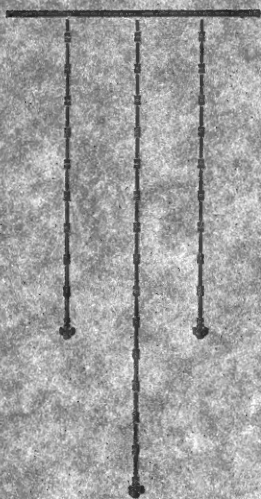


F 489
R6 D3
Copy 1

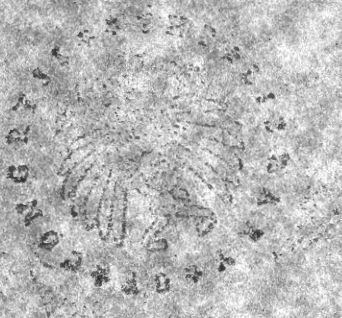
SUCCESS

with



PEDIGREED

REDS





SUCCESS WITH PEDIGREED REDS

BY
MRS. H. A. DANIELS
GRAFTON, MASS.



Mrs. H. A. Daniels

ILLUSTRATED BY
J. A. QUINN
N. GRAFTON, MASS.



SF 489
T 489

Copyrighted, 1922
POULTRY BREEDERS PUBLISHING CO.
Waverly, Iowa

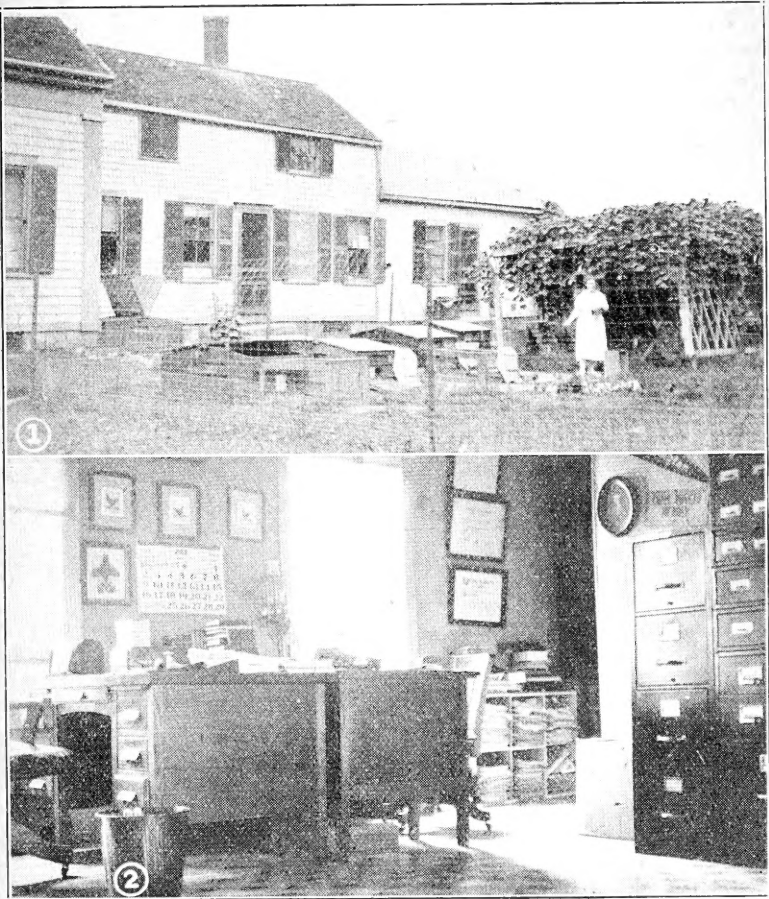


JAN 15 1923
451

© 1A096224

Introduction

In placing this book before the poultry world I make no pretense of its being a treatise on "How to Succeed"



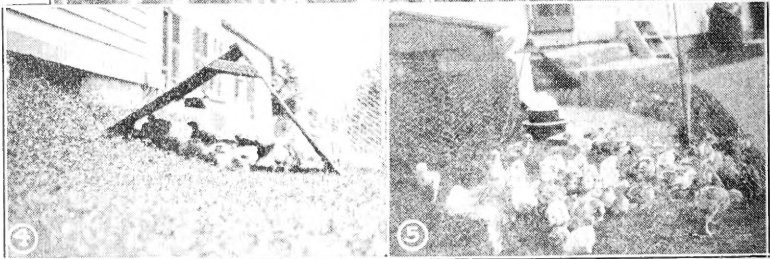
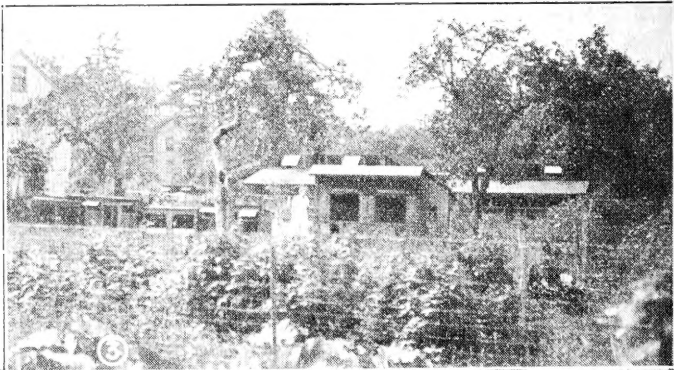
1.—Home of Daniels' Pedigreed Reds, showing Hodgson Baby Chick house battery of brooders. Mrs. Daniels at right.

2.—View of Daniels' office, not showing all of file nor mimeograph.

nor as a text book on the breeding of Rhode Island Reds. It is simply a story, imperfectly told, of the work we have

done, or better—the work we have commenced to do in the combining of high production with Standard qualities in Rhode Island Reds.


Many things in the following pages may be somewhat contradictory to the experiences of others, but this only proves that there is no ONE road to success, especially when dealing with old Mother Nature. Every day we find changes necessary and learn new things about the work. This will account in many instances for the incompleteness of the material. We are still learning. Fully believing that there are many people interested in quality before quantity to whom this book will offer some suggestions of value and assistance, I present the same for your criticisms.



3.—Showing laying-breeding houses. Note the heavy growth all about the buildings.

4.—Artificial shade for baby chicks.

5.—Protected corner for Hodgson baby chick house. Note Ideal drinking fountain for milk and iron pins to hold fence.



A Short Biographical Sketch

I do not intend to say any more about our personal affairs than is necessary to supply a few connecting links to make our work clearer than it would be in its various stages without. Many books are made more humanly interesting by the addition of some of the actual life of the writers and, in the work which we are doing, our home life has been closely interwoven. Real people with their troubles and their problems are so much more interesting than imaginary persons in the third person.

Experience, to help others, must have a living vital interest, with plenty of local color and every-day background. This I am using wherever it will make our experiences more interesting to the average reader. I have tried in every possible way to keep away from everything technical and complicated and to tell our work in a way to convince anyone that it is entirely within the power of any conscientious person with application and willingness to persevere and WORK.

Both Mr. Daniels and I have loved chickens all our lives. I consider this very essential in being successful with them. The real love of any work is a pretty safe capital.

As a young lad Mr. Daniels made a back yard flock his chief interest and spent most of his spare time caring for them after school hours. When he was about fourteen he made his first trip away from home, going from Grafton to Natick, Mass., to the home of Henry Felch, brother of I. K. Felch the originator of the Felch Strain of Light Brahmas. At this time the Light Brahma was at the pinnacle of its glory and Mr. Daniels went to get hatching eggs. He often tells how Henry Felch left his cutting block in the shoe shop, after reading the letter of introduction presented by young Daniels, and took him to his home, spending the rest of the day in the pens and incubator room with him. Before he left for home Mr. Felch took him to the poultry houses and directly from the nests picked the eggs to fill his order, marking them and in-

structing him how to mate the resulting chicks. I often think this example which made such an impression on his mind at that time has been very instrumental in the help given many a young lad or beginner later in life with REDS.

During the succeeding years several popular breeds were kept, and, boy-like he took up the moment's favorite. As school days ended and work along mechanical lines was taken up, the time for poultry work grew less and finally ceased. However, the fever was firmly implanted in his system and broke out anew at the first opportunity.

Twelve years after the arrival in Grafton of young Daniels another chicken crank came into this world—a thin, almost puny youngster, about whose health there had always been a doubt. A wise mother, realizing the value of out-door life, practically turned her out with the chickens and she grew much more rugged. The home of this youngster was a farm half a mile from the nearest neighbor and, as there were no brothers or sisters, she took up the next most interesting things for chums, the chickens. Dolls were too inanimate. The mother noted the interest in the chickens and decided that along with the benefit of the out-of-door life could be combined some lessons in responsibility and kindness and gradually the care of the poultry was placed in the child's hands, always under supervision but not the kind that made the work an ordeal, but rather a great privilege.

Many things were learned about poultry that never would have come through the ordinary channels. Their individuality was noticed and studied and early in life this little girl realized that birds have individual identities.

One instance never forgotten either by herself or her playmates, such as came to see her, was a Barred Rock cockerel which she trained to hitch to a tiny wagon. When this was going on the dolls were resurrected and used as passengers. A little harness was made of odds and ends and a doll carriage smashed to get the running gear, which was nailed to a wooden salt box, two sticks making shafts into which the cockerel would back and stand to be hitch-

ed. The year that this cockerel had the center of the stage the girl, then about nine years old, was the scorn of all the other little girls, but the envy of the boys. Later the bird became ugly, as is the case with many unusually tame and docile animals as they grow older.

All this took place in Northboro, less than ten miles from Grafton, and when this girl was about twelve years old the farm was left and a change to the city of Worcester made. No chickens were possible for several years and school and work soon took up about all the time. Occasional visits to the country to relatives and friends kept her a little in touch with country life.

However, very little was learned in any way about chicks during this time and in 1905 an entire stop was put to all work in the girl's life for eleven years, as in that year the mother became a helpless paralytic and all else had to be laid aside for these last years of loving ministrations.

Change after change took place until in 1912 the family came to Grafton to live and the life romance of the two chicken cranks was commenced.

Daniels had been hammering out horseshoes for about thirteen years for the Grafton horses. In 1913 they met and were friendly for quite a long time before each discovered that the other was interested in poultry in any degree.

The father of the girl (getting along to be a pretty old girl) resumed his interest in Barred Rocks as soon as he was settled in the country and considerable of the work of caring for them fell to the girl, as he was away during the day. Little by little chickens became a topic of conversation between Daniels and this girl.

Her interest became more intense from day to day, paving the way to the future work. With the renewed interest in poultry work, which was now carried on with a view to helping out the household funds, came a degree of success on a small scale. The comradeship between the three, Daniels and the girl and her dad, became cemented as this was made more or less of a study. This interest in birds grew until almost no other topic of conversation was

dwelt upon. It ended suddenly and tragically by the failure one morning of the father to respond to the call of the helpless mother and the finding by the girl that he had gone to the Great Beyond. After this loss the mother failed rapidly and joined him five months after. This loss brought the girl and Mr. Daniels permanently together and poultry work was made a part of their very life from that time on.

At first it was only intended to make the poultry kept pay in a measure some of the household expenses, but, like many other things which commence in a small way and grow so rapidly, this soon became an all absorbing and very good paying business.

The start was made the year of the foot and mouth disease with the first birds, which were Barred Rocks. Mr. Daniels had talked "hens" so much during the preceding year that he felt he must own some, so he sent to a New York dealer in portable poultry houses and got the first section of a 16x20 house—this section being ten feet wide and sixteen feet deep. After the house was ordered a search for pullets was made and only one lot could be found. They were, as before stated, Barred Rocks. After they were bought it was necessary to send to the State House for a permit to move them because of the foot and mouth disease. The house was not ready and the man from whom they were bought needed the room so a stable in a barn was obtained and finally they were moved to this temporary place awaiting the house. In due time this came and was set and the pullets moved and settled down to business. I could write some very funny experiences we had during the first year in getting under way. How, in setting the house, we rushed roofing paper on the building when we found boards were not sufficient, and all manner of amateurish stunts, but I feel many writers have covered this ground for the amusement of many readers and I would rather go into the real work as it came along in the succeeding months. All beginners in any work do foolish things, so why enumerate on them?

The twenty-five Barred Rocks did splendidly in production. Every one began telling us, "Hens always lay well

the first year in a new house; better than they ever will again". We could not see just why this should be, but it does so prove in many cases and our subsequent experience has proven to us that it is because the first year is usually the only year that the house is really clean.

The next year we added another section the same size as the first to the house and decided to try a pen of Reds along with the Rocks. We bought a hundred month-old chicks from the Sycamore Farm in this town and a hundred Barred Rocks from the same source that supplied the first lot of Rocks the year previous. These were brooded in the two E. C. Young combination houses the same as shown in cuts of range houses. The old style circular hover with kerosene lamp was used to furnish heat. All did well with only normal losses and troubles and the pullets laid extremely well but it just seemed that the Reds did a little better and were more consistent producers.

The next year our enthusiasm increased and we added another 20x16 house, in two pens. This season we did not have pullets enough so we bought here and there as we could get healthy birds as we felt we must have each pen filled to capacity. We had no idea of quality at that time as quantity and the use of housing to its very limit was the first consideration.

I well remember among other amusing things that happened during our search for well developed pullets, how we obtained a few from one party in a nearby town. After we got them home and had looked them over—noting many good points among them—we wrote the raiser, asking him what strain they were from and he replied that he did not know, but the only strain he ever knew of in connection with them was the strain on his pocket-book for their feed. I believe I could write a book filled with the amusing things that have happened as we have always had the happy faculty of seeing the joke even when it was on us as often happens with the poultry man during his novitiate.

During this same year we commenced breeding a little. Some of the Sycamore Farm pullets looked pretty good to us and, as we had been reading the Rhode Island Red Journal we had become interested in better looking Reds.

Like all other novices we felt we had to have "new blood" and commenced looking through advertisements to make the selection of a plant from which to purchase a male. Owen Farms advertisements were very attractive and the plant being located in the same state we made our final decision on that, which proved to be a good one.

