
- One roll of roofing contains 108 square feet.
- For Lining between floors..... 10 rolls
- Lining between walls, sides and ends..... 9 rolls
-
- All of one ply..... 19 rolls
- All outside covering, two ply..... 25 rolls
- Ventilators to be the length between the windows, with width of opening 12 inches. See detailed drawing at end of Book.



BREEDING HOUSE IN 1907--THE ORIGINAL CORNING HOUSE

Bill of Material for the Construction of Colony House

Skids, 2 pieces, 3" x 4" x 12', and 1 piece, 2" x 4" x 10'.

Braces, 2 pieces, 2" x 4" x 10'.

Uprights, 5 pieces, 2" x 3" x 12'.

Nailing Pieces, 2 pieces, 2" x 3" x 10'.

Rafters, 2 pieces, 2" x 3" x 14'.

Plates, 2 pieces, 2" x 3" x 10'.

Roof, 60' of 12 inch cheap boards, 10 feet long.

Floors and Walls, 300 feet #4 flooring.

Window Frames, 2 pieces pine, 1" x 4" x 8'.

75' of 2 ply roofing.

It is impossible to give prices of lumber, as there is a great variation according to locality. The above list will enable anyone to work out the full bill of lumber required, and the builder or lumber dealer will be able to give the prices in a very few moments.

The cost of labor on the Laying Houses is from \$1.50 to \$1.75 per running foot. This would include every item of labor in the construction of these Houses down to the smallest detail.

CHAPTER XXX

The Original Thirty Hens

THE egg production of the Original Thirty Hens on The Corning Egg Farm is an interesting story, but, of course, it must be remembered that this record is of one hundred and fifty-three days, the banner days of the year for eggs from yearling hens.

The Biddies arrived in different lots, the last days of February, our record beginning with March first, and ending with July 31st. During that period they laid 2466 eggs, and at the end of the third month we lost two of them. The cause of death we were unable to tell, for, at that time our experience was not of sufficient duration to have made even a close guess.

The average for the birds, it will be noted, was eighty-five eggs per hen. Had we been better posted as to feeding methods, doubtless the hens would have been capable of producing eggs in numbers considerably greater than the figures show.

The record, however, for real yearling hens (and these were real yearling hens, because when they started to lay with us they were fully eighteen months



PULLETS IN LAYING HOUSE NO. 2, FALL OF 1911

of age), was very far from a poor one, and the novice who succeeds in caring for his breeding stock in such a way that he does not fall short of this average, may consider that he has done very well.

CHAPTER XXXI

Egg Records

February 1st, 1908 to June 30th, 1911.

Dates	Average Number of Hens	Production of Eggs	Average Price per doz.
Feb. 1, 1908 to Jan. 31, 1909.	2,040	338,976	.5066
Feb. 1, 1909 to June 30, 1910.	2,811	709,836	.47125
July 1, 1910 to June 30, 1911.	4,723	612,000	.4618

AVERAGE FOR FIRST TEN MONTHS OF PULLET LAYING IN FLOCKS OF
FIFTEEN HUNDRED.

1909.....	143.25
1910.....	145.11
1911.....	146.23

On examination of this Egg Record it will be noticed that in the average number of eggs laid by the pullets, in flocks of fifteen hundred, there have been three gains, and in analyzing these averages it must be remembered that these are results obtained, not by the handling of a few pullets most carefully selected to produce a record, but of thousands, and the advance of three eggs in the average is therefore a remarkable gain.

How Corning Farm Is Able To Get Great Egg Records

The salient reasons which make possible such egg records as The Corning Egg Farm is able to show are:

1st,— Careful selection of breeders by the Corning Method, which is the only proper Method and has already been described.

2nd,— Pullets raised on free range, feeding to them a strengthening and upbuilding ration, which constantly supplies new tissues, and is, therefore, a nutritious and not a forcing food.

3rd,— Housing them in The Corning Laying House, which to-day stands unequaled, where they are practically outdoors yet protected from extremes of heat and cold, for if hens are to lay to their capacity they must be kept always in a perfectly comfortable condition.

4th,— The succulent, green food, which is so necessary to their welfare if they are to lay strongly, and which must be given to them in large quantities.

Hens on the ordinary free range, in the general run of seasons, after July 1st., cannot find succulent green food in sufficient quantities to enable them to keep up even a fair average of eggs. Receipts of eggs at all large market centers, begin to fall off at about this date, and prices correspondingly increase.

Highest Percentage of Fertility

Every observer, viewing the stock of The Corning Egg Farm, is at once convinced that the scientific Method here employed produces better birds than any other. The steady increase, from year to year, in the hatchability of the eggs towards full fertility; the strong, livable chicks, their rapid growth to maturity; and the voluntary testimony given by our customers whose ever increasing orders come back to us, year after year, all conclusively establish the fact that hens bred and raised by The Corning Method are unequaled anywhere.

For the last two years hatching eggs have been shipped from the Atlantic to the Pacific, and from the Northern part of Canada to the Gulf of Mexico, and even across the Atlantic to far away Scotland. From this widely extended territory comes the unsolicited testimony that The Corning Strain of Single Comb White Leghorns is unequaled.

At the present time the amount of labor carried on The Corning Egg Farm is one working foreman and three laborers. The latter are \$1.50 a day men, and, with this force all the work of the farm is accomplished. The Houses are thoroughly cleaned, as to the dropping boards, drinking fountain stands, tops of nests, and the inside of nests where required, every day in the week and three hundred and sixty-five days in the year.

When the Colony Houses are in use they are cleaned and rebedded every two or three weeks, as required, during the first part of the Spring. After the first part of the season is over, say from July 1st., they are not cleaned as often for the reason that there is very little dampness, and so long as the Houses remain dry, the cleaning is not required.

The cost of feed in the last two years has gone up materially, and it now requires an outlay of about eighteen cents to raise a Leghorn cockerel to broiler size. The cost of raising a pullet to the laying point is forty-two and a half cents, which includes cost of incubation. The pullet, through her first ten months of laying, costs \$1.15.

