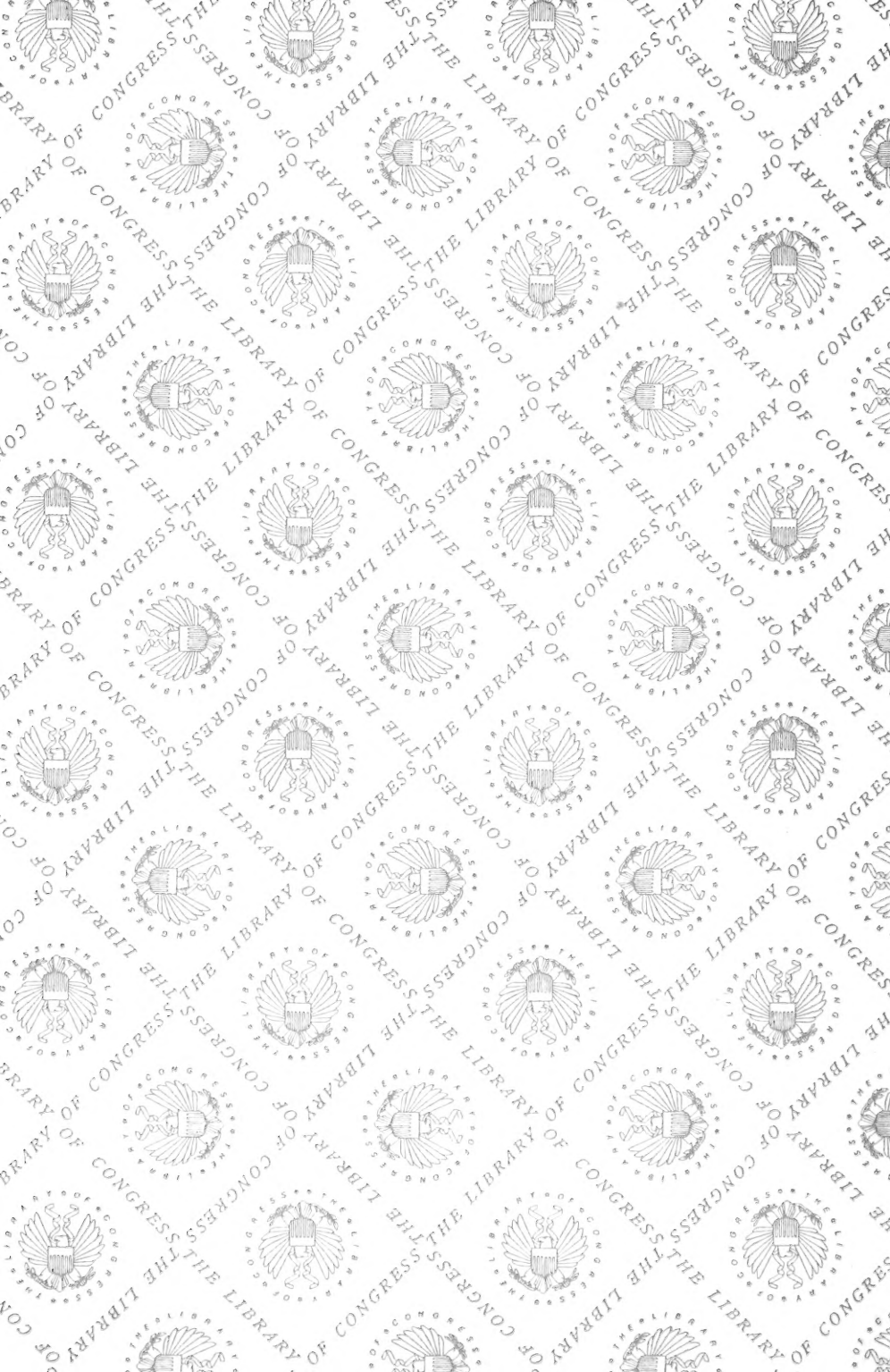
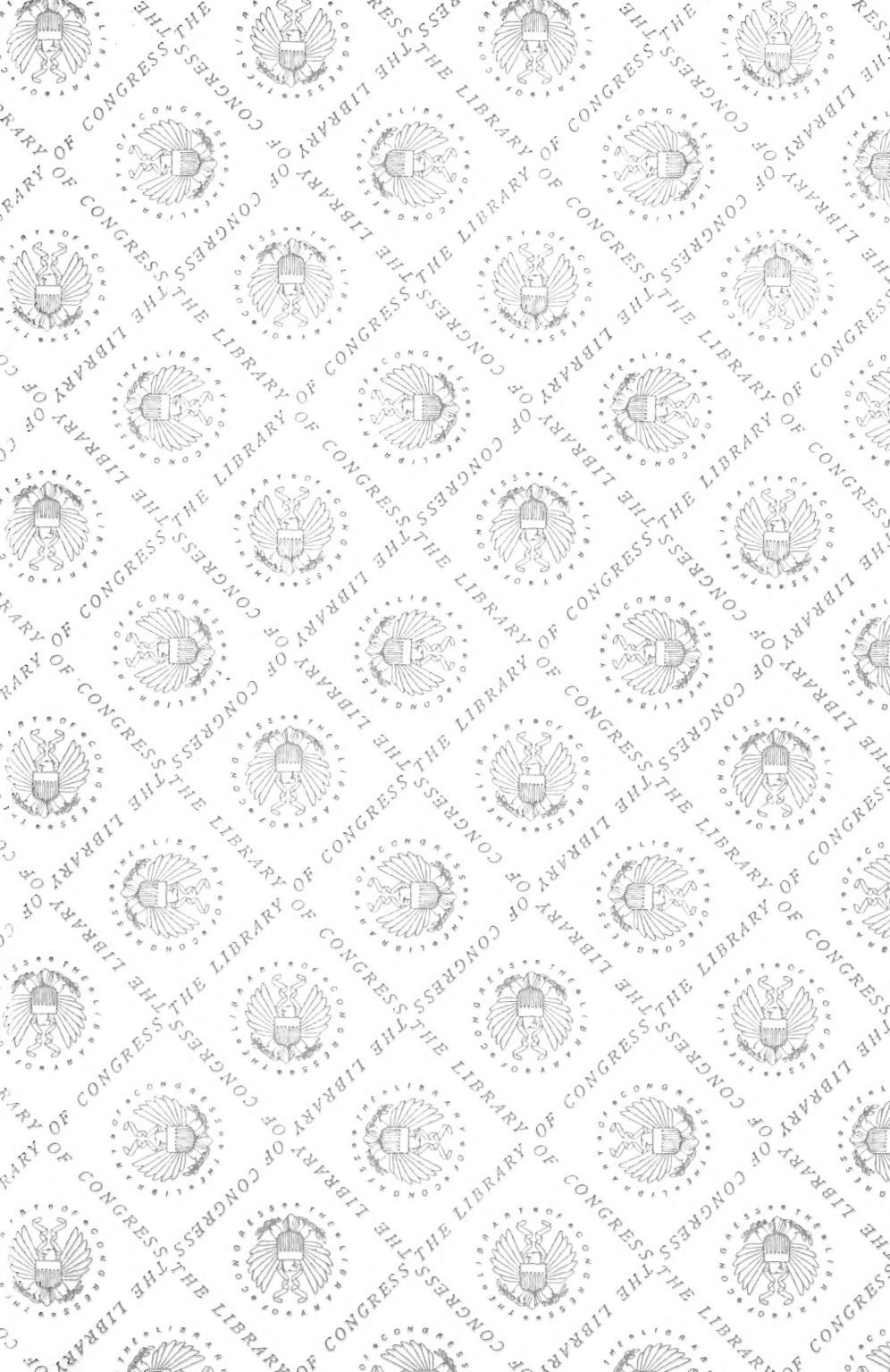