We made our initial purchase in the shape of a cockerel. Not a high-priced bird as we now estimate and realize the value of good birds; but this male turned out to be a very fine breeding proposition. Just as a clue to our total lack of knowledge of really high-class Reds, let me say that in our first correspondence with Owen Farms we did not know that a good female was supposed to have black ticking in hackle.

In October, 1916, this cockerel came. He was looked over by many in our neighborhood and we felt he was a good buy. His good depth of color was a revelation to us. Watching this bird and his style became an absorbing interest to us and as we studied him, we finally decided to get some females from the same source to mate to him. The last week in October the four hens decided upon arrived and on November 2, 1916, laid the first egg, which was laid by No. 1, the REAL hen of the four and whose blood today flows through about every bird in our matings.

Meanwhile we had added to our equipment an 8x12 E. C. Young shed-roof house which we had used for brooding. At this time we added on another similar section making a house 8x24 feet. In this house, which was divided into four pens, and these birds were placed in one pen with every second day in one of the others. A careful record of the production of this pen was kept, commencing November 2, 1916, and ending November 2, 1917, and at the end of this time it was found that these four hens had produced 768 eggs or an average of 192 eggs each in their second laying year. Two of these hens appeared to us to be better as layers and as individuals than the other two and we wished to isolate some of their chicks. At that time I had never seen a trapnest and such a thing was only a name to me. My household duties were light and I had

spent much time with the few birds we had and decided I would watch these two hens and as they laid pick from under them their eggs. This I did, spending many hours in the pen with them for that purpose. These eggs were marked and set and from that time began the steady improvement in our work. Cuts No. 20, No. 33 and No. 35



The birds in this illustration from left to right are: "Danny", "Jimmy", No. 9 and No. 7.

show four of the birds that were hatched from this hand-picked and pedigreed lot of chicks, No. 9 and Jimmie, No. 17 and Danny and throughout the following pages will be many references to them. When it is considered that all the pictures in this book were taken during an interval of a few weeks of each other one can judge the lessons in breeding which we have had constantly before us. Many times as an improvement is made in anything a person is liable to forget the process of evolution which brought it about and this I think is especially true in poultry work. At the time the pictures of the four birds above referred to were taken their combined age was twenty years.

Out of the original four hens one was lost and we immediately sent to Owen Farms for a replacement hen and the present No. 2 was shipped up. She proved a great old hen; although never a beauty, we learned to judge her by her performance. In cuts No. 18 and No. 19 will be seen this same "old lady" and her son hatched in her sixth year. She has been the dam of a great many fine layers and some very good male birds. The other hen of the original purchase was an indifferent proposition and we have none of her blood on the place today. This was a very

high percentage of good birds from so small a number to select from and we found the progeny of these birds better than the birds themselves, showing that there was a strong trait of prepotency in this combination.

Remember that these first hens were NOT trapnesteed, and all chicks with the exception of the few hand pedigreed—as one might say—were hatched just as any chicks. Of course they were kept separate from the remainder of



16.—Split wing—a space where feathers will never grow. Will make a fine broiler.

17.—Birds-eye view of plant.

18.—Number two, six years old 1922. Laid 197 eggs third year, 187 fourth year.

19.—Son of No. 2, hatched in her sixth year. Sturdy stock.

our flock and each was toe marked. These chicks when hatched in the incubator were pedigree hatched as far as

keeping them separate from the rest of the bunch was concerned.

The chicks we pedigreed from No. 1 and No. 3 were so pronounced in individuality that we decided we would do more pedigreecing another year and made arrangements to install trapnests for that purpose. This was only contemplated for the duration of the breeding season and merely as an aid to improvement of the appearance of the flock. We felt just like thousands of others, that we could not do the work necessary to trapnest for production when that necessitated tending traps all the year around. The season of 1918 saw us trapnesting for the spring months and pedigree hatching the chicks. So many have asked us just how we pedigree hatch, that, while our method is so different, materially, than any other, we put out a mimeograph sheet telling exactly how we proceed and the demand has been very great for this. I am entirely reproducing the material in this:

Pedigreeing Poultry In Detail

By H. A. DANIELS, Grafton, Mass.

Our methods of pedigree hatching differ very little from those used by Government Experiment Stations and



Putting eggs into pedigree bags. All eggs packed for shipment here.

other breeders but these details are often unassembled when wanted by one commencing this work. Following is the system we use, in detail:

In the first place pedigreeing poultry demands that all eggs from each hen be laid in a manner to make positive identification possible. This is done either by trapnests or the single penning of each female. Mark the eggs as laid, plainly, on the small end. Set as usual. When testing out the clears and dead germs check them off the hen's list. On the eighteenth day—last turning in incubator—place the eggs from each hen in cheesecloth or bunting bags. Make these large enough to give the chicks room as they must remain in them until hatch is taken off. Four or five inches will hold three eggs nicely. Machine sew on three sides. Close opening with a large safety pin. In each pin catch a cloth tag (cheap, smooth toweling is very good) with the hen's number written thereon. This is in addition to marking the eggs because if all eggs in

a bag hatch, the shells are liable to be broken up and number lost, entirely. Where hens are used for incubation, eggs from each hen must be placed under different hens at hatching time. Take off the hatch as usual. As each bag is opened remove each hen's chicks, placing a numbered band on the leg. With especially valuable stock use



6.—Brahmas make good mothers. Note E. C. Young hen and chick house.

7.—Four weeks old son of No. 17, showing pedigree band on leg.

8.—Same chick as in No. 7, showing band removed to wing.

duplicate bands, one securely fastened on each leg. Keep a record of each, showing dam, sire, date of hatch and any information you may wish to keep track of later on.

The items are a good lesson many times in the year.

In about one month this band is taken from the leg and a slit is cut in the skinny part of the wing between the two joints (the shoulder and elbow) and the band slipped through and fastened. Use heavy gauge aluminum bands. Dip in carbolic solution and touch with iodine after band is in place. Infection is thus avoided.

We use three by five cards to keep track of chicks. These are numbered and placed consecutively in a section of our filing system. All details mentioned above are placed on this card and occasionally notes of development, etc., are made. This information is instantly

Seal band 200

Wing band 1922-25,

Dam #115

Sire Thunder Three

Date of Hatch March 8-1922

Remarks Nearly white at hatch.

Very rapid growth. Heavy black fuzz at 8 wks.

Final Disposition Hold as breeder.

available and makes a fine breeding history. Pedigree hatching will teach more in one year than hit or miss work in three years.

It does not pay to go into pedigree hatching with inferior stock and it surely pays to get stock that has been pedigree bred for several generations. However, many people have really better birds than they realize and a little effort will locate the really worth while ones.

In addition to this sheet which tells how we do the actual work, you will find a cut showing the duplication of the cards which we use, this card being filled out with an actual pedigree hatching of the cockerel in cut No. 28, whose pedigree in full is shown in pedigree reproduction No. 3.

Continued Improvement

Line breeding, pedigree breeding, and production breeding were subjects but little known to us at this time, but we were growing more and more interested and had learned a bit about the possibilities that were in sight. We read everything that came to us and probably swallowed whole as much as the usual poultry enthusiast. All the time we were learning, however, to sift the chaff from the wheat, and *learning by experience*.

Our interest in production as a breeding possibility commenced when we noted that No. 9 laid 92 eggs in 100 days, 55 eggs in 55 days, and after the trapnesting was over we identified her egg with remarkable regularity as far as our own satisfaction was concerned. Previous to this we rather leaned to the idea that production was more a matter of feed than anything else. Even at that time there had not been a great deal of information available about the results of systematic breeding for higher fecundity.

The work which the old hens did in the first year we had them, and that which certain of the daughters did during the breeding season, convinced us that egg production could be established in breeding as well as red eyes or five comb points, and January, 1919, saw us with trap-nests in operation.

All this time we had been anxious to improve our birds as individuals. We attended all the shows we could and talked with every Red breeder we could locate. In the summer of 1917 we made the second purchase from Owen Farms, this time a higher class pen than the first. A very peculiar coincidence in comparing this pen with the first, was the fact that the same percentage of females proved good as breeders. Two out of the four were well worth the initial cost of the entire pen. As this addition to our flock was primarily to improve color, etc., it might not come amiss to pass a few remarks on their particular characteristics, and, later, in tracing the relationship in some pedigrees the influence can readily be seen.

The male was a descendant of a very fine show bird. We named this cock bird "Daddy" and his depth of color, which was augmented by some excess black, has been very instrumental in the improvement of the color all down the line. One of his mates, No. 5, was also a color feeder, carrying more excess black than many would care to use. In some of her progeny this showed up strong, but usually, even though the male was clean, we knew he was a descendant of either a dam or a sire having some excess color and we have now learned to use the No. 5 blood with far above the average results. No. 7 was a clean female of splendid bone and type. She was above the Standard in weight and was one of the finest typed hens I have ever seen. At sight we could almost pick her offspring from the squareness of their shoulders. This can be plainly noticed in three of the chicks whose pictures appear in cuts No. 28, No. 29, and No. 38. While the No. 9 family show wonderfully good type, this No. 7 hen seemed to have a remarkable ability to perpetuate type.

The four females in this pen were mated as bought, and No. 9 added to them. She was a good shaped pullet of fair color and great vigor, entirely clean.

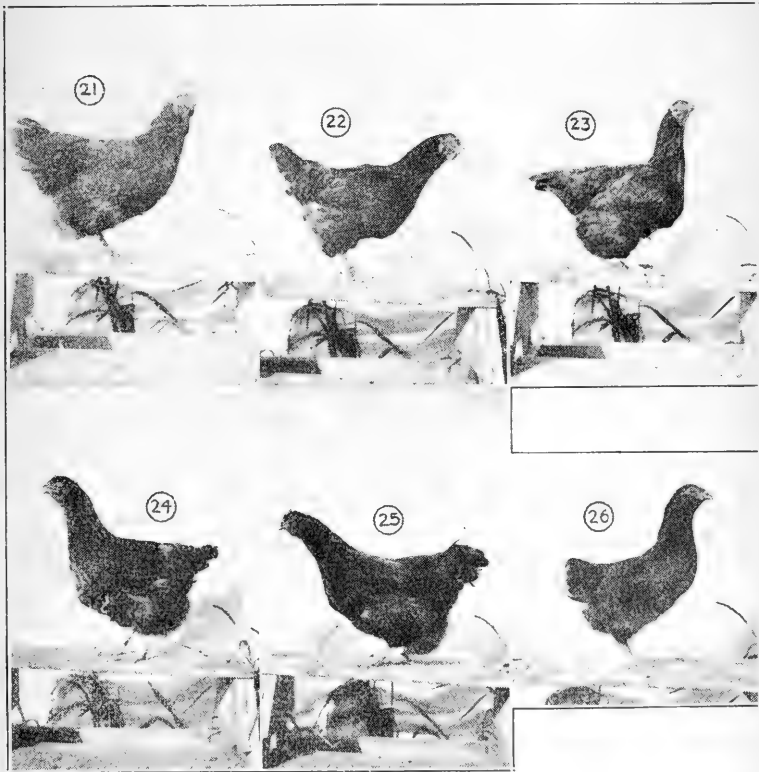
"Daddy" was a fine breeder. He produced a goodly number of splendid layers but the star performer was No. 9. Mated with him she gave us eleven daughters, laying thus: No. 25—235, No. 73—265, No. 94—232, No. 96—221, No. 99—232, No. 15—220, No. 67—243, No. 41—214, No. 40—207, No. 22—209, No. 76—206. This made us feel that we had material to make all nests trapnests, provided we could work out a scheme of breeding which would perpetuate this producing ability without deterioration of Standard Qualities we were working on.

The fact that one hen alone had the power to transmit production to so many convinced us absolutely that production was at least fifty per cent of breeding.

Having a slight knowledge of the process of production breeding as practiced by cattle breeders we knew the same principles would apply. We also knew that crop breeding was done in the vegetable world by means of studied propagation and selection and we started in to

think deeply.

In working with No. 9, who is, after all, the real foundation of our success, we followed these principles and, emulating the cattle man, used as much of her blood in as



21.—Number 9 hatched 1917, dam of 23 females laying from 201 to 301. Taken July 23, 1922.

22.—Number 67, 1918, out of No. 9, sired by "Daddy" (unrelated). Laid 248 eggs first year, 238 second year. Taken July 23, 1922.

23.—Number 31, 1919, out of No. 9, sired by "Danny" (half brother). Laid 252 eggs first year, 187 second year. Taken July 23, 1922.

24.—Number 37, 1920, out of No. 9, sired by "Tip Toe 3d. (grandson of No. 67). Laid 259 eggs first year. Taken July 23, 1922.

25.—Number 172, 1921, out of No. 9, sired by "Sporty" (unrelated). Taken July 23, 1922.

26.—Baby 1922, out of No. 9, sired by "Tinker" (grandson out of No. 79). Note strong resemblance to No. 31 and dam No. 9.

many combinations as we possibly could. We mated her as an individual to as many different males and her daugh-

ters also. Sons she did not produce—neither in quality nor in quantity. In fact only three males have been of a usable character from her in all her years of breeding. We have found, however, that some of her granddaughters went to the other extreme and one or two have been almost solely cockerel breeders. Today, eight out of ten birds in our matings have her blood and some are fully three-fourths her blood, pure. Many of the 1922 chicks trace back to her several times on both dam and sire side.

The first year's work with Daddy was extra satisfying. However, the first pen produced such strong layers that we decided for one year to reconcentrate the original blood of this pen. Several people told us we would have weak stock if we mated half brother and sister but we took a chance and a mighty advisable one it proved. A son of No. 3, Danny, whose picture may be seen in cut No. 33, was mated with her and the results in production excelled the first year's work with her. In this year she produced 222 eggs, a creditable SECOND year's lay. Mated with Danny she produced our 301-egg hen, an achievement of great merit, as along with this phenomenal hen were several others of truly high production.

Many times as I look back on our first groping experiments in mating I wonder that we got along as well as we did. There seemed some impetus over which we had no control that urged us to make certain combinations. One man recently told me he thought it might be an added sense. He called it "hen sense".