It is somewhat difficult to give a fixed figure as to the cost of caring for the coming breeder through the time of moult, during the months when she is producing eggs for hatching, and up to the time when she is shipped, in August, eleven months in all. Different seasons and different flocks of birds vary in the amount of food necessary during these months. Our records show, however, that the output of eggs through the moulting season from the birds which we are carrying for hatching eggs has always been enough to show a profit over the feeding cost. It would be safe to figure that the outlay will be between one dollar and forty and one dollar and fifty cents. These amounts, as given, represent the cost of feeding and the cost of labor.

CHAPTER XXXII

Prevention and Treatment of Diseases

DISEASES in poultry generally come from neglecting sanitary conditions. A damp house, filthy drinking fountains, musty and sour foods, or a general condition of filth, bring diseases, whether the birds are kept in large or small flocks.

An ailing bird should at once be removed and isolated, and, unless it shows immediate signs of recovery, the best remedy, and the safest, is the hatchet. The constant and systematic spraying of the roosting closets, the drinking trough platforms, underneath the dropping boards, and in the corners between the sections, with Kerosene Oil and Crude Carbolic (and it must be remembered that the solution used for spraying is one-half gallon of Crude Carbolic to five gallons of Kerosene Oil, when the birds are in the House), will eliminate all danger of contagion, provided the Houses, in all other respects, are kept in a proper and cleanly condition.

When the pullets are first put into the House, in the Fall of the year, it is wise to watch with great care that individuals in the flock do not develop the

“snuffles,” which mean increasing trouble of a more serious nature if allowed to go without attention.

The washing of the drinking cups of the fountains with Kerosene Oil, and Potassium Permanganate in the water once a week, will, in most cases, keep the flock immune from trouble. Spraying is one of the best cures for colds, as it not only restores the affected bird to health, but clears up the danger of infection which, otherwise, might result in spreading disease among the whole flock.

We have never had a “run” of any disease at The Corning Egg Farm. Gapes and White Diarrhœa — the most dreaded of all young chick diseases — are unknown on the Farm. This is attributed to the strong vitality and vigorous condition maintained by fresh air housing, cleanliness, sanitary regulation, and by giving sweet, wholesome food and plenty of pure, fresh water.

CHAPTER XXXIII

A Word in Closing

OUR business is running The Corning Egg Farm and not writing books, so that in telling our Story we may have lacked some of the polish of the experienced author, but every word that we have written is true, and we shall be very glad to welcome any of our readers at the Farm, and let them see for themselves just what we have.

The Corning Egg Farm actually does enjoy the supreme position among the egg farms of the World that we claim for it, and that the great authorities, after thorough, personal examination, have frankly admitted.

And we have been far more open in telling you everything that has been done on the Farm than, for instance, owners of large manufacturing plants would be.

Methods and problems in the successful and profitable production of eggs for table and hatching purposes have been worked out on The Corning Egg Farm, and we are quite willing others should have the benefit of our very expensively acquired experience.

Nothing to Hide

We have nothing to hide; nothing to keep to ourselves. We started in a very modest way, and believe that is the preferable way to successfully build up a paying poultry farm. Those who have an abundance of capital might be tempted to work out too many self-evolved theories and to begin on too elaborate and extravagant a basis, whereas, in our opinion, it is wiser to follow precedent, known successes, and start in a smaller way and expand.

Illustrations are Photographs

The illustrations in this Book are all from photographs, and the camera cannot be persuaded to exaggerate or to show buildings where there are none. The diagrams are drawn of sufficient size, and such measurements given, that our plant in its entirety, or any part of it, can be readily reproduced by anyone who cares to do so.

The Corning Success

The success we have made on the Farm gives us a certain feeling of satisfaction that we are entitled to enjoy, and yet we have accomplished nothing that cannot be done by any person who will give as much thought, time and attention to the work as we have.

Our Advice to Beginners

Our advice to the beginner is that he carefully study the Corning Method as set forth in this Book (and we want to impress upon you again the fact that the Corning Method is just as adaptable to the town lot as to the large tract, and in this particular it surpasses other systems which have had considerable publicity), and then start, either with a breeding pen, or with an incubator and hatching eggs purchased from a Breeder whose eggs can be depended upon, and in this connec-

Single Comb White Leghorns Only

tion we want to say that for the production of eggs there is only one breed of fowls — Single Comb White Leghorns — and that, in considering the purchase of a breeding pen, or eggs for hatching, experience will show that it is the height of folly to begrudge the additional price you must pay in order to get the right kind of Stock. Whether you buy Corning Strain or not, let us again emphasize the fact that no matter how famous the Breeder, or how high his prices, if he has not a Strain that has proved itself a good Strain, you do not want it at any price. It is

It's "Strain" You Want

Strain that counts, because it includes every good quality for the purpose, and the market for the right

Strain for breeding and hatching is a very large and profitable one. The Corning Egg Farm cannot produce enough birds and eggs to fill its orders, and probably never will, because we do not believe in increasing the size of the Farm beyond our ability to be personally in constant touch with every detail connected with it.

Utility, Not Show Birds

We want to write just a word or two as to the difference between a Strain for the production of eggs and of Show Birds. It must be remembered that a great laying Strain cannot be, at the same time, a Show Bird, at least not under the present requirements of the Association, because a great egg layer must have size, and must be bred to produce size, and not inbred to secure fancy Show points, which produce a bird without constitution, and eggs from birds of the show class are small, the fertility runs low, and, in many instances, their hatchability is so poor as to be hardly worth speaking of.

Corning Largest Specialty Farm in World

The Corning Strain Single Comb White Leghorn is an egg machine, a large bird, of vigorous constitution, and typical Leghorn shape. The Corning Egg Farm is the largest poultry farm in the World devoted entirely and exclusively to one single purpose

— the developing and breeding of the great egg machine, Corning Strain Single Comb White Leghorn.