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Poultry Packers' Guide

—BY—

M. V. BICKEL.



A Compendium of Useful Information
for Poultry Dressers.



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ERRATA—In tabulated head on Page 36, Column 3, should read "Weight Per Bird" instead of Weight Per Dozen.

Mr. C. W. Jan. 7-1910

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DESCRIPTIONS OF ILLUSTRATIONS.

ILLUSTRATION 1—The birds are Fancy Chickens assorted as to size. Beginning at the left the figures 5, 10, 15, 17, 18, 25, 34 and 35 refer to Systems A and B, pages 36 to 41 inclusive; Box 19 contains Fancy Springs packed Export Style, Variation 2 (G), see p. 29; Box 21 contains Fancy Chickens packed Standard Broiler Style (A), see p. 27; Box 34 contains Fancy Springs packed Standard Roaster Style (H), see p. 29; Box 75 contains Ducks packed Standard Duck Style (N), see p. 30.

ILLUSTRATION 2—Bird on left hand of illustration is a Broiler correctly dressed and with wings tucked back or "broken." Ducks and Broilers or any birds packed breasts up appear to better advantage with the wings tucked; center bird is a poorly country dressed bird badly scarred and poorly finished; right hand bird is a roaster properly dressed, but the wing fans should have been plucked.

ILLUSTRATION 3—Front, Side and Back Views of Capon Dressed Chickens.