Since we have studied our birds and the combination of them I have decided that one bird, to whom little credit has been given, was really the breeding strength of the flock. This was the old bird we bought first, "TAT".

The fact that his daughter mated to his son produced females laying better than when either was mated to an unrelated male, impresses me with his real breeding value. Another thing was the fact that sisters of both No. 9 and Danny were high producers. We have only come to this decision since old Tat went to chicken heaven. One may also consider the fact that the progeny from No. 9 that carries the largest amount of her blood—which must be

one-half that of her sire—shows the very strength of his breeding worth by the marked individual resemblance which is so pronounced when compared with her progeny sired by an unrelated male.

After mating No. 9 with Danny and producing No. 79—301, No. 85—277, No. 114—254, No. 127—217, No. 31—252, No. 74—201, No. 88—243, No. 81—229, we were tempted to make the same mating the next year. We did not do so, placing her instead with her grandson out of hen No. 67. This year she disappointed us as she molted and commenced her third year's lay January 17. She laid a good clutch of eggs and then had another partial molt, the cause of which we could never discover. It retarded her production. This made her run of chicks small but in spite of that we added four more high record females to her progeny. These laid 227-230-231 and 259, the latter being hen No. 37 in cut No. 24. Her fourth breeding year, 1921, produced some of the best colored chicks we have had from her. In this case she was mated to another purchase from Owen Farms, an entirely unrelated male, a very showy bird. The females from this mating have done, so far, great credit to their dam. The present year, 1922, she was again thrown back to her own line by mating to another grandson, out of hen No. 79. Tinker has proven a good breeder and the resemblance of chicks from No. 9 mated to him can be noted at a glance. Note also the resemblance to their dam of No. 31 and No. 79.

This hereditary resemblance is very interesting to the student of genetics, and has, I am sure, a strong breeding significance. To try to follow much of this work is too much of a statistical operation and would not interest or help the average breeder. I hope some time to have accumulated data enough to make a work on just these topics of some value. The process of the evolution of our breeding and work is more interesting just now.

Culling vs. Trapnest

In 1919 we became interested in comparing the physical conformation of the hens we were trapnesting with their actual work in the trapnest. At that time we got the "Call of the Hen" and studied it assiduously as so many others have done. Like many others we tried to apply the tests literally without the use of judgment. The trapnest contradicted us so many times it was like getting a slap in the face. Reading the rules of culling according to the physical conformation of the hen appealed to our reason but it did not always follow out. We could not reconcile ourselves to certain facts. One was that one hen which we knew had laid 250 eggs was a subject which these



14.—Mr. Daniels reading leg band—Note orange box trapnest.

15.—The finished product waiting for truck. Showing one, two and pen size shipping boxes and various size egg baskets. Note holes in end of box to supply hot weather ventilation. Square box at right is foreign egg shipment. Note new water cups on steps, more eggs for shipment and the smile that keeps the Reds laying.

tests would eliminate as a beef type of hen. Her pelvic bones were heavy, she had a rather coarse head and was really a good meat type proposition. We did not at that time note her great breadth of back, which breadth extended to the base of her tail; neither did we know about the elasticity of the sternal processes nor the relative size of the gizzard.

As we learned these things both by additional reading and observation I am led to say there is just one way to judge a hen's possible production by her body conforma-

tion, and that is to take her producing characteristics as a whole. Study her symmetry as related to all possible producing indications rather than any one, two or three characteristics. A judge in the show room looks for symmetry in a bird. This counts high and the same principles must be applied to production. The correlation of one part to another is vitally important.

In this way we have learned to reconcile ourselves to many things that otherwise would still be a mystery. There is one thing however, which is still an unknown quantity, and that is the hen that shows all the outward indications of production, even so far as going to the nest to lay and coming off without so doing. This hen, and there are quite a lot of them, is a puzzler and I am trying to find out the "why's and wherefore's" of her. She is surely the arch deceiver.

There are a number of seemingly trifling things we have observed that I feel sure are of much importance in selecting the layer. One is the head of the heavy producer. There is a built-for-business look about it which the observing poultryman notes at once. The beak is noticeably strong and the head back of the blade of the comb is broad in proportion to the rest of her. There is always a shortness from beak to eye and a roundness which, while hard to describe, is easily recognizable. Her eye is active and she seems to note with intelligence what is going on, yet for all this alertness she is easily tamed and never squawks into a veritable panic like her low producing sisters. Another thing I have never read is that, while she may weigh even more than her low producing sister, there is a buoyancy and lightness when you lift her that a poor hen never has. One who has closely followed the trapnest will notice these things quicker than one who does not handle their birds frequently. I honestly think I could look at the heads and pick from a roost or nest a bunch of Reds and pick ninety per cent of the good ones in a flock without any other test, so sure have I become in making decisions. Of course this would have to be hens in full lay or nearly so.

Care Relative to Production

So closely related to production and vigor are care and feeding that it seems the best place to sketch our experiences is right here, following the outline of some points in breeding and selection which we have encountered. I was much impressed at Amherst last July to note the stress placed on the balance of care and breeding in production and this has proven out in our own work time and time again.

In the first of our work we had to learn by experience, and bitter experience, the lessons now seemingly so elemental, those of sanitation and clean food. The fact that I have not forgotten these years has made it possible for me to give help to many beginners who have brought their problems to me in the past three years. At that time moldy grain or musty sprouted oats meant nothing to us. Grain was grain and a hen was a hen and could eat anything. We had to learn by actual loss as do most, that there were certain danger points that could not be overlooked.

One of the most expensive lessons was, I think, in the second year of our work. We made a "buy" of cracked corn. It was soft corn that had not fully ripened in the field. The result was that a short time after we had it delivered it commenced to mold. Hens were sick, oh, so sick! We could not locate the cause and thought we had imported disease from some source. Every case of sickness was the same, a packed crop and bowel trouble. This led me to feel sure there was some local cause over which we must have some control. I commenced to read every poultry disease suggestion I could get hold of, and in several found very distinct warning against moldy grain or spoiled food. I then tried to wash the corn and tried all sorts of stunts. Finally we had sense enough to stop feeding it and commence treatment. I got a small funnel and a piece of syringe tube and started in with all the birds that were ill and, you may believe there were plenty. I knew that the spoiled grain must be gotten out of the crop and that at once, so I started a washing process, using

warm water and baking soda. What the poor hens thought I do not know, but I do know I was as sick as they were. By degrees I worked the poisonous mass out of their crops and by care and attention brought them back to health. We had not at that time given any special attention to production, but I well remember that the entire egg yield dropped very low during that time.

With sprouted oats we went through the usual experiences as with all sorts of experiments. We soaked oats in warm water, in cold water, soaked them all night and twenty-four hours, soaked them in formalin solution and clear water. We tried wooden pails, galvanized and enameled pails to soak them in. We scrubbed and sunned trays and threw out oats enough to feed an army of hens until we got onto the very simple and effective method we now use, with seldom a bad oat. In cuts No. 9 and No. 10 are shown our present method very plainly. The pan under the bags was made especially for this as was also the frame on which they hang. The following is the method we use so successfully:

The required number of oats are placed in one of the bags each night. These bags are made of a cheap grade of unbleached muslin. The bag of oats is placed in a pail of water at night. In cold weather this is slightly warm, in summer time we use it cold. In the morning they are hung on the rod. On the fifth day the first bag is ready to feed and figure No. 10 shows them being emptied into pails for feeding. Note the wonderful mass of silvery roots. The bag in the cut had just two and one half quarts of oats in when put to soak. After the bag is emptied it is washed in hot soapsuds. Of course the oats in the bags are dipped in water as required to keep them growing and it is surprising how very dirty the bags get. The feeding of sprouted oats is a religion with us and every day every bird over one month old has its quota.

Many people have commented upon the luxuriant growth of green in our runs in spite of the large number of chicks and hens on a rather restricted area. This is due in no small degree to the regular use of sprouted oats as well as cut clover in the hens' mash. Both of these

things have been indirectly helpful in soil sanitation by permitting the growth of greens which care for the pos-



9.—Sprouting oats in bags back of kitchen range.

10.—Mr. Daniels emptying sprouted oats.

11.—Feeding cockerels sprouted oats. Arrow points to old "Danny" among the youngsters. Note combination E. C. Young range houses.

12.—Feeding sprouted oats to mixed lot of chicks on range.

13.—Three months o'd pullets eating sprouted oats. Note troughs used for worm mash every two weeks.

sibility of soil contamination and act as a natural disinfectant.

Today, after much loss and worry—loss of both birds

and feed—we know that it is absolutely impossible to be too particular and careful as to the quality of the feed that is used by the poultryman. Any question of doubt is referred to a strong reading glass, which will show up bad grain that the naked eye cannot distinguish. When there is then any question of doubt we simply pass up the feed because the loss of one good hen will mean far more than the loss of some poor feed. Without doubt a large percentage of poultry illness is caused entirely by spoiled food, consequently, it is entirely preventable.

Little by little each year we have learned to closer understand the needs of the hen. This delicately constructed machine has certain rules of care that are just as important as the care of any highly specialized work of man, even more so. I wish every one who reads this would just consider a moment and see if they can think of anything man has constructed or invented that in any way compares with the marvel of the hen?

I am often asked for rules governing the care of the hen, just simple little “do’s and don’ts” that will cover the vital points. A list of ten, which I call the hen’s ten commandments, is as follows, and is certainly the A B C of success with production and care of any hen :

1. Breed for Vigor.
2. Cull.
3. No Lice.
4. No Mites.
5. No Intestinal Worms.
6. Cleanliness—Absolutely.
7. Soil Sanitation.
8. Never Overcrowd.
9. The Right Food and Drink.
10. Quiet and Gentle Care at All Times.

Get the right kind of stock and follow these rules after learning all that they encompass, and success is bound to come. Not one of these rules can be omitted or broken without showing its effect. The more one can add to them the better the results. Poultry care is no work for the shirker or the lazy man or woman.

Feeding

The details of poultry care have been written about so constantly and discussed through so many avenues of instruction it would seem to the experienced poultry man that anything more would not be necessary. However, anyone who has heard poultrymen talking will realize that some of the most important subjects—and those most universally talked about—have very much to do with how “Jones” and “Smith” rear their chicks, how they feed their layers and breeders and the problems of housing. This shows that all the good points have not as yet been cornered by anyone. In my work of conducting three service bureaus, I find that—outside of actual illness—ninety per cent of the inquiries from all over the world have to do with just these problems, and I am going into some of the most important ones quite in detail.

In connection with the service bureau work I found so many inquiries had such a personal aspect concerning the feeding of Reds, many asking outright for our method, that I cut a stencil and turned out some mimeograph sheets with which to supply this information. I am duplicating them exactly as used for this purpose. This includes our entire feeding schedule from the day a chick is hatched to its finish. We have never been able to get a commercial dry mash meeting our needs. This season we are to use the Grandin feeds on a check pen and learn just what can be done along this line with a feed that is built and sold on quality. If this works out satisfactorily it will be a boon, as well as a labor saver, as the careful weighing and mixing of mash at home is a task of no mean proportion and better done, when done satisfactorily, by machine than by hand power.

Daniels' Breeding-Laying Feed Formula

By H. A. DANIELS, Grafton, Mass.

Do not feed baby chicks until forty-eight hours old. Brood first week at 100 degrees.

First feed: Sour milk, buttermilk or semi-solid but-

termilk. Sweet bread rubbed fine, mixed with baby chick grit. Feed thrice daily.

After the third day give access to open feeder of: Two parts bran, one part granulated (table) corn meal. This by measure.

At the end of the first month change mash to:

One part middlings. One part ground hulled oats.

Two parts hominy. Two parts bran.

5 per cent Protox (or other high grade) beef scrap.

The above by WEIGHT.

Chick scratch grain, by measure:

Two parts cracked corn. One part steel cut wheat.

One part rolled oats.

After the first month use larger grain but the same proportion of each.

Breeding-laying mash (change from growing mash by degrees when pullets commence to redden and sing):

Middlings ----- 10 per cent

Corn Meal or Hominy ----- 20 per cent

Bran ----- 15 per cent

Ground Hulled Oats ----- 15 per cent

Gluten Feed ----- 10 per cent

Curtiss Cut Clover ----- 10 per cent

Old Process Oil Meal ----- 5 per cent

Protox Beef Scrap ----- 15 per cent

This mash by WEIGHT.

Scratch for hens is fed in deep litter, lightly in the morning, with good feed at night and increase of night feed when weather is very cold. This consists of:

Three parts cracked corn

One part oats

One part wheat

By measure.

Sprouted oats are fed at noon all the year round after four weeks of age. Semisolid buttermilk (or sour milk) in fount, also water in another all the time. Milk should never be fed in tin or galvanized iron. Use earthen or enameled ware.

Oyster shells, grit, and charcoal, should always be

available. Keep birds free from vermin with Happy Hen Lice Salve and house free from mites with Carbolineum. Remove any ailing bird from pens as soon as noted. Treat for ailment or kill. We will gladly give free any service in any difficulty you may meet.

Now remember that we have not gone into the feeding of poultry from a scientific standpoint. We have merely kept experimenting to get a reasonable ration that would keep the flock in good condition, not over stimulate, yet make a good showing in production of eggs that would hatch good chicks.

We have found one thing of great interest. In our work we have used the Magic Egg Tester a great deal and have found it an interesting study. The noting of the specific gravity of an egg has three factors back of it. One is heredity. A hen laying a good testing egg will produce females, that, given the same care, will as a rule lay a like egg. I have tested many eggs, isolating a hen and using other feed combinations and found that when feed was changed, the specific gravity of the egg went much below the same hen's egg with our ration. Have had other people make a like report.

In feeding poultry there are two factors that play very important parts in success. One is the way the feed is fed and the other is the quality of the feed itself. The best feed in the world, when mismanaged, never gives its full worth of results—and poor feed has the same disappointing feature no matter how carefully fed. Good food rightly used is positively necessary to make any hen give her best service. She may be a XX hen, a 250-egg hen and pedigreed for ten generations, a perfect show specimen, or a combination of all three, but unless she is cared for and fed with a liberal application of good old-fashioned common sense (which is as rare as hen's teeth) and the best of food, she will never live up to her possibilities.