Points That Mean Success

Just to repeat in regular order the points a Breeder must observe if he is to make a permanent success :

Suitable location for houses and runs.

Properly planned, arranged and constructed houses.

Right breeding stock.

Hatching eggs from a farm that has "made good."

Care in incubating and brooding.

Proper handling of the pullets and cockerels.

Careful selection of breeders.

Regularity in feeding and attending.

Properly balanced ration.

Clean, sanitary quarters, fresh water, and pure air, all the time.

Constant adherence to one Strain, and that the best Strain.

Be jealous of your reputation, because it is on your reputation that you build up a demand for breeding stock and eggs for hatching.

Care, and courtesy, and regularity in serving customers.

You will know after reading this Book that on the Farm we have little idle time on our hands, and yet we are always willing to advise and help those who are really seriously seeking information, and who are willing to accept what we may be able to give them, in

addition to the contents of this Book, and in our regular way of furnishing it.

THE AUTHORS.

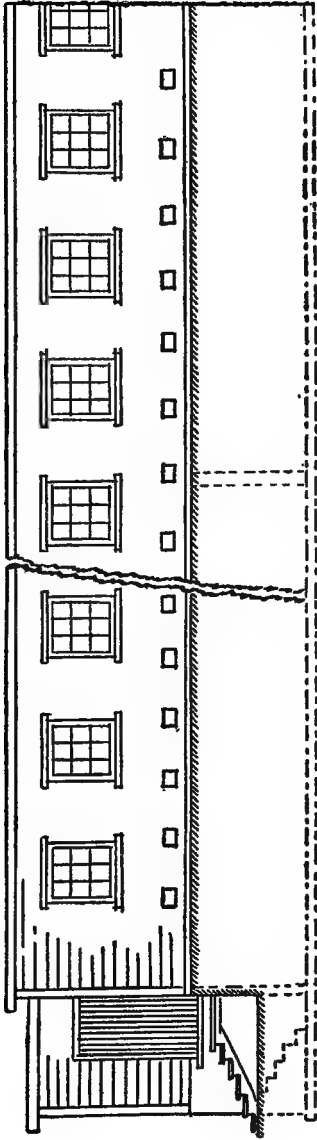
BUILDINGS ON THE CORNING EGG FARM AND MANY HANDY DEVICES

These plans and drawings are of sufficient size to show quite clearly the construction of every building on the Farm. Those who care to do so are entirely welcome to duplicate the entire Plant, or any part of it.

As the dimensions are also given, it is a simple matter to reduce the size of the buildings to suit a flock of any number, because, as we have made clear in the Book, the Corning Method and Buildings are equally suitable for the largest flock, or the few hens and a rooster kept by the average family.

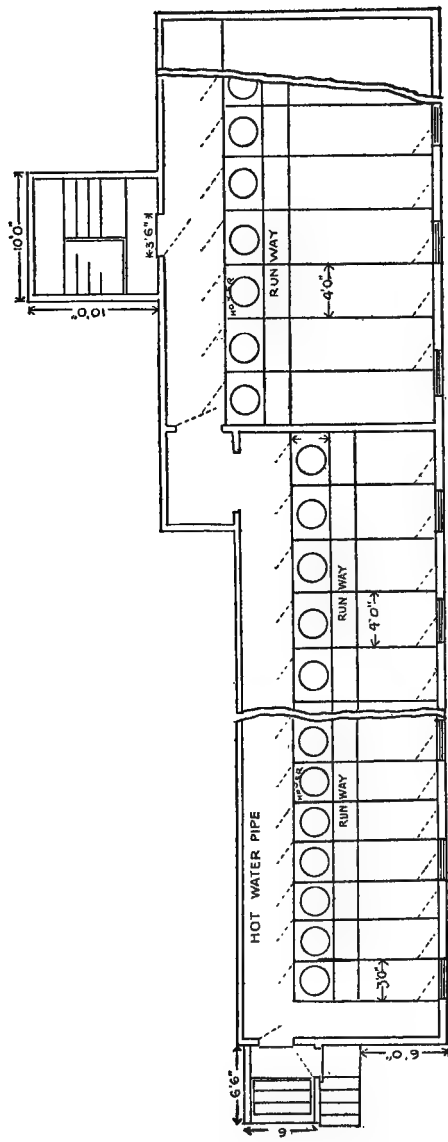
We do not want to be thought egotistical, but believe we have the most complete and economically arranged lay-out in the country, but if any reader thinks he can point out improvements we shall be very glad to hear of them, and to discuss those that are worth while in some future edition of the Book.

Of course it is easier to build from an architect's plans, and we can furnish working size blue-prints of the principal buildings.



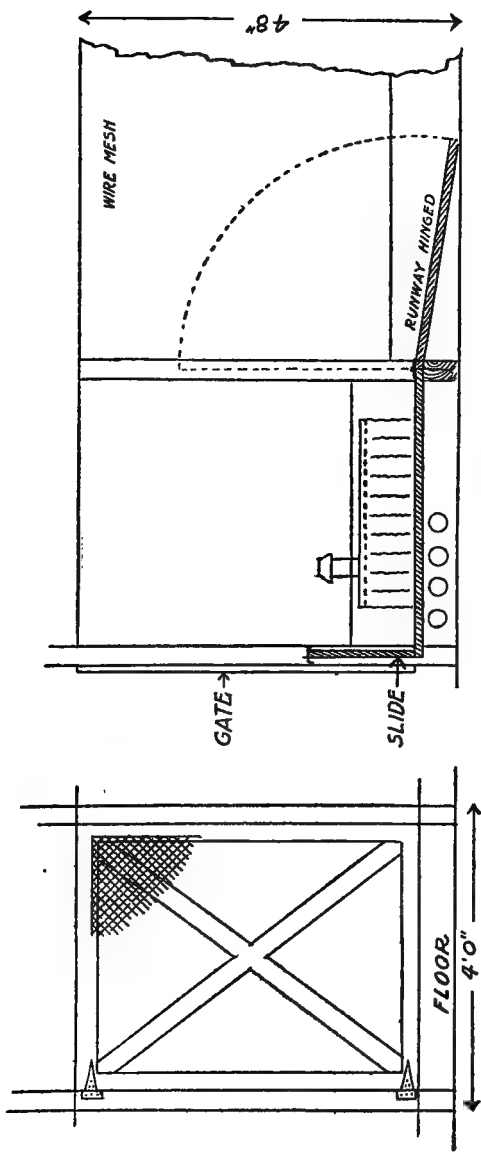
EXTERIOR OF THE CORNING BROODER HOUSE

Total length, 264 feet. The older part, 118 feet long, is 16 feet in breadth; the new addition of 146 feet is 22 feet wide.