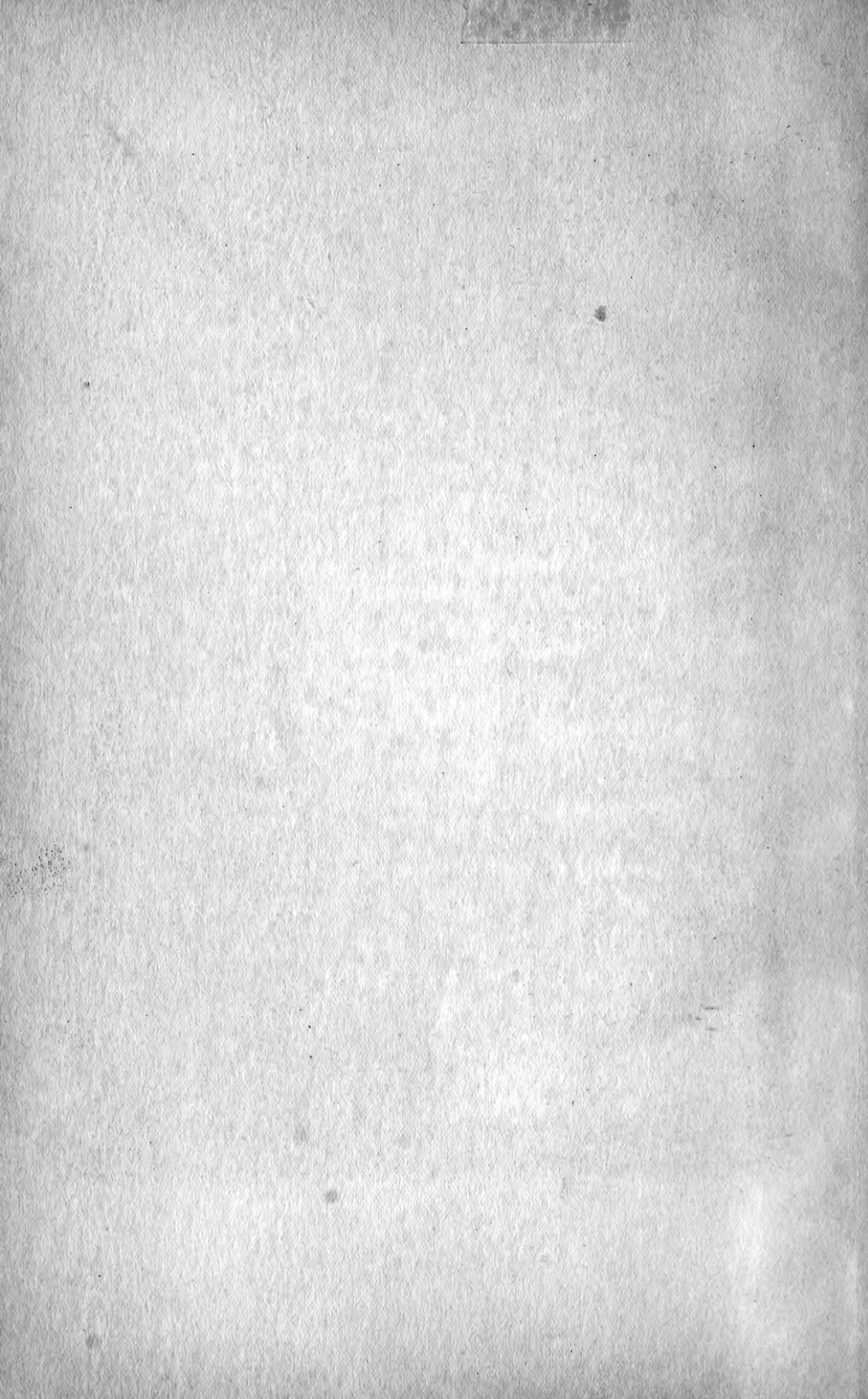
ILLUSTRATION 4—Cooling Rack, see p. 20.

ILLUSTRATION 5—Wrapping Heads, see pages 24 and 25.

ILLUSTRATION 6—Cooling Racks in use, see p. 20.

ILLUSTRATION 7—Grading, see p. 22.

ILLUSTRATION 8—Single Layer Roaster Style (K), see p. 29.



5 10 15 17 18 25 34 35



ILLUSTRATION 1.

The Poultry Packers' Guide.

Prefatory Note.

Where the demand for poultry is greater than the supply, a considerable amount is dressed by the farmer or poultry raiser and sold direct to the housewife, and the remainder is bought as needed by butchers, slaughtered and sold to their customers. A large part of the poultry raised in the Eastern states, and a limited amount in all parts of the country, is disposed of in this manner.

Where the supply exceeds the demand, the surplus is disposed of to packers or produce dealers. If the surplus is small and the market close at hand, the packer soon ascertains by experience the requirements of the particular market that he uses. Consequently, the output of these various packers differs considerably in style of dressing and package.

In those localities where a large surplus of poultry is raised, the packer must depend upon a wider outlet, and not always knowing his market at the time the poultry is being dressed, he should put up his stock in such a manner that it will be acceptable on all of the larger markets.

A vast amount of poultry is still being prepared for the larger markets in a careless and haphazard manner, not graded as to size or quality, packed in second hand barrels or boxes not uniform in shape or size and all very unattractive in appearance, but each year on account of the competition of properly prepared and standard packed poultry it has become more difficult to dispose of such stock at a profit.

The poultry packer engages in the business primarily to make a profit. It is true that the profit in the poultry business is governed to a considerable extent by several factors which are not under the control of the operator and which make the business speculative in nature. These factors are (1) the uncertain weather conditions during the packing season, (2) the impossibility of determining at the time the poultry is dressed the prices that will move the goods into the consumptive channel. This factor is caused by the difficulty of obtaining adequate or exact information concerning the supply of poultry in the country. (3) To some extent the variance of the quality

and condition of the live poultry as purchased from the farmer, though generally the average quality of the poultry in the same community, is the same each year.

However, the buying, handling, feeding, dressing, grading, packing and marketing poultry are the factors in the business governing profit that are directly under the control of the operator.

The methods of preparing poultry for market used by practically all of the larger poultry packers, and by a considerable number of the small packers, have advanced very rapidly during the past decade and are now approaching an exact science.

Information how to put up and handle standard packed poultry has been difficult to obtain by those desiring to go into the business on a large scale or by those in the business on a small scale desiring to put up their poultry in a better manner. Heretofore there have been but two ways of obtaining this information—by actual experience or by employing the services of poultry experts, both of which are expensive.

Any literature or information of a reliable nature tending to standardize and improve the methods in vogue is in demand and believing that there is need for a work that deals with the poultry dressing business in a more comprehensive manner than anything yet published, the writer has undertaken to furnish a hand book of reliable information gained from actual experience, exhaustive inquiry and careful observation. Using the information, and following out the instructions given on the following pages will enable the poultry packer, either large or small, to prepare his poultry in the most approved and attractive manner and get it to the market in the most wholesome condition; and thus will obtain the maximum market price and consequently a larger profit.