The chicks we have grown from year to year have met our demand. They improve each year which is, to my mind, proof that we have, in a measure, done our work

right. The quality and improvement in quality in the chicks, from year to year, is the proof of the pudding. If the young show steady increase in desirable qualities, health, vigor, production, standard qualities, etc., there is not much doubt as to the success of the methods, whatever they are. The fact that our stock has shown all these desirable qualities is one thing which made me consent to prepare a sketch of our work, as I have perfect confidence in our methods.

We are asked many times concerning the feeding of semi-solid buttermilk to breeders. Why not? The food that will make a chick strong and healthy should make an egg contain the same elements that will produce a chick of extra vigor.

Then, again, the cut clover comes in for discussion. We are told many times it contains too much bulk, that hens cannot lay well on so much fiber. Our trapnesting has disproved the latter argument and I always call attention to the grazing habit of the hen when she has a chance to follow her own inclinations. She will eat grass or clover on range, in the morning, all day, and even at night after her full supper feed of grain. Clover, properly cured, as can be supplied by the W. R. Curtiss Co., of Ransomville, N. Y., is one of the finest substitutes for range grass there is, and it is much more desirable than tough old grass in late summer and fall. It gives the hen almost as good food as she could obtain on the most perfect range. The vegetable protein in dry cut clover is very high and is in a very easily digested form. There are other elements in it which make for health and assist in giving the intensive poultry keeper a good imitation of natural conditions. Fed in the mash as we use it, it will materially help in keeping the yards green, thus being an indirect help to prevent soil contamination.

The rest of our feeding is very ordinary for the most part. The Old Process Oil Meal is sometimes spoken of and the reason for its use inquired into. I consider it an indirect egg food. In this way—as we use it, it is primarily an aid to good heavy plumage. Birds that are to produce heavily in cold weather must be well clothed and

anything which helps in the production of feathers without drawing on the maintenance or production portion of the hens' ration will aid. If they use the elements from their regular food to make feathers, the egg yield will surely drop. Many of our birds lay well during the entire molt. Naturally, we do not try to make them, but, if they do, with the same care the others are getting, we consider them all the more valuable. Any hen that will molt, lay a reasonable number of eggs and hold up good body weight, all at the same time, is a good breeding proposition. Just here the O. P. Oil Meal fills the bill.

In my service bureau work I have had feathers from all over the world sent to me, and it is seldom we receive any that have the body of those from our own birds. This thick feathering makes a bird hard feathered, which has often been pointed out as an indication of a good layer. I truly feel the oil meal is a strong factor in this.

In this respect, I often hesitate to enumerate on the value of some of the things we have found so satisfactory, because the mistake of thinking that if a little is good, a lot is better, is often made. I frequently think of a story Dr. Sanborn used to tell: A person was advised to use sulphur and lard for head lice on chickens. Promptly the chicks were covered with the mixture and as promptly died. It certainly pays to give careful directions for the use of anything and also, in turn, for the user to follow them.

For many years we used the ordinary ground oats. This contains an unbelievable amount of undigestible fiber as we learned when we commenced sifting it to get suitable ground oats for small chicks, after constant request for ground HULLED oats we finally obtained same through our grain dealer. This costs considerable more than ordinary ground oats, but it is well worth the difference as there is practically no surplus of fiber. We feel, positively, that it is better to feed a fiber or roughage which the birds relish, such as cut clover. Since using the ground HULLED oats we have not had a case of indigestion in any of the older birds, nor in any of the flock of nearly 800 chicks. With the latter we have used from

the start the rolled oats in place of the usual whole oats in the scratch, and this I am sure has been an added advantage. There is no better bone builder than oats but the disadvantage has been the excess amount of indigestible hull.

Many times we are asked regarding hominy. We prefer this to corn meal after the chicks have passed the baby stage. The feeding value is as good as corn meal and there is no danger of spoilage as it is a cooked product. It will not heat and "go bad" as corn meal is liable to do under certain conditions. Then, again, we know that bad corn is often ground up and put on the market in the form of corn meal. We feel that our dealer would never knowingly, sell us such a product, but there is always the possibility that he might have something put over him. For the small chicks we use the table corn meal, buying from a wholesale grocer in 100 pound lots only, thus being sure of its freshness.

The importance of high-grade beef scraps cannot be over estimated. High grade scraps are made by butchers from clean trimmings, while the cheaper stuff—rendering works—is from dead carcasses of diseased animals, etc. The difference is obvious to the most casual. Personally, I do not want to knowingly eat eggs made from the latter class of protein, although we have to admit that the hen is a wonderful chemist and can transform the most obnoxious of material into edible eggs.

Sanitation

All through the process of poultry culture, sanitation plays an important part. It cannot be too emphatically impressed on the poultry raising public. True sanitation does not stop with clean dropping boards. It includes sanitation as applied to any living conditions, the cleanliness of all things used—feeders, drinking founts, litter especially the soil on which the young stock is grown. The very manner of the hen's eating calls for clean feeding floor and ground.

In our first few years' work we did not rear chicks enough to anywhere near tax the limit of our area, but, as a demand came for them and we saw improvement in them—warranting our making the selling of good birds as high class breeders, we commenced to increase our output. Each year the garden has grown less, until this season it is a thing of memory only.

Neither of us had any real knowledge of soil contamination. We thought all that was necessary was to seed down occasionally and keep the worst of the filth cleaned up. After some hard knocks we found that attention to soil sanitation was just as important as to make the houses clean. Year by year we have learned more about this subject and this year, while our area is well covered with chicks—after several years of intensive work on the same plot—we have the best chicks we ever had.

A great deal has been said in the past two years about raising chicks on new ground. That is all very well, and is necessary where a person has not the gumption to make the old ground clean. In that case it must be done. Attending to this to bring results is no boy's job. Liming and seeding and keeping a constant heavy growth of green stuff—enough to use up the accumulation of droppings—is a steady job, and one that cannot be "let up" on. Nature, in this way, has a chance to do her part. The heavy use of lime on heavy soil each year releases the nitrogen which is the element making top growth and this in turn cleans the soil.

Concerning the right soil for poultry, much has been

said, but I think the right man is more important than the right soil. I have known of poultry yards, situated on the most ideal soil, where coccidiosis, gapes, tapeworms and all other forms of "bug" were so thick there was no chance for the chicks. This was on the so-called "ideal" sandy soil with perfect drainage. Other places I have seen, with like condition, where the soil in the hen yards was so packed it was necessary to use a bar to break the crust. Sickness was of course evident, under such conditions; still, if these people wrote a college or any person for help, they would invariably say, "My soil is ideal for poultry, being quite sandy, with perfect drainage." This is the **DISADVANTAGE** of ideal conditions. Everything was swinging on the natural condition and no care taken of it. A good loam which will grow a heavy foliage will, I am sure, give much better results, even with the same lack of care.

The average poultryman cannot select his soil—at least, not when he is working with a back yard flock. This is merely supplementary to some other business. Of course if he is going into it in earnest he has a better chance to make something of a selection.

The most trouble comes from the feeding spots. The feed is almost always thrown in one place and this soon becomes bare and filthy. We have found that the use of sand on these places takes away all danger. In the early spring or late fall we have a large pile drawn in at \$1.25 per cart buck, and it is the cheapest disinfectant we can get hold of. A barn broom is used to clean up the feeding places and the refuse is loaded into a barrow and taken off, with a return of some fresh sand. This is done every ten days or less, especially when rainy, making the feeding spots just as good as fresh soil. In cuts No. 12 and No. 13, these sand spots can be seen very plainly.

The cleanliness of the poultry house has a lot of influence on health and, consequently, on production. A lot is written about sanitation of the henhouse. By sanitation is meant **CLEANLINESS**, which means free from filth. Just because a building is inhabited by hens is no reason it cannot be clean. Human beings have learned the

lack of sanitation in their own life means disease and trouble. A hen is simply another living creature with the same functions of life, requiring the same consideration and protection. Taken from her wild state and domesticated for man's pleasure and profit—a wonderful food producing machine, more marvelous than Radio, more valuable than the "Lizzie"—she is so often given less consideration than the grass which grows. There is one salve, though, for the real poultry man or woman and that is—that the persons who make little of the hen are, as a rule, very fond of all good things to eat which are so dependent on the hen.

I know you will think I am a fanatic. Possibly I am. I hope so, if it is necessary to be one to have ordinary humane consideration of one of the most valuable gifts to man. The real poultry man or woman thinks first of the hen. Just the same with any person with a good business. All successful business men have put their life blood into their work. Poultry work is as much of a business as the U. S. Steel. Why not consider the hen first? If one is making their bread and butter with their poultry and hopes in the future to have a little cake, why should it not be the strongest element in their life. A satisfactorily conducted poultry business requires the application of every business principle. Can you think of any really successful business, manufacturing or other, that would countenance the filthy conditions too often seen on a poultry plant?

In this connection the elimination of all parasites comes under the head of sanitation, because that is one of the prime factors in getting rid of them and keeping rid of them. The old woman said it was no disgrace to find a bed bug, but it was a disgrace to keep them.

I have frequently received letters from various people telling me that they had only a few mites and that their hens were not very lousy or that occasionally they found a worm on the dropping board but not many. Now this is temporizing with trouble. One mite, one louse, one worm and it is time to get busy. The way in which they

will increase is simply unbelievable. There is no need to tolerate any of these pests for a day.

The mite comes first. His habit is the same as the bed bug. In fact, I believe he belongs to the same family. His is the mission of sapping the blood from various birds on the roosts or the chicks in the brooder. There is one thing which means, absolutely, sure death to the mite. Carbolineum. Read the ad in this book. All range coops are painted once a year. It is all that is needed. Each pen in the laying houses has an extra roost. This is treated and allowed to dry and then put in place of another which is painted and so on until all are done. The result is that for four years I have not seen a mite. Before then I was tugging buckets of spray and pump several times a week, and especially on the hottest days. Of course the Carbolineum makes the range houses dark but in only three foot depth that is of little matter. In breeding pens the place at the end of the roost, where roost hangs on any support, is also coated. It is also applied to the dropping boards and it is a help in scraping them in frosty weather, as the droppings do not stick nearly as hard as when frozen. While there are many substitutes on the market, no one will ever regret the use of Carbolineum.

Many salves and powders are on the market for body lice. Personally, I wonder how a powder is ever sold. I never would subject high-bred production hens to the shaking up necessary in the application of powder. We use the Happy Hen Salve and find it O. K. It will not separate in hot weather, will not blister, and will not injure fertility. It is also fine for scaly leg, and for depluming mites. A large number of birds can be cared for in a single evening, saving much upsetting of the flock and time for the caretaker.

Intestinal parasites are a less superficial matter to get rid of. To my mind prevention is better than cure. After a bird has been infested with intestinal worms to the extent that it shows in its appearance, that bird has received a great setback. It will require considerable time to regain the vigor that has been lost. The span of a hen's

life is so short that she cannot afford to spend much time recuperating from any sort of ailment.

For many seasons we thought, as do many persons writing me, that a few worms were no cause for uneasiness, as all animals are more or less affected with them. However, we learned that it was necessary to get rid of them. We used tobacco, turpentine, etc. These preparations did the trick but the shock to the bird's systems seemed too great, as it was necessary to starve them in order to make them eat the stuff. About this time we got hold of "Hubbards Poultry Secrets" and he made a great deal of reference to worms and recommended garlic. This was the best yet. It eliminated the worms and the birds were simply crazy about it. We tried to grow it but our soil was not adapted for it, and it proved a failure because we were not always able to get it and when we could, the price was almost prohibitive for any extensive use, being anywhere from twenty-five to forty cents per pound. We kept experimenting and at last took up another Happy Hen product—the worm powder made by them. It fills the bill and we now use it regularly as a preventive and I candidly state that it has been instrumental in the fine condition of our 1922 flock. In cut No. 13 can be seen troughs up against the building (back of Mr. Daniels) which are used the 1st and 15th of each month for this purpose. This remedy does not shock the bird's system.

Ordinary care in these things will have a marked influence on any flock. It will make them disease resisting and, consequently, more able to withstand the changes of our New England climate.

Speaking of the New England climate makes me think of the little boy who was asked by his teacher to write an essay on the advantages of the New England climate. This is what he wrote:

The Advantages of The New England Climate

"There ain't none. In summer my pa works all the time to pay the ice bill. In the winter my pa works all the time to pay the coal bill"—John Dean.

This is about so, as we have some great variations in temperature in very short intervals of time.

Mating and Culling

Successful mating of Reds is based on careful selection, and selection is begun with rigid culling. I am asked many times, in the course of a year, how we make the sacrifice of color necessary many times to get production and vice versa. In the first place, in our work, we dispose of all the birds that are not fairly representative of the breed, at an early age; hence, we do not have these to consider. Males are marketed, while pullets that are poor in color or too poor in type are sold as early as they can be identified to various people wishing for just a pen of egg producers. This eliminates any chance of partiality later on when these birds are older and a desire for egg production above all else touches us, as it will, at times, any practical poultryman. Good color and type that does not prove out in production are picked out before the breeding season as by careful watching of the trapnest the poor birds can almost without exception be found by the first of February. Of course there are some birds that lay with considerable winter intensity, yet do not finish out a creditable year. These are the ones, especially if good as individuals, that test the mettle of the breeder when culling. They are breeding uncertainties and are best off the program.

Insofar as our work has gone we find that color has absolutely nothing to do with production. In other words there is no correlation between the poor color and high production as so many have tried to make us think. Our first consideration is high production, but this without due regard to reasonable color and breed type is not a good breeding foundation.

I know a large plant that works for high production alone, and their slogan seems to be "It is impossible to serve two masters at once." Hence—they claim, along with many others, that production and good Standard qualities, even to show quality, cannot be combined in the same bird. We have not gone very far in the production of real show birds; not, as yet, making any claim to exhibition quality, but the work we have done and the con-

sistent improvements from season to season, resulting in a higher production average, proves to me that there is just one obstacle to accomplishing this end. That is the lack of will to persevere and study with this definite object as an end. As regards the serving of two masters at the same time, in this connection, I feel like going one step further and in place of that slogan use something to the effect that it is desirable and possible to combine both qualities into one harmonious whole, the object being to produce Standard-bred birds that will lay a creditable number of eggs. In this there is but one master, although, possibly, a rather exacting one.