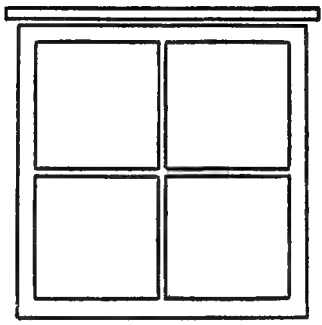
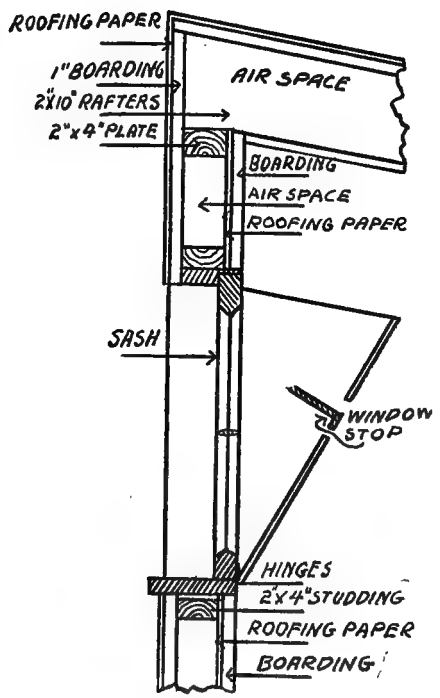
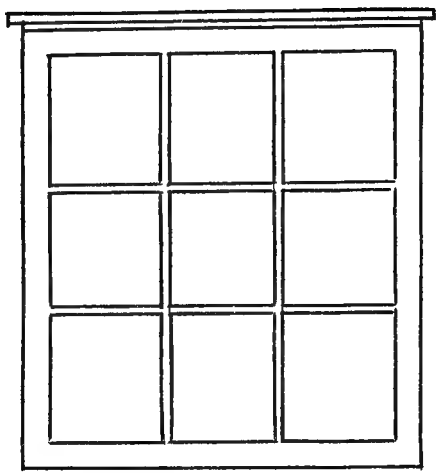
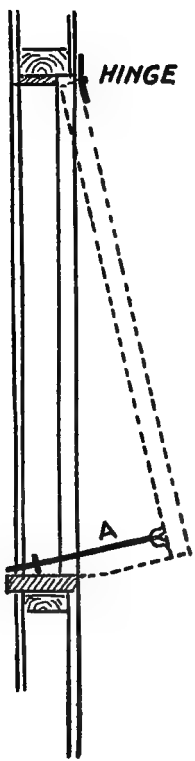
FLOOR PLAN OF BROODER HOUSE

Equipped with Hovers, giving capacity for 12,000 Chicks at one time.



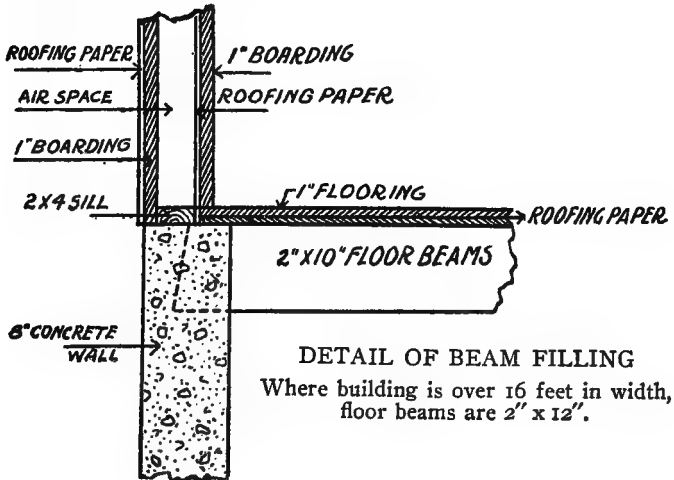
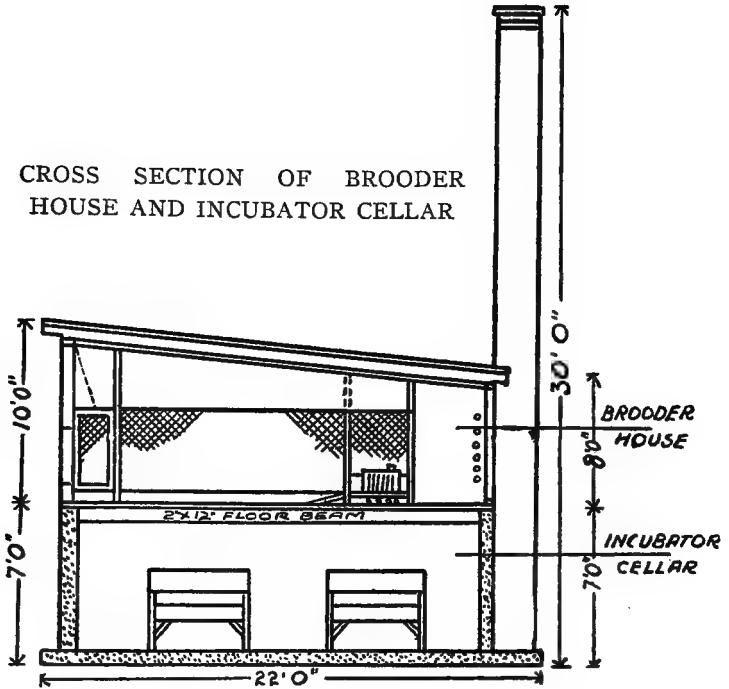
CROSS SECTION OF HOVER FLOOR

Showing hot water pipes underneath, and hinged runway, with drawing of entrance gate from alley to Hover pen.