CHAPTER I.

Introductory.

The source of supply of poultry for the Eastern markets has been gradually moving westward and at present the largest proportion comes from the middle Western states.

There are few exclusively poultry farms in this territory and practically none given entirely to the raising of market poultry. Poultry raising on the general farms is a side line and is not carried on in a scientific manner.

A portion of the poultry in all communities is of a good table quality and fairly well fatted when marketed. This por-

tion varies greatly in different localities. Where Plymouth Rocks and other "American" breeds, such as the Wyandottes and Rhode Island Reds, predominate, the average quality of the packer's output is higher than in communities in which the Leghorn or small, scrubby stock is more numerous. Various methods have been tried in different communities to raise the grade of table poultry with varying, and in most places, indifferent results. It is indeed a stupendous, or almost impossible, undertaking for a packer in some communities to improve the quality of their product. The most practical thing to do is to buy the raw material at right prices and make the best of it with careful handling and proper grading and packing. If the stock is consistently poor, it may pay to move to another locality where the stock is known to be of better grade.

Some of the methods of improving the quality of poultry of a locality that have been used with a degree of success are, (1) paying a lower price for Leghorns and other scrubby stock than for breeds possessing good table qualities such as the Plymouth Rock, the Wyandotte or the Rhode Island Red; (2) selling cockerels of a utility type of the above mentioned varieties, that some farmers bring in, to those farmers who have poor stock, in order that they may gradually improve the table qualities of their flocks; (3) buying good cockerels are bought from customers, importing utility pure bred cockerels and selling them at cost or exchanging pound for pound for poultry brought in.

By a utility type cockerel is meant a good, blocky bird with short shanks and legs set well apart, having a long body and a deep, full chest, and of good size.

Encouraging poultry shows or exhibitions, and offering liberal prizes at same or at county fairs on Plymouth Rock and other market varieties, and especially on the utility type of same, is advised.

While it is true that the poultry fancier seems to breed more for feathers than for anything else, still the standard requirements for pure bred poultry are such that breeding for shape and size are necessary, and it is well to encourage the poultry fancier as much as possible, for it has been found that the more poultry fanciers there are in a community, the higher the grade of poultry. This is due to the fact that the surplus cockerels are generally sold in the neighborhood and if the farmer is educated right he will buy only cockerels of the breeds recommended above. It has been found that reading matter in local papers pointing out the advantages of the market breeds and utility bred stock proves effective.

CHAPTER II.

Buying, Shipping and Holding.

The smaller packer buys nearly all of his stock direct from the farmer or raiser. In some communities in order to obtain a regular supply it is necessary at least part of the year to send out buyers with wagons. A light wagon should be used and the team should be good travelers, so that sufficient distance can be covered to make it pay. The wagons should be fitted up with built in coops made of light lumber and wire poultry netting. It is well to go over the route the day before in a buggy and engage the poultry so that the farmer will have a chance to catch up the birds. The telephone can often be used by the buyer in engaging the poultry on a proposed route. When a route is made regularly, it is obviously not necessary to go around twice, as the farmer will know when the buyer is coming and will have the poultry caught up and ready for him.

The larger packers depend upon receiving considerable of their supply from a distance, shipped in by express or freight. Shipments by express come in quicker and with some less shrink but at a higher transportation cost. The majority are freight shipments. The larger packer secures his supply from local buyers who may buy the stock from the farmers and sell to the packer or may act as the agent of the packer either working on salary or commission. Poultry is frequently not handled properly before it reaches the packer and in such cases there is considerable shrinkage and more No. 2 birds.

Care should be taken in making up shipping coops, so that the slats on top are so close together that the birds cannot get their heads through. Freight handlers are very careless and many birds are killed by slamming one coop down upon the other while the birds have their heads up between the slats. The coops should also be made with sufficient distance between the two upper side slats so that the birds can get their heads through for feeding and drinking. For this purpose use galvanized iron troughs about three inches deep, an inch and a half wide at the bottom with a width of three inches at the top, made with two hooks for hanging over the edge of the next to the top slat.

Sometimes it is necessary to hold over night a considerable quantity of live poultry without cooping. If this poultry is placed in a vacant building or yard and no perches be provided, it will very likely pile up into a heap and a considerable number will be smothered. All buyers should be informed of this peculiarity of chickens and thus prevent a loss that

otherwise will probably come to them sooner or later. If perches cannot be provided, build a platform ten inches or a foot above the floor or ground, leaving the boards wide enough apart to permit a good circulation of air and run the poultry under this platform.

In shipping from the buying station to the dressing plant by freight, especially if the weather is warm, the buyer should insist on the railroad company furnishing a stock car. Also during hot weather care should be taken not to overcrowd the coops.

Each variety of poultry in shipping should be cooped separately as much as possible. Not only will less loss from dead birds result, but it will be much more convenient to weigh in and care for the poultry at the dressing plant.

When the poultry is bought direct by the packer from the raiser, the dressed stock will consist of a larger proportion of No. 1 or best quality birds and also there will be less shrinkage. The large packer receives the majority of his supply of poultry from a distance. Many of his buyers do not understand how to feed poultry properly. In holding, they either overfeed or neglect the stock, generally overfeeding just before shipping in an attempt to keep down the shrink. This neglect and overfeeding often gives the birds indigestion. A bird once sick has little chance to regain weight in a large packing plant.