In breeding Reds there are certain laws that have to be taken into consideration in the breeding of either exhibition or production stock and these have to be even more carefully observed when a combination of the two is effected. In both cases—or shall we say all three, as they represent different attitudes toward poultry breeding—the prepotency of the breeding material is an important factor. Unless birds have the power to transmit to their progeny the qualities wanted in the flock, little progress will be made, and in working at first with any stock the main object should be to find the best birds as regards quality, using parent stock having this quality. As a safe foundation, vigor should be considered first of all. Vigor may be bred into a flock just as readily as five point combs, red eyes, etc. No matter what object is in view, in poultry breeding, or what combination of objects, vigor is *first of all*. Especially in production does this hold true. The bird lacking in vitality, for any reason, will not hold up under heavy production.

Prepotency holds an important place in production. It has one splendid advantage, without which it would be almost a will-o'-the-wisp, that is, it has the power of reproducing itself. As a rule, a bird strong in prepotency begets the same strong point in his offspring.

Many people place too great stress on feeding as the source of high production. Feeding is part of the battle, but two other elements are just exactly as important. The production triangle to my mind is Breeding, Feeding and

Care. One without either of the others is like a ship without a rudder. You may be sure in flocks that produce well there is 33 1-3 per cent of each of these factors, which make up the whole. All the feed in Christendom, without proper care, and fed to poor birds, will not bring any but ordinary results. Just the same with well-bred birds poorly cared for and fed improperly. Or, with the best of feed and birds not rightly combined.

We have learned that in order to realize the height of our ambitions it has been, is, and will be necessary to sacrifice many of the superficial things of life. Many start with a wonderful spurt of enthusiasm but lack staying qualities. To such people I would suggest that they employ themselves with inanimate things. Then, when interest lags and the body tires they can take that "sighed for" vacation and nothing will suffer through neglect. The care of God's creatures, whether hens, hogs or cattle is a man sized job.

To the one willing to count the cost there is an open road to success. Start with quality. The road is too long to waste time on inferior stock of any kind. This does not necessarily mean that your birds be show winners, preferably not, for the ordinary man. As the foundation of the flock, use birds that can be recognized as Standard bred without a placard. A good test, were it possible, would be to put the Standard into the hands of someone never having heard of Rhode Island Reds. Let them look at the birds under consideration and then find that bird in the Standard. If they could locate them the birds should be pretty representative of the breed.

When the start is made, do not expect every bird to produce 200 eggs nor to beget all 100 per cent chicks. In picking the good ones remember it is also necessary to find the poor ones and, in a way, it adds to the interest. If 50 per cent of the stock you start with proves good as breeding material—shake hands with yourself.

Start with quality, not quantity. For the first year four females should supply all the chicks that one can study and work effectively with. In our first year's work with the pen headed by old Tat, we hatched, from the

four hens, close to 200 chicks, rearing 180 to maturity.

If such a pen is correctly mated, it is possible during the succeeding year, to have your families to work with. If the majority of these prove good, the next season there is material for an almost indefinite number of lines. Many will do well for a short time and then prove of little value and have to be discarded. If your original purchase proves good, return to the same breeder for "new" blood. Tell him what you have accomplished and especially tell him of the weak points in your matings. If he is worth his salt he will take a keen interest in your work and in helping you advance. In case you are entirely dissatisfied with the results from any stock you have and feel a change advisable, do not bawl out the first breeder to the second. Say nothing about him, but do tell him what you have and what you have not in stock. Remember, in buying Reds, there are only a few main arteries, the other strains being tributary veins.

Constructive breeding is best attained by trapnesting. Not that many good birds have not been produced outside of the trapnested plant. They surely have; some wonders. The drawback in this is the necessity of using too many birds to get the desired results, and not knowing which are the good ones.

Trapnesting to get the records of a bunch of commercial egg hens is a waste of time. The real value of the trapnest is in the pedigree possibilities when it is used. By trapnesting and pedigreeing the chicks, with careful records, it is possible to know how each bird was produced. As history repeats itself it is comparatively easy to locate the combination of birds that produce the poor ones and not make the same combination in another year's work.

This applies to all the points desired in a flock. Production, vigor, color, type, etc. When it is possible to identify the mating producing some very fine characteristics, it is mighty interesting and instructive to study the male and female producing it.

Inferior shelled and colored eggs can, to a great extent, be influenced. For example. A hen lays a poor egg

and has a tendency to transmit this to her progeny. Mate her with a prepotent male from a prepotent dam a good egg and it is almost a certain fact that a larg per cent of the offspring will lay a much better egg than their dam. This I have proven to my entire satisfaction.

Another thing we are working on, although experiments have not covered time enough to make the results as positive as in the case of poor eggs. This is the hatchability of eggs. I am now practically convinced that hatchability is transmitted and improvement is possible through prepotency of the parent stock in this one thing. Tests to prove this must be exhaustive, and frequently interfere with some other factor. One case I will cite for what it is worth: We had one female whose eggs hatched less than 30 per cent. This happened regularly and consistently, no matter how or when incubated or what male mated to. In her second year she was mated to a male whose dam had given us over 90 per cent hatchability for two years. This second year with the poor hatching dam gave the same ration of chicks from her eggs but, in two pullets from her the next year we had a strong 80 per cent hatchability. This is not enough to prove anything, but it is strong enough, so I am going to make as careful observation as possible another year.

At Amherst the past summer, poor hatchability was taken up by Professor Sanctuary and he observed one thing which I also noted. In breaking a large number of eggs containing chicks dead in the shell, it was noted the position of the chick in the shell seemed to have an influence on its mortality, and in several cases this checked up showing a lot of these came from the same hen. Heredity again. This brings me to the relative hatchability of eggs from extra good, fair and poor layers. Much stress has been put, of late, on the heavy layer not being a good breeder, that we have observed this phase with interest. I think the trouble has been that the production of the natural layer was competing with that of the forced layer. There is bound to be a great difference. The only trouble I have had in checking this that we do not allow the poor layer to reach the season of incubation. We cannot afford to

experiment with them, so market such as soon as we are sure they are of no value.

The observations we have made in our pedigree work have been about as follows: A hen laying one day, skipping two, then an egg, etc., may hatch a possible two out of ten. This with the exception perhaps of very old breeders; although they, as a rule, show great intensity if they have been producers in the past. The medium layer who lays the regular day and skip a day rate will supply about a 50 per cent hatch. The hen of high intensity—not forced—will be the one (nine times out of ten) to give the big hatches. Of course all contributory things must be running good or this part cannot be estimated as of much value.

One of these things is care of the male heading the pens. Low fertility is often caused by his neglect. As a breeding factor, the male has been considered to the neglect of the hens but as regards the production of fertility and hatchability the females have had the largest amount of attention. True, this is very important, but the male out of condition influences the entire output of eggs from the pen. Attend to his feeding. Many say, "Let them shift for themselves." All right, as far as it goes, but unless some special care is taken, a good breeder will in nine cases out of ten lose flesh and become run down. His very value as a breeder, attention to his mates, stops him from getting proper food. He scratches, calls the hens and leaves the grain. This a good male will do regularly. A shallow pan on the wall, into which his grain may be thrown, will keep him O. K. Use a little discretion in this. We feed a fair feed once daily this way. In some pens it is hard to put the cup or pan high enough so the male can reach it and so it will still be above the reach of the hens. They will do some wonderful stunts to get the grain out of the feeder.

Hatching and Brooding

The hatching and brooding of the chicks play an important part in the future birds; almost as much as the work done in the mating, feeding and care of the parent stock. Incubators are run too hot, too cold, eggs are turned carelessly or not often enough, all leaving their mark on the chick. The first thing to do is to learn to operate the incubators and brooders according to instructions. If all else is well and reasonable and success is not obtained, write the manufacturer. There may be some little thing you have overlooked. We have used various makes of incubators and have at last settled on the "Prairie State" as meeting our needs the best so far.

In cut No. 30, may be seen part of our incubating room. In this cut I am placing eggs in pedigree bags on top of one of the machines. This picture shows our incubating conditions which differ radically from most. My routine is as follows: In the morning when I first rise I put my coffee on to percolate, wash my hands and turn all eggs that are due to be turned. After breakfast I fill and fix all lamps. About ten a. m. all eggs incubating over three days are again turned, then again about four p. m. and the last thing at night about 10 p. m., making four turnings per day. With this exception I follow the instructions of the manufacturers exactly. In order to turn eggs outside the machine as is necessary with the average machine, the outside temperature must be above 60 degrees or there will not be heat units enough supplied to the chick during the 21 days of incubation to ripen it and have it hatch on time. All of our chicks are hatched and pedigree banded in this room.

After being left in the nursery until they commence to raise a rumpus (that's the only thing I can think of when they are ready for the brooder), they are placed in flannel lined baskets—with hot water bottle in cold weather—and carried to the side lawn to the Hodgson Baby Chick House shown in Cut No. 1 in the angle of the house. Both roofs are shown raised in this picture. This is placed in the corner, as it is a most wonderfully protected spot and does

not get the wind during the chicks first few days. As soon as another hatch is due I move these to one of the more exposed houses and clean the corner one so that it is ready for the next hatch. In opening the brooder to care for them they are not exposed to as much wind as the others. This is only a small item but the chick itself is a pretty small thing until it is a week or more old.

We find for our work the Hodgson Baby Chick House is the sure road to chick growth. Note in cut No. 1 the possibilities of ventilation. Every inch of this brooder can be opened to direct rays of the sun. On the left of the cut one is shown with roof partly raised. This admits ventilation on warm days, when rainy. Chicks—about sixty-five to a Chick House—are grown in these until they are transferred to the house at my right, in cut No. 32. (I stand on a box and am just turning a page of address to Connecticut Poultry Association members.) This has another style oil hover.

From this, as soon as they are hardened off, we move them to the combination range coops shown in cuts Nos. 11 and 17. We have twenty-four of these and they are the finest of anything for the chicks. We get them portable from E. C. Young of Randolph, Mass., and they can be set up in a few moments time. Each section is 3 x 6 feet and can be taken on a wheelbarrow and moved easily by one man. By the time the chicks are put into these houses with an old style oil hover they can stand most any sort of weather but can, in a pinch, be confined, as they have the open front part as a scratch pen. Feeders are placed on stands about six inches from the floor; also, milk and water founts are thus kept free from litter. Again, the ventilation of these coops is fine and, as a growing chick throws off a lot of body heat, good ventilation is very essential to keep them healthy.

We place the roosts in these coops just as soon as the hover is removed. These are four inches wide and placed one foot from the floor. It is seldom I have to put a chick on the roost. At first they learn to hop on them during the daytime, and shortly all are comfortably perched at night. This puts a stop to corner crowding as soon

as the hover is removed and gives each chick an equal chance.

I fully believe two reasons why hen reared chicks often do better than brooder reared, all other conditions being the same, are due to two things, crowding and poor ventilation. The nearer one can come to following nature's way in rearing chicks, the better the results. Of course the commercial man cannot rear his thousands of chicks in small units, it is an economic impossibility, but the person actually breeding, putting in many hours of study and work to attain improvement, cannot afford to throw away his work just to save time on chick care. This is too much like robbing Peter to pay Paul.

We find the Hodgson Baby Chick House will rear chicks as well as the hen, if given reasonable care. It can be used to care for chicks under conditions and at times when hens are impracticable. In February we have few hens that want to set, yet, in many phases of breeding the February chick is an asset. In Massachusetts we have had about all kinds of winter weather that one can have, and I have used my Hodgson Chick houses in February, with a 100 per cent score on raising chicks. Coated with ice—and a blizzard outside—made no difference. Of course a shed would make it much easier for the attendant to do the work but the brooder will function perfectly without, which is a pretty good test.

Anyone working with high-grade poultry, who increases their business to the point where outside help is necessary, had best attend to their own incubating and brooding unless they can get an absolutely efficient man or woman to do this. They are very scarce. We feel it better to hire some of the more laborious work done and look after the immediate concern of the birds personally. Possibly at some time we will expand to the point where we will discover that someone else can do things as they should be done, but in the care of live stock of any sort, a pretty good rule to follow in order to have things done as they should be, is to do them yourself.

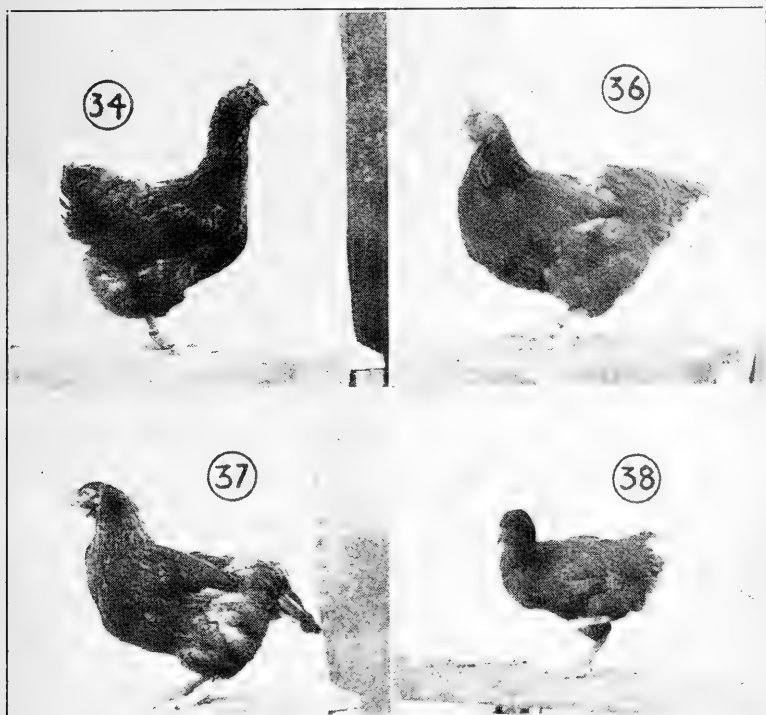
It is even better to continue to work for still higher quality than increased numbers. We are too apt to say,

“Oh, Jones! He has 3,000 birds, which he winters.” Or on the other hand, “Smith, I never heard of him, he can’t keep over a hundred or we would know about him.” Smith’s 100 birds might be really worth more than Jones’ 3,000, but quantity spells success to many. Quantity is usually necessary in selecting fine birds where large matings are used, but where careful and small matings are made and every chick pedigreed, there is a greater chance to get a larger percentage of good ones. In the small breeder’s work every bird must have high individual merit to get into the breeding pen and this has its effect on the chicks hatched.