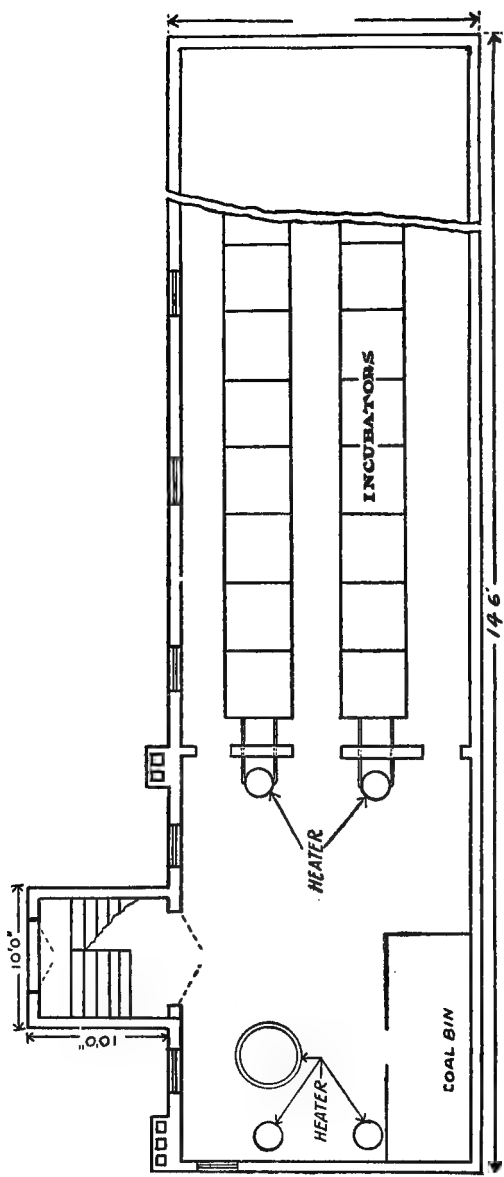


BROODER HOUSE WINDOWS AND VENTILATORS
 Showing details of construction.

CROSS SECTION OF BROODER HOUSE AND INCUBATOR CELLAR

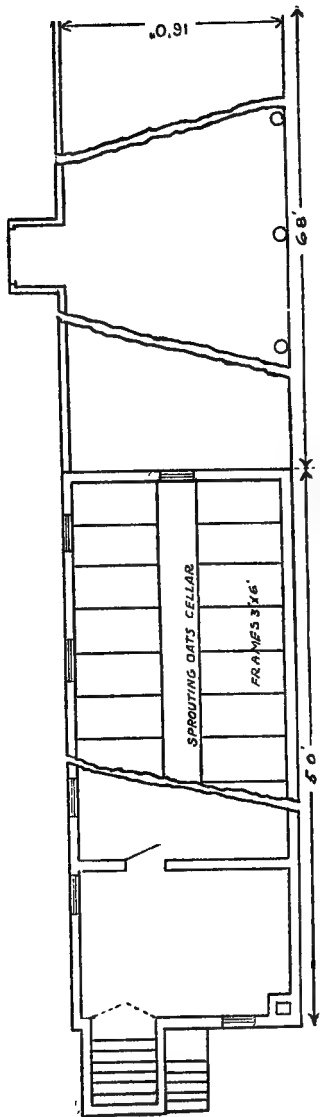


DETAIL OF BEAM FILLING
Where building is over 16 feet in width,
floor beams are 2" x 12".



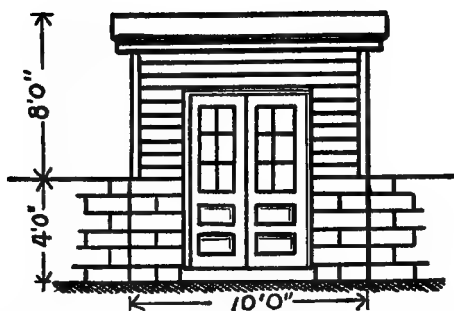
FLOOR PLAN OF INCUBATOR CELLAR

146 feet by 22 feet, with a capacity for 15,600 eggs at a setting, and space to double the number.

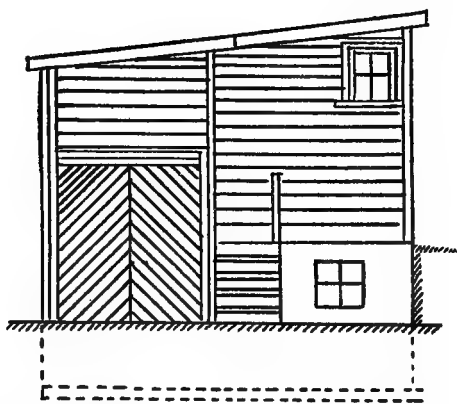


SPROUTED OATS CELLAR

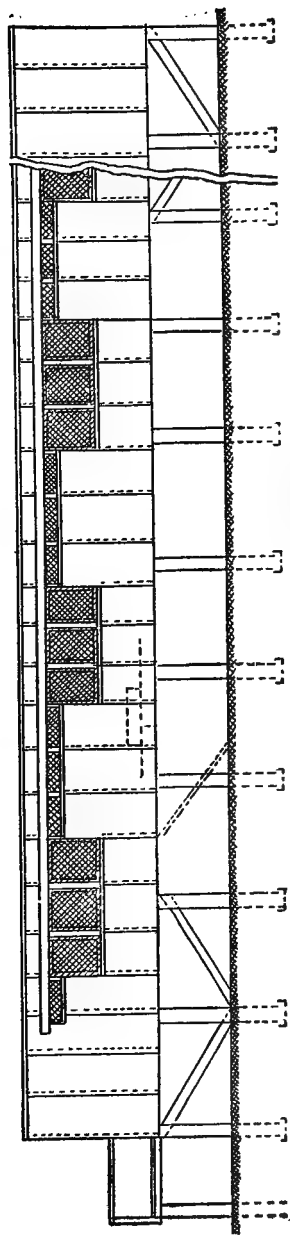
With capacity for sprouting 100 bushels of oats at a time.