The large packer often receives more stock than he can take care of properly, because when his plant is in a glutted condition he has to employ considerable inexperienced and incompetent help. Thus it is no wonder that the larger the packer the more there is of No. 2 stock.

Most poultry when received from the raiser is in fair condition, and unless it is to be especially fattened by the packer, it should be killed and dressed the second day after it is received, or as soon after that as possible, as it will dress out much brighter in appearance than if it is killed the same day that it is brought in.

For holding poultry there is nothing better than yards or pens. These are constructed on either side of a central driveway which is used in filling the pens, and also in transferring from the pens to the killing room. A part of each pen should be roofed over and be well protected from the weather. Ample perches should be provided which should be hinged so that they may be fastened up during the day time. If the perches are left down, a considerable portion of the birds will roost during the day, especially if the pen is a bit crowded, and

will not take sufficient food and thus lose in weight and condition.

In inclement and severely cold weather, it will be necessary to hold in coops under shelter. If, however, birds are held any length of time in ordinary shipping coops with no chance of cleansing same, they are apt to become "coop burnt." Birds in this condition are, in plain language, sick, and the causes are the unsanitary conditions of the quarters, poor ventilation, and neglect or improper care in feeding.

In holding poultry, it should be fed on cracked corn, moistened with water. Withhold all food 12 or 18 hours before killing. Some packers use buttermilk instead of water for moistening the food, but this must be used carefully so as not to throw the birds "off their feed." Grit should be given freely and many packers mix with the last "feed" a large portion of gravel or grit. This will remain in the gizzard and increase in size and will materially cut down the dressing shrink. Always give the poultry plenty of water before killing as this will cause it to dress out brighter, as well as lessening the shrinkage.

If any food remain in the crop after the bird is dressed an opening should be made into the crop at the extreme side and just above the wing or shoulder joint and the food taken out. Some poultry dressers allow the bird to have some food up to the time of dressing and remove what may be in the crop after the bird is dressed. This is done to reduce the shrinkage, but as it hurts the appearance of the poultry and especially lessens its keeping qualities, it should not be practised. Turkeys should invariably be dressed the day they are received, for a turkey will not take food in confinement and will shrink every day it is kept. If it is absolutely necessary to hold turkeys they should be held in pens.

It is customary for some packers to "yard feed" ducks from two to three weeks. It is well not to begin too early in the season, as they make little or no gain if fed in warm weather. Feed on dry whole corn and keep a constant supply before them. It is well to have water from a hydrant running constantly through troughs in the yards, but if this is impossible, they should be watered very frequently.

In selecting the location for a yard, choose one that is well drained, and if possible, with quite a slope. The yard must be kept in a sanitary condition or the ducks will die off, generally developing a disease commonly called "sore eyes." A duck of its own volition, will not go under shelter, preferring the open, and in cold and inclement weather they should be well bedded down in the yards with dry straw.

After the weather becomes settled, which in Northern Iowa, is by the middle of November, it is the practise of the larger packers to buy dressed stock from some of their buyers and from smaller dressers, likewise dressing stock at their own buying stations, if same are equipped for this purpose. It may be possible to ship in dressed stock earlier, say by Nov. 1st, if the packer has artificial cooling facilities and the shipper can cool out properly and is near at hand so that the poultry will not be delayed in transit.

The small dresser should follow the same procedure in dressing and cooling as outlined for the packer in Chapter IX, and should pack his poultry carefully in barrels or large packing boxes for shipment, wrapping the heads with newspaper and lining the barrels with common wrapping paper; care should be taken to keep the poultry clean and in a wholesome condition.

CHAPTER III.

Milk Feeding.

In this country during the past ten years poultry has been fattened by a special method known as "milk feeding." In Canada and in England this method is called "crate feeding," and has been practiced in England and on the continent for a great many years. Various articles have been written for the poultry press, and bulletins issued by experiment stations in this country and in Canada, but none of which covers the ground in as comprehensive a manner as could be desired. No attempt is made in this hand book to give exact directions for milk feeding. You are referred to a booklet called "Feeding Chickens for the Packing House," by F. C. Hare, published by the Egg Reporter of Waterloo, Iowa, and which can be obtained from the publishers for 35c. This little work contains some valuable information, and the rations given, and the directions laid down are practical and can be followed out especially by the small packer, with profit. I wish to caution the reader, however, concerning Mr. Hare's methods of dressing and packing, which are the Canadian methods, but which would not be standard in this country. You are referred to following chapters in this hand book on packing poultry and especially that part devoted to squatted poultry, for information as to standard packing.

Up to the time of this writing I have found that Milk Feeding on a large scale has been successful in an indifferent way. While some large operators claim to have made a great success, and are fattening more poultry in this manner each year, building additional houses equipped for this purpose

and at the same time increasing the facilities at their older plants; others have abandoned it as worse than useless as far as profit is concerned.

There is no doubt that the quality of some poultry can be greatly improved by Milk Feeding when properly done. Individual birds take on a large increase of weight and the quality of the meat is greatly improved and increased in value, but the general profitableness of the carrying on of Milk Feeding on a large scale is questioned by many. At times, too, there have been quantities of poorly fed birds offered on the markets, birds that show the effects of sour and otherwise improperly prepared food, birds whose flesh is soft and flabby and which falls away in an unsightly manner from the framework, and these have hurt the reputation of milk fed poultry to some extent. However milk fed poultry is and always will be in demand.