It is actually impossible for one man to care for a large number of birds when there is pedigree breeding and work to be looked after. There are details connected with this phase of the work, which many in the poultry business never realize. The overhead is enormous—for the number of birds. I merely speak of this with the idea of not misleading my readers into thinking that because we make a good living from a flock of less than 125 breeders is a get-rich-quick game. It is not. But it is well worth the effort, when accompanied by the necessary enthusiasm and interest.

Notes On Breeding and Pedigree Charts

To make our line of work clearer I am including the pedigree of three chicks whose pictures appear on other pages. These are 1922 chicks and their pedigrees show exactly how they have been produced. Added to this are the interesting cuts of several of each chick's ancestors. I



34.—Number 79. Laid 301 eggs first year; 227 second year heavily in moult. Note the breast and bowl and well balanced body out of hen No. 9, and "Danny."

36.—Number 138 out of No. 17. Laid 241 eggs first year. See No. 37.

37.—Number 183 out of hen 138—year complete, 191 eggs.

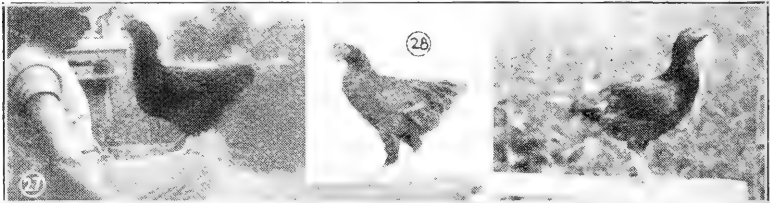
38.—Baby pullet out of No. 183. Note the type as chick.

wish I could even indicate the improvement in the color as well.

In the pedigree of the chick from No. 17 showing the leg and wing band, in cuts Nos. 7 and 8 it will be noted

that the dam is five years old. In this season she was mated back to a cockerel out of No. 79, whose sire was her full brother. This cockerel traces back to the sire of No. 17 thrice, and there are three direct tracings back to No. 9, her half sister. The strengthening vein in this combination is that of No. 5 and "Daddy," which came down to "Tinker" through No. 67.

The pedigree of the pullet in cut No. 38 shows another combination of blood strongest and most direct on the same line, that of No. 17. In this case the pullet is the great grand daughter of No. 17 and a study of the pedigree chart will show how No. 17 was mated to her half brother sired by her sire, producing No. 138 (see cut No. 36). No. 138 was mated to Thunder, an entirely unrelated male, breaking the closeness of the relationship.



27.— Number 115, 271 eggs first year. The hen with \$1,000.00 type, which she transmits to her chicks. See 28 and 29.

28.—Son of Number 115. Note the wonderful racey lines—the head showing business in every feature.

29.—Daughter of No. 115, three months old, a very promising chick with body conformation strongly indicative of high production.

He was out of hen No. 7 and sired by "Daddy," two of the birds in the second pen we purchased in 1917. From this mating of Thunder and No. 138 we had splendid results, one of the chicks being No. 183 who, in 1922 was mated to her half brother, "Thunder Two," a grandson of No. 9, which mating brings into the great grand daughter of No. 17—the chick is cut No. 38—the blood of No. 9. This shows how we have bred "in" and "out" with the same family lines, creating new combinations and strengthening weak points as well as intensifying the strong.

The third pedigree is that of the cockerel and pullet in cuts Nos. 28 and 29 which are, I think, the best examples of the intense work we have done with the No. 9 blood. This

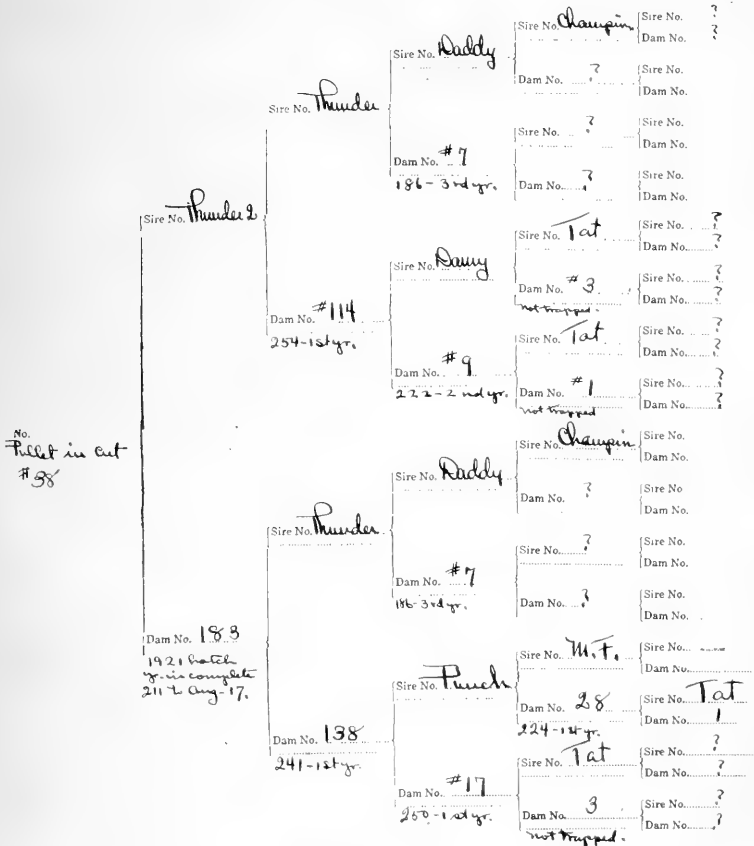
pedigree shows the careful infusion of two new—or un-related—lines, with very close breeding on one line. A little study of the chart and the cuts will show how this

Pedigree of Single Comb Rhode Island Red

Seal Band Number Sex **F** Date of Hatch May 13, 1922 Bred, Owned and Reared by **HERBERT A. DANIELS, Grafton, Massachusetts**

Date

Sold to



Pedigree No. 2.

has been instrumental in the results we have attained.

In pedigree No. 3, the sire is a combination of the No. 9 blood and the No. 7 "Daddy" line. A son of No. 150, who was out of hen No. 73, a daughter of No. 9, mated to another daughter of No. 73—sired by "Smarty," the

The present year's crop of youngsters show the best breeding and also show more established characteristics than any percentage of any previous year's birds. The fact that the characteristics we want most are becoming fixed in the larger percentage of the young stock is proof of the constructive nature of our operations, which makes the work after all seem much less than it would were we always struggling against a blind wall. I fully believe this rapid improvement is only possible where each bird in each mating has its full value tested as a breeder by careful pedigree of all its progeny. In this way the females are studied as closely as the males, which is very necessary to rapid improvement.

When the finished product is ready to be disposed of, another man sized job confronts the poultry man. Many breeders have good stock and are willing to give fine values but through some lack of foresight or lack of "selling sense" fail to get the market their goods deserve. Our work in this line has been a sort of evolution, and I am going to give a slight outline of the history of it as I am sure the reading will be interesting at least, and may help others just at this point.

Before the consideration of any advertising one must be sure to have just what the public wants. In poultry selling, it is practically impossible to cultivate a market as has been done in some things that have been put on the market. After being reasonably sure you have what the public is looking for, use every legitimate means to let them know you have it and will sell. Granted you have a mighty good line of stuff, unless you have the power to set the merits of your flock into written form to create interest, get some one used to the work to do it for you. Keep your name as associated with some particular and desirable feature of your stock always before the public.

When we first commenced advertising we used a local newspaper. This is not usually a good medium for good stock but I made it a study to word my copy so people would look for it from week to week, always leading from one week's ad to another. This proved good business, and many told us they looked for our little fifty cent ad after

reading the news headlines. As we outgrew this class of trade and had stock which merited a larger field of customers, we commenced with a classified ad in the Red Journal. This brought business, and we then took display space. We have never exceeded four inches and find that this size ad handles our present capacity, bringing in a steady and growing number of new inquiries.

After your prospect has been prompted to write you, the sale is far from made, and lack of care in making your reply to his inquiry will lose many a sale. Form letters cannot be used as a dozen inquiries may come in on one mail and no two in anyway resembling each other. It is possible to help out on the letter writing, which is a good sized job, by some carefully prepared and timely mimeograph or printed sheets. These can be made to cover various phases of selling.

Our first hatching egg shipments were made in 1919. This was before we had any pedigreed stock to sell and the office work was very light. Month by month the mail increased.

In 1920 when we sold back to Owen Farms a pen of ten record females directly out of the original pen which we purchased from Mr. Delano, and he made the fine arrangement which booked our pens in his mating list, we commenced to do a real business. Our own work was becoming known and the publicity of the arrangement with Owen Farms combined to give us a real standing in the "Red World." Mr. Delano, a keen business man, saw the advantage of this arrangement, not only to us, but to himself, because it showed plainly what could be done with his stock by keeping one hundred per cent pure. This was, to us, an entirely unlooked for outcome of the application of our ideas..

Our little plant, started with four yearling hens and a cockerel, has grown steadily in output and is convincing proof of what can be done by application, work and determination to succeed. "Nothing succeeds like success" is true, and after the first few hard years, one should be able to keep improving this work from season to season. It never will do to let up on constant vigilance, but the

elementary experience should prevent much of the so-called "bad luck" the poultry man cries about.

We are now looking for a larger area, not so much with a view to increasing the breeding capacity, but to simplify the rearing of the chicks and make more yard room for all stock. We feel, however, that whatever success we may achieve in the future will be dependent on the conquering of our present difficulties.

Office Routine

Many very fine poultry men and women have not had office training and are at sea when it comes to the necessary clerical work involved in giving to the public the service their good money pays for. Correspondence must be properly attended to, records correctly kept, and orders booked in a way to insure no oversight on wrong filing. This positively requires a system. Our was evolved with the help of an office equipment expert, who, however, was not familiar with poultry work. We gave him an idea of our needs, that which we must keep track of and the necessity for so doing and, through his interested suggestion, we now have a very complete and efficient method. I well remember the first time he came to size up our needs. It was quite a joke to him (he laughing to himself, as he has since admitted) that anyone with a few hens in the back yard should want to put in steel filing. Today he has quite a large respect for the poultry business and is very prompt in filling our orders.

In the January 1922 Red Journal appeared our entire office system and I am reproducing it herewith:

So much has been said concerning the feeding, care and breeding of Reds and very little about the very important part devoted to handling the sales, etc., that in answer to many appeals for same, I am going to outline our methods and policy.

In many cases that I have come in contact with very little attention has been paid to this end of the work until it was necessary to hire competent help and get a working

John Doe	1-10-21	Key R
Albany, Michigan.	9-2-21	C.
2nd inquiry-chick _{kg}	6-5-21	
3rd " cockerel	9-2-21	

system under way. This is unnecessary as anyone even selling but a few birds or a few settings of eggs can for a very small sum be efficiently equipped to have a really good foundation for a larger business later on.

This simple initial equipment can consist of one wood-

en 3x5 card file and three ordinary pasteboard letter files, and three 4x6 card files. This is the system of using these:

The 3x5 card has the name and address of the inquirer on, also the date of inquiry and when subsequent letters are received this date is put on, keeping the mailing list up to the minute and allowing the breeder to discontinue any names after a certain time when they are considered

John Doe	Ship March 10-22	32 Shipped 30 eggs 3-10-22 chicks hatched, very strong as per letter 4-6-22
Albany, Michigan.	Booked Dec. 3-21	
15 eggs pen 10		
7 " " 5		
8 " " 1		
Total Value \$20.00		
Cash 5.00		
Due <u>15.00</u> pd 2-20-22		

Eggs to be used as foundation stock.

in office parlance as "dead." This time varies. We hold them two years.

The 4x6 card files are labeled "egg orders", "stock order" and "orders shipped". Figure 2 shows how a stock order is cared for. It is filed under guides indicating dates of shipment. Egg orders the same. When the order is shipped the card is removed from orders, and placed under

John Doe,	Ship Oct. 10-21	Shipped 10-10-21. Well satisfied per letter 10-15-21.
Albany, Michigan.	Booked 9-2-21.	
1 S. C. RED COCKEREL. #100.		
Total Value \$20.00.		
Cash 5.00		
Due <u>15.00</u> pd 9-20-21.		

To mate John Jones stock, smut bar desired.

alphabetical guides as an order shipped, note of time of shipment being written across end of card as indicated.

When that order is heard from—if ever—a note of whatever the customer has to say is made. These are instantly accessible for information.

The three letter files are used as follows: one for inquiries, one for customers and one for general price lists, small catalogues, receipts, etc., that are wanted for reference.

A typewriter is almost indispensable. One can get a rebuilt machine reasonable. We used one for one year and did not lay out one cent for repairs, then we purchased a new Oliver, which, while being a low-priced machine, does excellent work. When a machine is used it is easy to keep a carbon of every reply made, order sent for supplies, etc. Later I will show how valuable such is.

Stationery is important. The poultry breeder does a mail order business and his first impression is made by his advertisements, second by stationery. Use good paper. It is an ear mark of the business man today. Embossed heads, etc., are not necessary. But do get a good quality paper and envelopes. Have a good job of printing done. Poultry breeders are apt to go in for sensational stationery. Why, I do not know. Make your letterhead tell some pertinent things about your birds, but keep all advertising off the envelopes. Many people interested in poultry and likely to answer your advertisements do not care for mail coming to their address covered with cheap red or vari-colored cuts. In all dealing with the public a little conservatism is safest. The sensational savors of the huxter who caters to the cheap trade. By this I do not mean low-priced trade. There is a very marked difference.