VESTIBULED ENTRANCE TO INCUBATOR CELLAR
 Also giving access by inside stairway to Brooder House.

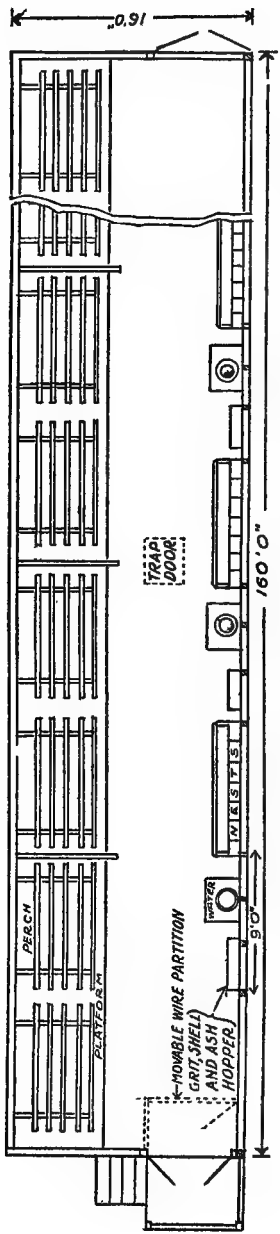


WEST END OF BROODER HOUSE
 Opening into Sprouted Oats Cellar, and by stairway up to
 Brooder House.



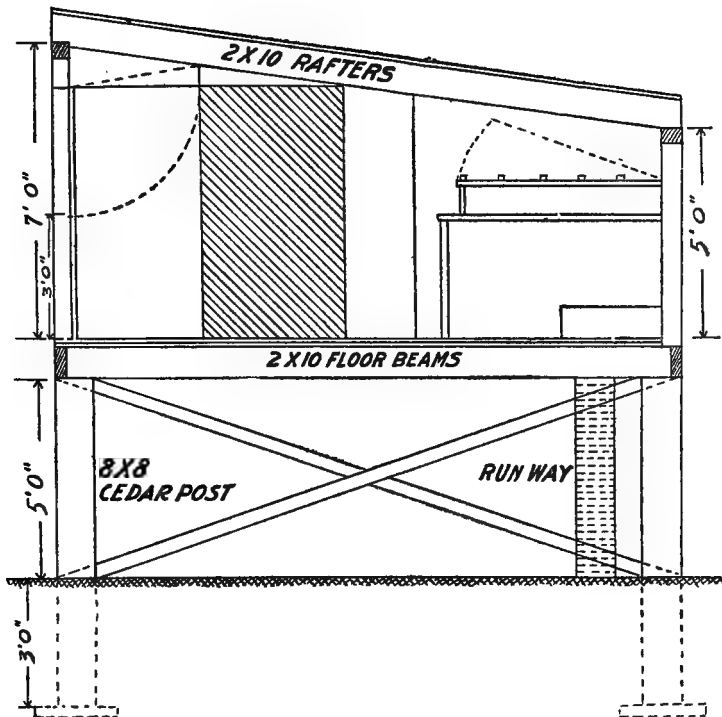
THE CORNING LAYING HOUSE

Which is built in 20 foot sections, and can be extended to any desired length. Those on The Corning Egg Farm are 160 feet by 16 feet.



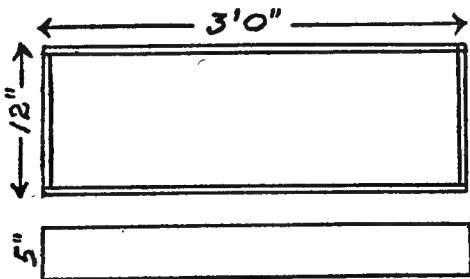
INTERIOR ARRANGEMENT OF LAYING HOUSE

Showing the draught-proof roosting closets, and arrangement of nests, drinking fountains, etc.

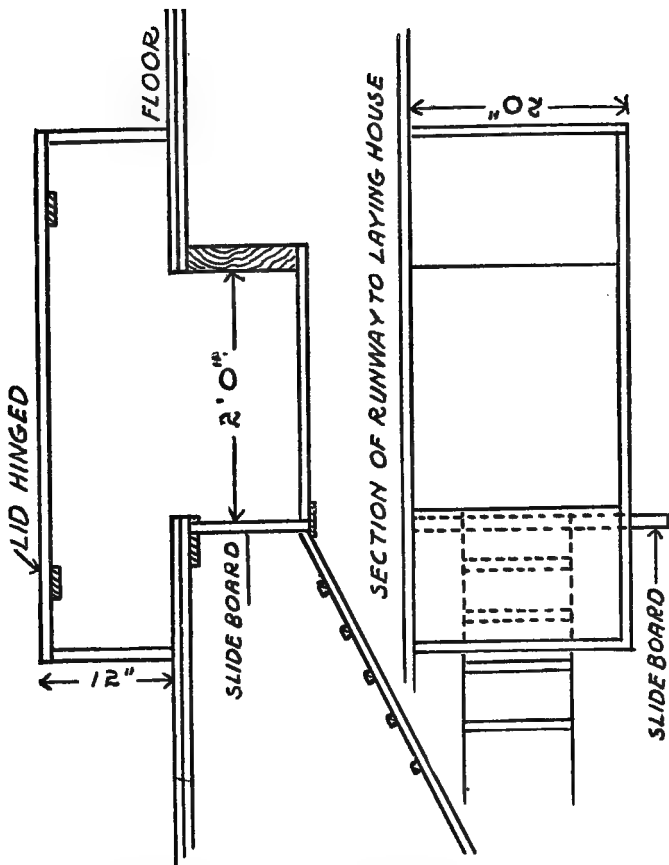


CROSS SECTION OF LAYING HOUSE

Showing method of raising perches while cleaning dropping board.