My experience leads me to the belief that, while Milk Feeding is practical and will give a profit when properly done, it is and will be most successful when carried on by the small packer. Milk Feeding poultry corresponds to feeding steers for market and is of the same character as intensive farming, such as market gardening and fruit raising. Feeding steers would not be profitable in large stock yards, where all the help would be known as "hired help;" and market gardening and fruit raising is most successful when conducted on a small scale, and where each farmer or raiser cultivates a small patch of ground and does his own work or can oversee it personally.

The results obtained by some of the smaller packers who do the feeding themselves are surprising. In the first place they have a decided advantage in the quality of stock they get to put on feed. It is brought directly to them from the farms and therefore is superior in health and vigor to that of the large packer, whose stock is, as I have previously explained, indifferently cared for by the buyer before it is shipped, and subjected to various hardships during shipment. The small packer being able either to feed the birds himself or to watch carefully the way they are fed by his help gives him a second great advantage.

Milk Feeding in a general way consists in confining from two to ten birds in coops with a slatted bottom permitting the droppings to go through to be caught and retained by a sheet iron pan, which can be cleaned daily. These coops are in batteries of about two dozen. They are three and four tiers high and the coops are generally back to back, a dozen on a side. They are housed in a well ventilated warm building,

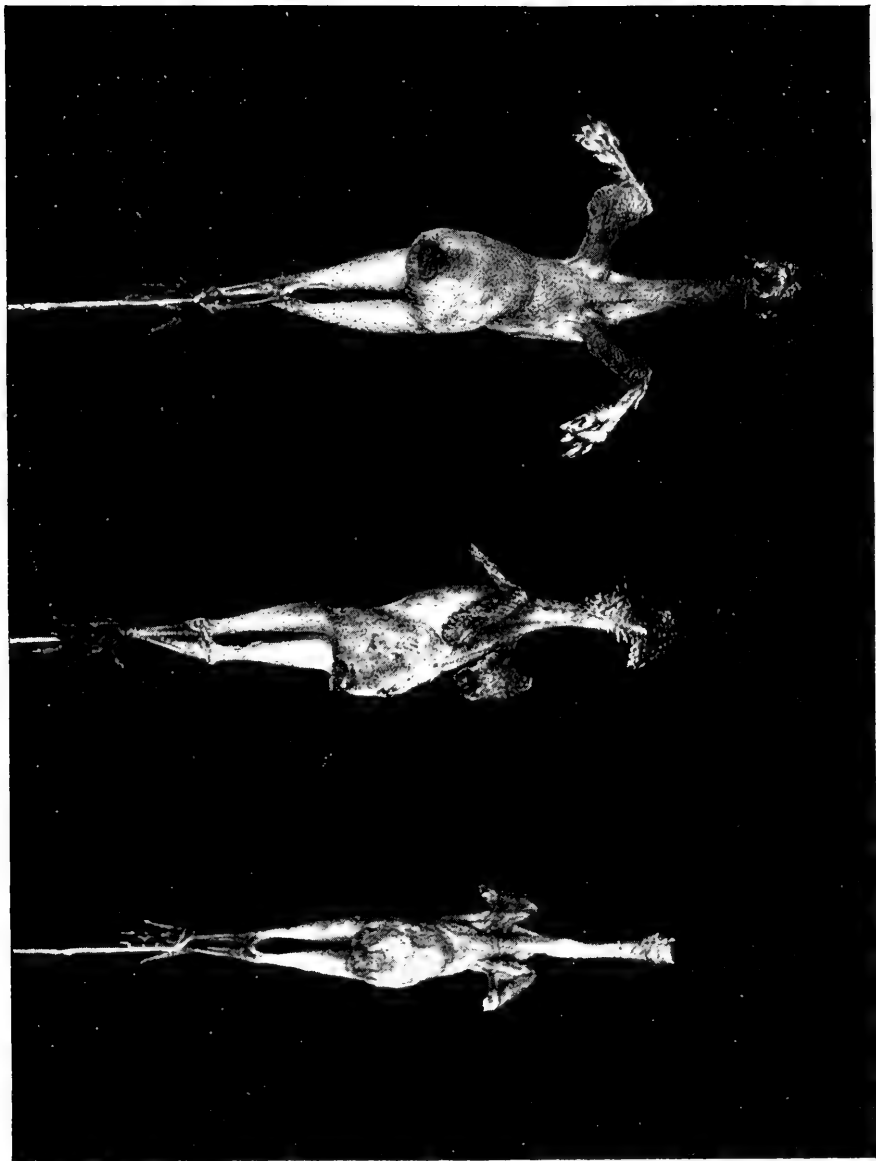


ILLUSTRATION 2.

and the sanitary condition should be as nearly perfect as possible.

The food is a ration composed of ground grain, moistened sufficiently with skimmed milk or buttermilk so that it will pour. In the country buttermilk is almost universally used. The grains used are oats, corn, barley, low grade flour, all finely ground and bolted, and the remainder of the ration may be made up of beef meal, alfalfa meal and tallow. For the proportions I refer you to Mr. Hare's book. If too much corn meal is used, the chickens will pick each others' feathers. This is remedied by cutting down the proportion of corn meal, also by feeding blood meal or beef scraps. Tallow is fed during the last few days in order to give the bird a finished appearance. Great care should be taken not to over feed. It is not deemed necessary to discuss or describe the cramming machine as the use of same has been found to be impractical.