When we commenced our first selling we had just the equipment described. As the business grew we added card files and letter files until we were buried under so many files and boxes we added to our outfit a very complete steel file. This is sectional and can be added to as we require. Each letter section will care for 20,000 letters. Another will hold 6,000 of the 3x5 cards. Below this is the four drawer section caring for orders of eggs and stock. Below that is a single drawer for any legal documents, bank statements, etc., and two drawers holding 6x8 cards on

which we keep our egg records, those cards being taken from the pens and filed every two weeks. Below this is a single letter file drawer used for some special work. We find the "Security" line meets the needs of this work in splendid shape and, while the initial cost may seem a bit high, we have equipment that will last as long as we and stand any amount of usage.

Before one has use for any of this, one needs have an advertisement or two. Make this in accordance with the amount of stuff you have to sell. If you cannot write an ad that has selling power, get some first class man in the advertising business to coach you, or take a course in ad writing. The same principles of selling apply to poultry as to automobiles. Have the goods. Get people interested through your ad. Do not claim what you have not got. Do not try to be sensational. Keep before the public all the year through. Get all legitimate indirect publicity possible in way of notes, "was present" items, etc. The more known your name is the better known your product and the easier for people to buy of you. When the telling ad gets a result the sale is yet to be made. This is where poor, cheap looking stationery does not carry through the first impression. Handle this with exactly the same dignity as if you were selling very high grade furniture. Note the stationery used by first class business houses and the appeal it makes to you. When your inquiries come in make a prompt reply. Make it direct and in detail. If any questions about your stock are asked, see that they are answered fully. Do not use too many words in telling what you have to say, but do not be too skimpy. Make each letter a personal one. Not merely a personal letter, but make it have the identifying marks showing it was written to that one particular person and it could not be an office form used for all. In poultry work where breeding birds and eggs are sold a form letter does not bring business.

In describing your own birds do not forget that the one you are writing to has a good opinion of his own stock and possibly has a good right to have. Tell it as it is. Do not over-rate your own. Write that letter just as though

you were to receive it and wanted it to satisfy. Next, if the prospective customer feels that you have that which he wants he will send you a payment. In your first letter you should give all details of ordering, payments and your guarantee (which must be a money-back one to be of any value) unless this is covered by printed matter. When you receive the money order or check, acknowledge it at once and give any necessary information concerning shipments. When stock or eggs are shipped, send a notice along.

Now it will occur in some instances that opinions will differ as to the value of a bird. You will write your description of what you have all in good faith. When the customer gets the bird he does not see it as you wrote. It is difficult to describe things on paper as they actually are. In this case the customer is dissatisfied. He may not know real values. There was a time when most of us did not, so it's nothing to become profane over. He may send the stock back, which he has a perfect right to do under your money-back guarantee within your specified time limit. In this case send his money back as quickly as you can. He may write you a very sarcastic letter. Any poultryman who has sold birds for five years could show some that would start a lawsuit in any other business. Some written in dead earnest, too, from people sincerely believing themselves "done". These are very difficult to handle. The only safe way is to be sure they get their money back at once and treat them with the utmost courtesy. It may be difficult, as I have seen letters that would reduce almost any red-blooded man to a savage. I have in my possession several entire sets of correspondence concerning poultry deals that have been sent me by poultrymen to know what on earth could be done to protect them from such insults. In one case a breeder sold to another breeder a bird. He did not like him for some reason and resold him. Would not even let the breeder of whom he bought supply him with a bird to use in his pen and really as I read and re-read the many letters in this case all I could think of was an old saying, "He would kick if he was going to be hung." There seemed to be no possible adjustment of the trouble and the breeder offered him a bird

gratis after all the rumpus. Another case I call to mind was one in which a prospective customer did not want to pay for a bird; said he never did business on that basis, but finally did pay cash and did not like the bird. There was no way to satisfy him. He would not take his money back nor another bird, but complained of the fact that he had been compelled to pay cash. Said he never would do business that way again. You may be sure if either of these parties wrote me asking quotations I would not quote. These letters were sent me in confidence to see if there was any way in which I could use them as examples.

It is good to be able to say, however, that these are very unusual cases. They do occur and are very difficult to handle without antagonizing the customer and with dignity to the breeder. These instances are where the use of carbons in all correspondence is of inestimable value.

I am today in receipt of another lot of correspondence of a similar nature in which the badly used customer wants to inform the man with whom he has been dealing that he is a liar. In this case I have the carbons of the breeder's letters and he has practically offered to give the man a bird to suit rather than have him dissatisfied. The customer even went so far as to write the breeder he was going to copy every letter and send same to the Red Journal for publication. This was rather amusing when the same breeder was doing all in his power to more than live up to his guarantees.

The meat of this is to be able to avoid those annoying experiences. I would suggest three things as of much importance in doing this:

First. Cash for all dealings with a strict money-back if not satisfied guarantee. Live up to it. You, as salesmen, won't send out birds not of good value under this rule.

Second. Give freely all help asked for in any way connected with the work. Do not have any loaning or borrowing of birds or make any exceptions in price to anyone. These things always lead to complications.

Third. Conduct your business insofar as you are capable the same as any other legitimate business. Read all

letters of inquiry with care. Get the customer's viewpoint. Answer his questions fully. Never cut in price after first quotations. Go careful with the man who writes you that he has always been badly treated, cheated by all and the victim of "bad luck".

Remember in all dealings to be courteous, dignified and honest. These are cardinal virtues in any business.

Aside from the actual work in the office of the poultry breeder there are some things that make the business have more tone. One is in making shipments. Use standard made boxes for stock. Put clean shavings in and a good cup of water. Label the crate plainly and have it made of as light lumber as possible. These things insure better care in transit, a better advertisement for you by all who see the shipment. The same with eggs. Pack them well. Do not stint of interlinings or packing material. Have well printed labels plainly addressed.

In all work connected with the breeding, rearing, selling stock or eggs from your flock of Rhode Island Reds, remember, "What's worth doing at all is worth doing well."

In cut No. 2 is shown a picture of our office, which used to be our dining room, as it appears today. The reprint above from the Red Journal explains all the details of the filing system, with the exception of the very top of the middle section which has been added since that article was written and which cares for the correspondence from all foreign countries, the Western Poultry Journal information bureau and one section is devoted to miscellaneous cards.

Just as the closing pages of this book are being written we had our biggest day, which, to an extent, shows the value of the work we are doing in the New England poultryman's eyes. In the accompanying cut is shown a group of poultrymen and women who made up the Connecticut Poultry Association tour this year, as they appeared listening to an account of our work, on August 17. We precarded every interesting feature we could of the work and had a display of birds in exhibition coops at right of the picture in which practically all the birds in the cuts in this book were shown. The fact that the thermometer stood at

120 degrees nearly all day when this party was at our place indicates some pretty enthusiastic poultry men and women.

Nearly all the cuts shown on these pages are self explanatory with the help of the captions. In writing this I know I will feel I have neglected many things that many would like to know about, and doubtless gone into details not interesting to some. Should I ever decide to try again I am sure I could make a more interesting job of it. I sincerely hope some may find a few hints that will prove helpful. It has been our practice from the very first to



Connecticut Poultry Association at Daniels' Plant, August 17, 1922.

give freely to the public whatever information we could, that would be of help. Not only has this been a literal boomerang to us but it has been of some little help to others, I know. Anything that stimulates interest in, and helps any business is bound to benefit all concerned. It is a pretty good ideal to follow—"helping others to help themselves."

In closing I am going to give a few recipes for home treatment of sick birds that may help until a good remedy for the ailment may be obtained. We keep a corner stocked with Happy Hen remedies. They have proven excellent and to the point when needed, which is seldom.

Ginger Pills.

For indigestion, diarrhea, colds, etc., in fact wherever a warming, slightly tonic pill can be used. One daily.

1 teaspoonful powdered ginger

1 teaspoonful powdered mustard.

1 teaspoonful powdered sulphur.

1 teaspoonful powdered asafoetida.

½ teaspoon powdered red pepper.

Mix with lard to make pills and roll in powdered charcoal. Pills size of marble.

Douglas Mixture.

Valuable as a tonic for molting birds, especially. Dose, one ounce in a gallon of water three times a week.

One pound copperas. Dissolve in two gallons of water. Add, stirring well, one ounce oil of vitriol. Keep in jugs.

For Vent Gleet.

Remove bird from pen. Wash parts twice daily with a very strong solution of Permanganate of Potash. Clean hands thoroughly. Do not get any of the discharge in eyes. With scrupulous care infection may be destroyed in ten days.

Canker.

Paint with iodine and remove the cheeselike growth. Get a good canker remedy as soon as possible.

Frosted Combs.

Thaw with snow or ice water as soon as noted. Apply carbolated vaseline freely. Look out for the next cold snap.

Bumble Foot.

Lance and cleanse wound. Use peroxide. Bandage and dress daily.

Running at Nose, Sneezing and Rattling in Throat.

Use a good roup remedy, cleanse nostril and apply carbolated vaseline or camphorated oil freely. In sudden cases where a roup remedy is not immediately available, a few drops of some standard liniment, such as Sloan's (on a bit of bread), will often give relief.

Soft Shelled Eggs.

Soft shelled eggs are caused by fright or over fat, also by a forcing ration. Remove cause. Two teaspoonsful Sulphate of Magnesia to a quart of water. Feed cut clover and plenty of clean oyster shell, which will correct this trouble unless caused by some actual diseased condition of the oviduct.

Egg Bound.

This is frequently noted in cold snaps, especially in pullets just commencing production. Remove to warm room, bathe vent with warm water and apply olive oil. Put one teaspoonful of Hayden's Viburnum Compound in one ounce of warm water and give one teaspoonful every fifteen minutes until distress is relieved.

Feather Eating.

File beak point so the tip will not meet. This allows bird to merely "comb" the feathers. Also apply a strong solution of bitter aloes to feathers. Filing the beak is also a good preventative for egg eating, but birds must be fed grain in a trough as the beak is very tender. Adding one-half pound of salt to each 100 pounds of mash will sometimes supply the need indicated by this vice.

Crop Bound.

Make an incision one and one-half inches long in outer skin of crop, after removing a few feathers. Then make a smaller cut in inner skin. With buttonhook and finger remove the contents, being sure all is removed, and wash out with peroxide solution. Sew inner skin with three surgeon's stitches (take up stitich and tie, then cut the thread). Then sew, separately, the outer skin. Feed very lightly for a couple of days and on soft food for a week.

When it is necessary to administer any medicine to a hen or chick a medicine dropper will be found a valuable help. Castor oil had best be given in capsules, as there is danger of strangulation when poured down gullet.

To break up broody hens, remove from nest the first night they take to nest and place in pen where there is no litter for nesting material. We use a 3x6 colony coop

with O. K. litter on floor. Feed exactly as in laying pens and give an outside run if possible. A series of colored bands may be used where trapnesting is not practiced, to learn the number of times in a year a hen is broody.

Regarding Advertisements.

Just a few of the people whose goods we have used have been given a chance to take advertising space in the back of book.

The Happy Hen remedies we use, and we find them as advertised.

E. C. Young of Randolph, Mass., has supplied about all the portable poultry houses, exhibition coops, etc., we have used. They are well made, economical and easy to put together.

Arthur Spiller, manufacturer of leg bands, puts out one of the finest trapnest bands to be had today. In cut No. 18 is a picture of old No. 2, who has on one of his bands, which has been in use five years. All the other birds in different cuts have the original bands with which they were started on their life work.

Carbolineum and Cut Clover we use all the year round. Both are staple articles and of great value to the poultryman, each in its own line.

D. J. Edmonds has devised *the* account book for poultrymen. Too many people raising chicks have no method of keeping track of the financial end. They never know where they stand or if they are losing or gaining. This system is so simple and accurate that any grammar school boy or girl can keep the accounts to a penny. It is of inestimable value when the point is reached that calls for an interview with the income tax man. Of course many will say that time will never come. We thought so once, but it is impossible to tell and it is a pretty good aim to make to reach it. The Edmonds Safety Account Book will help you get there, and know it when you arrive.

This fall we commence work on a check pen of birds to have as fair a test as is humanly possible on the Grandin Red Flag feeds. For several years we have watched var-

ious feed concerns with interest. The letters I have had through the information bureaus have given quite a key to many kinds of feed. All things considered, we finally consented to give the Red Flag feeds a thorough test. The pen with which this test is to be made will be in direct competition with another on our own scheme of feeding. The birds will be selected as near alike in body conformation and breeding as is possible and, aside from feed, the care will be identical. The manufacturers and ourselves both have confidence in this test, and on its results will depend a good deal of our future work. Hatchability of eggs and growth of young stock will be given a fair and unprejudiced workout, card indexing of all work being carefully followed from day to day. I feel free even now in speaking highly of Grandin Feeds, judging from the appearance and analysis and also from the high standing of all connected with their manufacture.

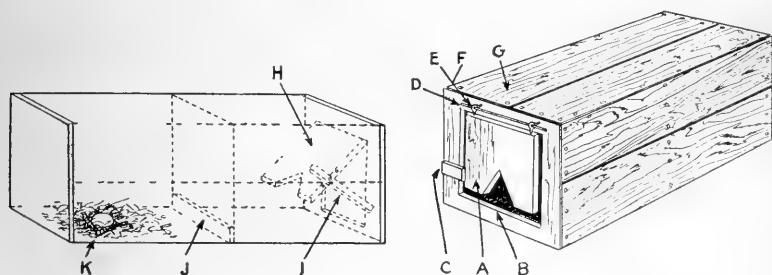
Other ads speak for themselves. We do not claim any one thing is best, but of the things we have used these have given entire satisfaction to date.

In closing I want to say just a word, individually, to each reader. Having made this work of pedigree breeding Rhode Island Reds almost a twenty-four hour-a-day job for six years, we feel we have had experience that is of value and we want it thoroughly understood that whenever, wherever and however we can be of service in this connection, to the poultry breeders interested, it is our wish to do so. We have no secret processes and anything which we have learned that can benefit anyone is theirs for the asking. Our rule has been, is, and will continue to be " 'Tis more blessed to give than to receive"—and so long as our flock supports us within reason, supplying their own expenses, our bread and butter and an occasional piece of cake, we feel they are helping us to make the world a better place for man and hen to live in.