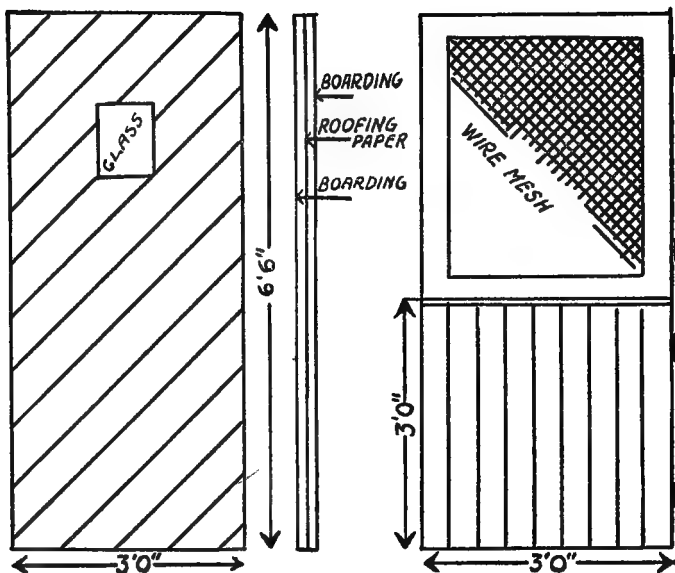


DETAILS OF MASH BOX



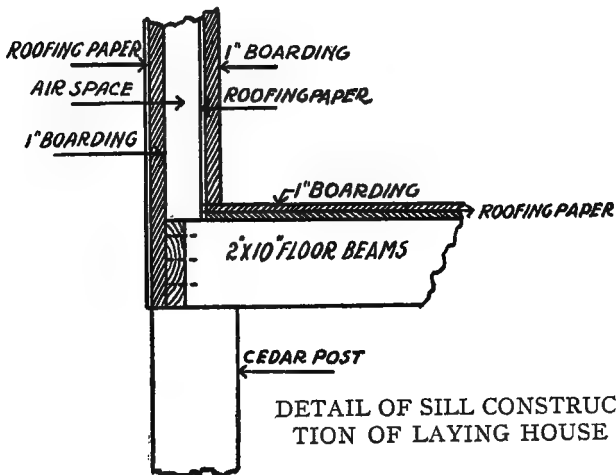
CONSTRUCTION OF LAYING HOUSE RUNWAY

Opening being placed at back of dropping boards. See Cross Section of House on opposite page.

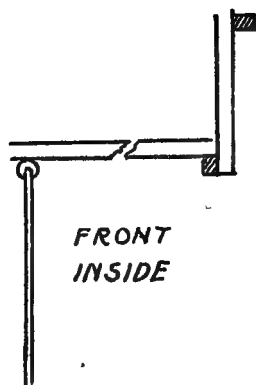
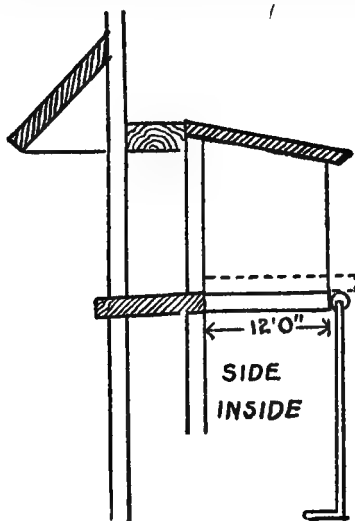
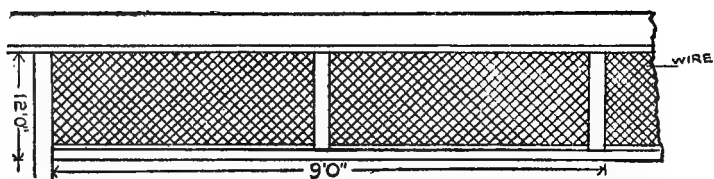


DOORS OF LAYING HOUSE

Showing outside half wire door and solid interior door with observation window.

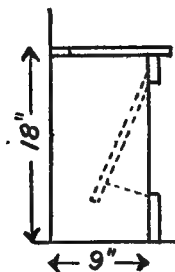
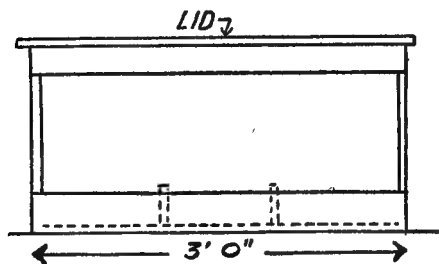


DETAIL OF SILL CONSTRUCTION OF LAYING HOUSE

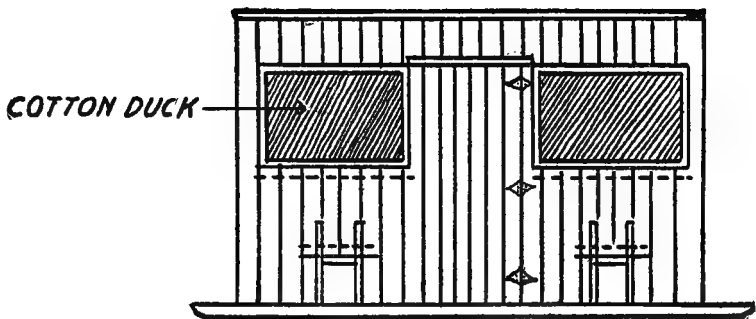


CORNING VENTILATOR

Showing full details of construction. Used in Laying House.