Milk fed chickens intended for export should have a white flesh or appearance. This is produced by feeding the proper length of time to get rid of the yellow corn color that most chickens have when "put on feed." Sometimes it is necessary to substitute white corn meal in the place of yellow. A white colored milk fed chicken is fully as much in demand in this country as it is in England. Of late, however, a yellow tinted milk fed roasting chicken sells on most of our domestic markets equally as well as a white tinted chicken and on some markets is now preferred and will bring a higher price. The yellow color is obtained by an abundant use of yellow corn meal. It is possible to finish up a yellow milk fed chicken in less time than it takes to give it a white appearance.

In selecting birds to be fed, use utility type chickens if it is possible to obtain sufficient of this type for the capacity of the plant.. A broiler is a chicken that weighs under $2\frac{1}{4}$ or $2\frac{1}{2}$ pounds. A broiler that weighs 2 pounds or less is more valuable than one that is heavier. Broilers are in great demand. Fryers are chickens weighing from $2\frac{1}{2}$ to $3\frac{1}{2}$ or up to 4 pounds each. They are not in great demand in this country and many have to be exported. Sometimes a milk fed broiler will bring as high as 10c per pound more than a milk fed fryer and a corn fed broiler, or ordinary broiler, one killed as brought in by the raiser, will bring 4 or 5 cents more per pound than a milk fed fryer. If a bird weighing $1\frac{3}{4}$ pounds or over is milk fed and does well it is apt to weigh over two and a half pounds when finished and thus will be a fryer or of undesirable size, and will sell for a lower price per pound, even though of improved quality. The gain in weight will

not compensate for the loss in price. The most profitable sized bird to feed is one that will weigh when finished above 4 pounds. Any spring chicken weighing 4 pounds or over is called a Roaster. A Roaster always brings several cents more per pound than a Fryer. It is therefore of advantage to feed a Fryer into a Roaster thus obtaining three gains, in weight, in quality and in price.

The chickens on feed should be watched carefully. Many Packers dress immediately any bird that shows signs of being "off its feed." It does not pay to bother trying to cure a sick chicken.

Milk fed chickens are more difficult to dress than ordinary corn fed stock. This method of feeding starts a new set of pin feathers which are short, and delay the work of the picker. If work is piece work, the picker will demand a higher price per bird. The bones of a milk fed chicken are very weak and brittle and often in killing and dressing when the bird flops its wings they are broken and this disfigures the finished bird.

CHAPTER IV.

Dressing.

Chickens and turkeys are dressed using two different methods, scalding and dry picking. Ducks and geese are either scalded or steamed.

Scalding.

Considerable poultry is scalded for Eastern markets early in the season in Michigan, Indiana and Illinois, but little west of the Mississippi River. Most of the scalded poultry is packed in ice and must reach the market promptly, as it will not keep when ice packed as long as does dry picked stock.

Scalded stock is rarely dry packed, excepting broilers, which are prepared for freezing early in the season. There are few expert "scald" men in the West, and outside of some large plants, most of the "scald" work is poorly done. In some plants the birds are "roughed" dry before scalding in order to save the feathers. In this case they are bled in the same manner as if they were to be entirely dry picked, which method is described later.

If none of the feathers are to be saved, the bird is bled by severing both jugular veins and at the same time breaking the neck. The birds should be well bled and the "scald" should wait until the birds have stopped moving before dipping in the hot water. The bird is dipped several times in scalding water kept just at the boiling point. Experience will determine the

correct time of holding in the water. The head should be kept out of the hot water. Dipping the head gives the bird a sickly appearance. If you intend to scald to any extent, employ an experienced man. An expert works on a table, others hook up the birds or work on a string. The feathers are removed as rapidly as possible without breaking or marring the skin, and if the stock is to be dry packed it should be handled with extreme care in this respect. To do good work on the wings and legs is especially difficult.

After all the feathers are removed, the bird should be "plumped" by dipping several times in hot water and then in cold. If the stock is to be ice packed, it should first lie in water at the temperature that it comes from the well or hydrant. The animal heat is drawn out in this manner better than if placed at once in ice water. It should be held in ice water until the time to ship, though if it is to be held any length of time it should be repacked in cracked ice without water. To pack for shipment use barrels and plenty of cracked ice, a layer of ice then one of chickens until the barrel is filled. If the poultry is to be shipped any distance a "header" of ice should be placed on top of the last layer and the top of the barrel should be covered with burlap securely fastened over the header, using the top hoop. A header is a piece of ice about a foot square, larger or smaller, depending upon the season of the year and the distance to be shipped.

If the poultry is to be dry packed, it should be cooled dry the same as dry picked stock, as will be described later, and should be graded and packed in the same style.

It is cheaper to scald poultry than to dry pick it, but on most markets it does not bring as good a price and it is more difficult to place or sell it to advantage.

Old roosters are quite frequently scalded, as they sell nearly as readily dressed in that way as they do when dry picked. Most turkeys in the West are dry picked. Eastern turkeys are quite generally scalded.

CHAPTER V.

Dry Picking.

The standard method of dressing poultry for the Eastern markets is plucking the bird immediately after sticking. The bird is plucked dry. This method is called dry picking.