Orange Box Trapnest as Used On the Daniels Pedigreed S. C. Red Plant

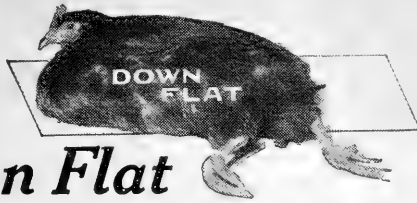
By H. A. DANIELS, Grafton, Mass.

This nest is made from solid end orange boxes. The trap is cut from one end of box cut down so it will swing freely in the opening as shown in right hand sketch. A small block on outside keeps nest from opening when hen tries to get out. The trigger or latch is a straight piece of inch by inch stock six inches long. A hole one half inch



Orange box trapnest as used on the Daniels Pedigreed S. C. Red plant. H. A. Daniels, Grafton, Mass.

off center acts as a pivot for it to move upon. A shingle nail will hold it. Be sure latch moves easily. Left hand sketch shows inside view of nest with side cut away, showing position of latch and trap when trap is set. Latch must be placed so it will lock the nest when trap falls keeping out any other hens. Two small nails can be used to keep latch from falling too low or going too high. D shows small rod trap swings on, two screw eyes acting as hinge—see F. E shows small staples holding rod to side of nest. C shows block holding trap, I shows latch both by itself and as used on nest. J shows center of nest which was the partition of box and is cut to three inches of the bottom. K shows position of nesting material, shavings, and a place where egg is laid, hen moving to front of nest to light after laying, hence no danger of breaking eggs. Nests are swung under dropping boards and slide on cleats attached to bottom of boards, an inch square strip on top of each nest serving as slides.



Down Flat

and they said she had an "incurable form of paralysis;" then
I gave her

HAPPY HEN WORM REMEDY

and now she is just as fine as ever.

When your birds have pale faces, begin to go light, stagger, eat well and still lose the use of their legs, worms are likely the cause; send at once for a package of this wonderful life-saver. Recommended by poultrymen everywhere.

Most birds have worms—worm yours every month.

Packages—\$1.10; \$2.50 and \$5.00, postpaid.

For bubbles in the eyes, sneezing and
colds, use
HAPPY HEN ROUP PILLS
\$1.10; \$2.50 and \$5.00 postpaid.

For effectively killing Roup germs in
the drinking water use
HAPPY HEN ROUP REMEDY
\$1.10; \$2.50 and \$5.00 postpaid.

For treating Bronchitis, Canker, Rheu-
matism, or injuries use
HAPPY HEN CANKER REMEDY
\$1.10; \$2.50 and \$5.00 postpaid.

For treating Chicken Pox, use
HAPPY HEN CHICKEN POX REMEDY
\$1.10; \$2.50 and \$5.00 postpaid.

For Indigestion, bluish combs, diarrhoea,
etc., use
HAPPY HEN CHOLERA REMEDY
\$1.10; \$2.50 and \$5.00 postpaid.

For White Diarrhoea in chicks, use
**HAPPY HEN WHITE DIARRHOEA
REMEDY**
\$1.10; \$2.50 and \$5.00 postpaid.

For head lice on chicks, poults, etc., use
HAPPY HEN HEAD LICE SALVE
30c; 55c; \$1.10 and \$2.50 postpaid.

For body lice, ticks, fleas, etc., use
HAPPY HEN BODY LICE SALVE
30c; 55c; \$1.10 and \$2.50 postpaid.

It is just as possible to make good poultry remedies as it is good Remedies for human use—HAPPY HEN REMEDIES are that kind—use them for the purpose intended, follow directions and then expect a lot of them—if they fail to satisfy YOU—we want to refund your money.

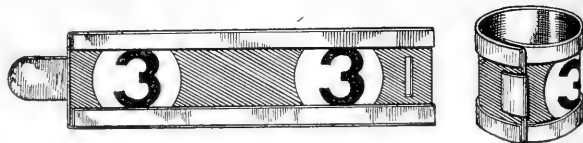
Send stamp for valuable Disease Diagnosis Chart.

Happy Hen Remedy Co.

Room 200, 36 So. Market St., Boston, Mass.

Spiller's COLOROID TRAP NEST BANDS

Trade Mark



PRICES

12 for 50c, 25 for \$1.00, 50 for \$2.00, 100 for \$3.50.

Designed especially for Trap Nest work; extra wide, and the numbers stand out boldly and very plainly. Figures are always black on white. Made in the following colors: red, blue, light green, pink, black, white, orange, dark green, yellow, brown, gray, purple. Numbered to order, as high as 1,000.

If you have any Trap Nest work to do, we especially recommend these bands. You will find that they will stand the hard usage which comes from the frequent handling of trap-nested birds, and far superior to all others for this work. Always state the breed.

**Intensely Practical, Efficient
Universally Popular
Bands That You Can See**

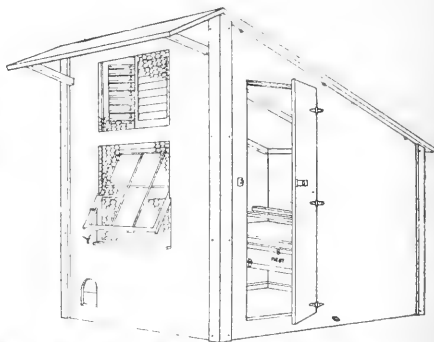
Catalog of other style
bands upon request.

**ARTHUR P. SPILLER
Beverly, Mass., U. S. A.**

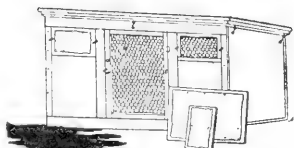
6'x8'—\$27.50

**Capacity 15 hens
Just right for your
winter flock.**

*Write for
Free Booklet*



E. C. YOUNG CO.



3'x6' Colony House—\$10.00

**90 Depot St.
Randolph, Mass.**

Free circular on request



Use SECURITY SEALED Bands



Rivet and Band made out of the same piece of aluminum. Numbered to order with raised numbers.

H. A. Daniels says—"These bands fill a long felt want with my pedigree work."

Cyko Farms, Hudgens, Ill.—"They are cleverest band made."

6 for 10c; 50 for 60c; 100 for \$1.00.

Circular Free.

Mention Breed.

Small Steel Pliers for fastening bands, 50c.

HARRY E. BAIR

"The Band Man"

Box 645-D,

HANOVER, PA.

KILLS CHICKEN MITES

Single application—guaranteed—to eradicate all CHICKEN Mites and make hen-houses IMMUNE to this pest for

ONE YEAR

Arrow Carbolineum is the only vermicide against chicken mites and other vermin in poultry houses.

GUARANTEE

We guarantee that one thorough application of Arrow Carbolineum, either by brush or sprayer, to the interior walls, dropping boards, roosts, etc., of such buildings, after a previous cleaning and no matter whether they are of wood, tar paper, or plaster, will exterminate mites in same for a whole year.

Opinions of Poultry Experts

H. V. Tormohlen, Ex. Pres. of American Single Comb Brown Leghorn Club and Editor of The Leghorn World, Portland, Ind.:

"I would like to see every poultry man and farmer in the United States paint his roosts with Carbolineum, because I believe it is the best thing found to date against mites."

University of Maine, College of Agriculture, O. M. Wilbur, Poultry Specialist, Orono, Maine:

"We have been advocating the use of Carbolineum in this state as a preventative against mites in poultry houses."

The Vermont State School of Agriculture, D. Hart Horton, Instructor in Poultry, Randolph Center, Vt.:

"I have used this product before and without question found it the only certain method of getting rid and staying rid of poultry mites; and the beauty of Carbolineum being that it is necessary to apply it only once a year."

Carbolineum
WOOD PRESERVING CO.

CARBOLINEUM BLDG.
Dept. 186
Milwaukee, Wisconsin

Hodgson Baby Chick Houses Every Time

For Brooding 250 Chicks or Less

*Handsome, economical and efficient
beyond anything else on the market*

"I have used one for two seasons and have never taken a dead chick out of it. Have had it on side lawn in a blizzard with mercury at zero and found thermometer exactly the same in the morning as when left at nine P. M. All my chicks are pedigreed from heavy laying dams and of great value, hence the importance of careful brooding to insure the least possible loss."

Herbert A. Daniels,
Grafton, Mass.

"I like the "WIGWARM" better than any brooder I have ever used. In severe weather it did not burn over a pint of oil in 24 hours, and in moderate weather about one half pint, and supplied ample heat and ventilation. It was run out in the yard with no protection when the ground was frozen and during snow-storms."

A. S. Briain, Mt. Kisco, N. Y.

"All my pedigreed White Rocks are raised in Wigwarm Baby Chick Houses, and the majority of them mature in 5½ months. This I attribute in no small degree to the start they get in your Chick Houses. The system of forced fresh air ventilation is really wonderful, and means the utmost vitality for every chick."

Harold F. Barber,
Dover, Mass.

"In my seven years' experience I have used four makes of brooders and I have found in the "WIGWARM" just what I have been looking for. In each of the four brooders I bought from you I put 60 chicks and had only two fatalities in the whole 240. They were put in the brooders on April 19, one of the wildest and windiest days I ever knew on Long Island. The second time I put 72 in each brooder with no losses."

Mrs. A. Mack,
Brookhaven, L. I., N. Y.

A Colony Brooder and Brooder-House combined. With the HODGSON BABY CHICK HOUSE you have NO coal stoves, NO brooder houses, NO cold corners, NO crowding, NO chilling, NO dead air for the chicks to breathe. Chicks raised the HODGSON way are healthier, mature quicker, and show more profit than those brooded by coal stove or box brooder.
Booklet free.

E. F. HODGSON CO.

71 Federal St., Boston, Mass. 6 E. 39th St., New York City

EDMONDS'
Safety System
ACCOUNT BOOK
for the
POULTRYMAN
copyright

Devised by D. J. Edmonds
Certified Public Accountant
Darien, Conn.

It is a regular bookkeeping system combined in one complete book, 28 pages 12x12 inches with press-board cover. Receipts recorded in columns from seven sources of income, Daily Egg Production and distribution in four columns, an Inventory Record to show stock at a glance.

On each opposite page Cash Disbursements are recorded in nine columns for Expenses and Purchases; then there is a Summary page for each month's business; an Income Profit and Loss Account and Balance Sheet with full complete instructions.

Any boy or girl can keep this book and you will find it indispensable, interesting, instructing and know results of your labor. Good for one year, postpaid to any address U. S. \$1.00, Canada \$1.25.

This system is in use in every state in the U. S. in Canada and abroad. It is highly endorsed by leading Agricultural Colleges as well as practical poultrymen.

Send today for your copy!



Grandin's

Red Flag Poultry Feeds Are Grand-In-Quality

Read this endorsement by a Rhode Island Red breeder.

M. M. TUCKER
CHIEF OF DIVISION
BROOKS BROWN
DAIRY INSPECTOR
C. H. CRAWFORD
SHEEP SPECIALIST



STATE OF MAINE

Department of Agriculture

F. P. WASHBURN, COMMISSIONER
Division of Animal Industry

AUGUSTA

May 23, 1922

CO-OPERATIVE TUBERCULOSIS
ERADICATION WORK

DR. J. B. REIDY
FEDERAL INSPECTOR IN CHARGE
DR. C. W. PURCELL
DR. E. B. BEALS
DR. R. B. STANHOPE
DR. F. L. STEVENS
DR. G. R. CALDWELL
DR. D. K. EASTMAN
INSPECTORS

To Whom It May Concern:

Last season I gave the Grandin's growing feed for chickens a thorough trial, keeping one pen of my Rhode Island Reds on it for the entire season. I was very much pleased with this feed and found it fully equal to the Grandin quality that I have always found in other feeds put out by this company. The growth and development of the chickens thus fed was gratifying in the extreme and I can heartily recommend it to any poultryman who is looking for a uniform standard of quality in this class of goods.

M. M. Tucker

Chief, Division of Animal Industry,
Department of Agriculture.

Mrs. H. A. Daniels, one of the editors of this magazine, wrote us on June 21, 1922, as follows:
"I have many inquiries through the two information bureaus, I edit (R. I. Red Journal and Western Poultry Journal) concerning high class feeds, and, while we use our own ration in our special work, I unhesitatingly recommend your feeds to those wishing a high class ready-to-feed poultry ration."

FOR BEST

Grandin's Poultry Dry Mash with Buttermilk
Grandin's Growing Feed with Buttermilk
Grandin's Buttermilk Baby Chick Starter



RESULTS FEED

Grandin's Screened Scratch Feed
Grandin's Intermediate Chick Feed
Grandin's Baby Chick Feed

Full feeding instructions in our semi-annual poultry book.

ASK YOUR DEALER FOR "GRANDIN'S"

D. H. Grandin Milling Co., Jamestown, N. Y.

Do You Keep Hens?

or

Do You Make the Hens Keep You?

The only way to be assured that the hens will keep you is to use only those ingredients in your laying mash which go into the manufacture of the egg. **OUR NIAGARA BRAND OF GREEN CURED FINE-CUT CLOVER** makes assurance **DOUBLY SURE**. Its own record is its best recommendation. It has been used in the laying and breeding mashes of the largest and most successful Egg Farms for the past 35 years. Tender, palatable, nutritious; it furnishes all the Vitamines necessary to keep the fowl in healthy condition while stimulating the function of heavy egg production. With eggs at present prices, you cannot afford to be without it. **ORDERS PROMPTLY FILLED.**

Day Old Chix and Dux

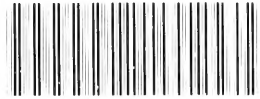
The parent stock of our chix and dux has been Hogan Tested for prepotency and high egg capacity for the past fifteen years. Their popularity has increased our output of 80,000 chix to 500,000 head annually within the past four years. Send for our **SPECIAL DISCOUNT PRICE LIST** covering early Spring deliveries.

Niagara Farm

W. R. Curtis Co., Prop.,

Ransomville, N. Y.

LIBRARY OF CONGRESS



0 000 465 142 A ●