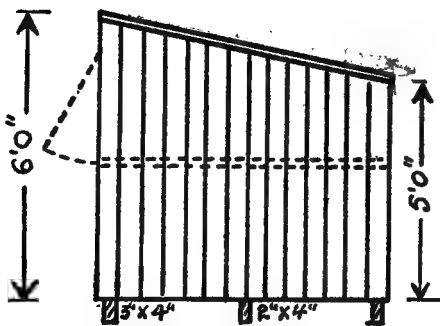


GRIT, SHELL AND ASH HOPPER

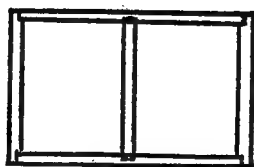


CORNING COLONY HOUSE

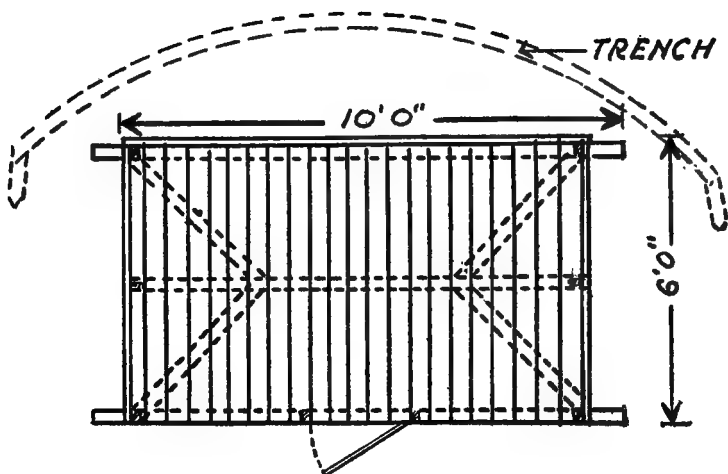
The Cotton Duck Windows when hooked up forming awnings.



SIDE ELEVATION

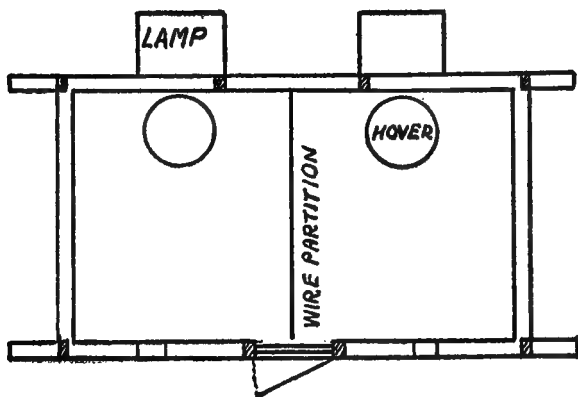


DETAIL OF WINDOW FRAME

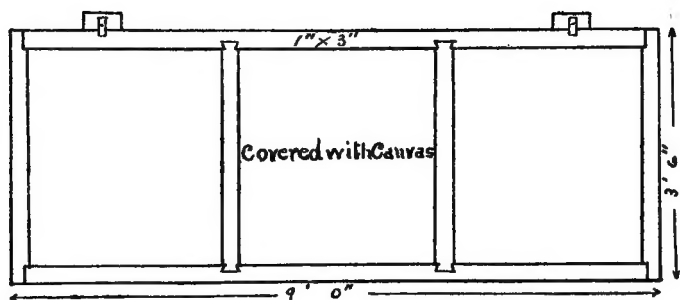


FLOOR OF COLONY HOUSE

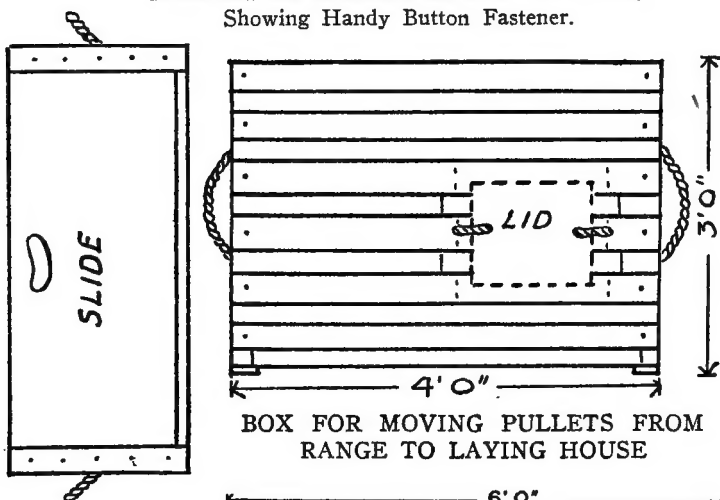
Showing skids, and brace construction. Also Storm Trench.



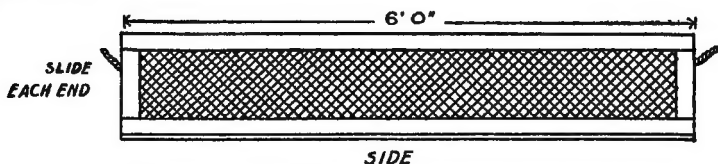
PLAN FOR UTILIZING COLONY HOUSE AS A BROODER



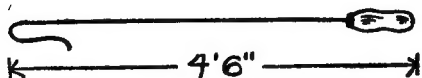
DETAILS OF LAYING HOUSE WINDOW,
Showing Handy Button Fastener.



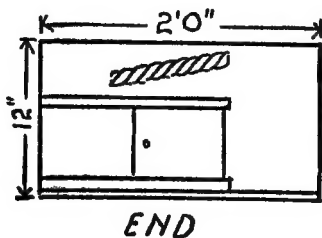
BOX FOR MOVING PULLETS FROM
RANGE TO LAYING HOUSE



BOX FOR CARRYING
YOUNGSTERS FROM
BROODER HOUSE TO
COLONY HOUSE.



CATCHING HOOK



PRESS OF
THE VAIL-BALLOU CO.
BINGHAMTON, N. Y.