There are two methods of dry picking: String picking, when the bird is hung by its feet on a stout cord, and chute or bench picking. On the average, chute or bench pickers do the best work, though some string pickers do equally as good

work. Chute pickers save more feathers. In chute or bench picking, the bird is fastened to a slanting table-like bench by hooking through the upper bill. This bench slants away from the picker and is about 18 or 20 inches wide and about waist high. The head of the bird is away from the picker and the blood passes through a hole in the bench into a pail or other receptacle. The bench is padded and covered with canvas to prevent the birds from bruising themselves or marring their skins. The feathers are caught in a bin extending along in front of the pickers.

The birds are stuck or bled in the roof of the mouth and should not bleed too fast. It takes practice for a picker to acquire the knack of sticking so that the feathers will loosen and be easily removed. A poor "stick" will set the feathers and the bird will be difficult to pick and will most likely be torn before it is finished. Do not sever the jugular veins in dry picking. The bird should be "brained," as it is called, by piercing the brain, either through the roof of the mouth or from the outside just under the eye. An experienced picker knows if the bird is stuck properly by a certain quiver it gives.

If the packer has had no experience whatsoever in dressing poultry, the services of at least one good picker should be secured. In fact, it will be somewhat difficult to operate without securing the services of a number of good pickers. Picking is generally done by piece work and the amount paid varies in different communities, and ranges from 2 to 3c for chickens, and from 3 to 4c for ducks, and from 4 to 5c for geese and turkeys. Some operators hire roughers by the day and these stick and take off the large bulk of body feathers, which is easily and quickly done, and the birds are finished by pinners, who finish the legs, neck and wings and remove the body pin feathers. The pinners are generally paid by the piece. Some houses turn the picking over to expert pickers to be done by piece work and allow these pickers to employ and pay their own pinners, and hold the pickers responsible for the quality of work done by their pinners. In this way when there are a large number of birds to be dressed, each picker employs as many pinners as he can get and when business is dull the pinners are laid off. This is quite a successful plan to use and generally results in good work being done.

Essential requirements.

Insist on the following: (1) All birds should be well bled. Note carefully the hips of the hens. Red hips denote poor sticking. A good picker will not turn out birds with red hips. (2) Do not allow your pickers to turn out torn birds or birds with barked up skins. If the picker should receive

no pay for the bird he tears, it would cover but 20 per cent of the loss to the packer, because the torn bird must be placed in a lower grade and sell at a lower price. (3) See that the feathers on the neck are picked well up to the base of the skull or to the ear openings, also see that the "garters" are picked off. In many small establishments the pickers follow a poor practice of leaving birds with garters—a ring of feathers above the joint between the shank and drum stick. See Center Bird of Illustration 2.

After the bird is dressed, the feet and head should be washed, using a stiff brush, and the vent should be well squeezed to remove any dung. If this is not done, the chicken will likely develop a green butt.

CHAPTER VI.

Dressing Ducks and Geese.

Ducks and geese can be dressed by two methods. They should either be bled, cutting the jugular veins, the wing and tail feathers plucked, and then steamed, or they should be stuck to loosen the feathers and roughed, that is, most of the body feathers are taken off and then powdered rosin is well rubbed into the down and remaining feathers and the bird scalded. This will not only loosen the feathers but it will also matt them together and they are much more easily removed than when scalded without the rosin. This method is generally known as "rosining," but steaming is advised because it saves more feathers, is quicker, and turns out equally as good finished birds.

In steaming, care should be exercised to have dry hot steam. Steam conducted from a distance condenses considerably before reaching the steamer and being wet it is likely to burn the duck and cause an unsightly scalded or burned look. When steam is conducted any distance, each time it is to be turned on for a batch, it should be shunted or turned off into a waste pipe for a moment to get rid of the accumulated condensation and then turned into the steamer. A method that is advised when steam has to be conducted from a distance, as is often the case in many large plants, is to conduct the steam into the steaming compartment through a drying chamber below. If the steam is run into this and permitted to pass up through various openings into the steaming chamber proper, it will be found that the steam is quite dry and that good work will result.

The most satisfactory work, however, is done when the steam is made close at hand. Use for this purpose a small steam feed cooking boiler and conduct the steam through the

shortest possible pipe to the steaming chest. The most economical chest and at the same time a good one can be made by using a vinegar barrel and fastening a tight cover over half the top, the remainder of the top being hinged. Three or four grooves can be cut into the solid cover to be used to hang the birds by the neck when steaming, or hooks can be provided for the same purpose. Some small packers use a gasoline stove of two burners or a coal fire in a flat topped laundry stove and use an ordinary wash boiler with a tight cover. About three inches of water is used and a wooden slatted platform is supported about six or eight inches from the bottom. Place one duck at a time on same, steaming $1\frac{1}{2}$ minutes, breast down; 1 minute, back down. Special care should be taken to prevent the head from hanging down in the water.

CHAPTER VII.

Dressing, Continued.

Capons, Guineas, Squabs and Pigeons.

Capons should be dressed capon style. By this is meant the style that has become standard and which requires that the feathers be allowed to remain on a considerable portion of the bird. Leave the feathers on the upper half of the neck. Pick the breast clean, pick around the vent and up to the large tail feathers. Pick the entire under side of the wing, all three joints; pick the upper part of the first joint next to the body. Leave the feathers on the upper part of the last two joints including the long wing feathers or flights. Leave the saddle feathers on the back to within $2\frac{1}{2}$ or 3 inches of the tail. See Illustration 3.

Some large capon packers vary the above style by picking the leg or drumstick clean and removing all, or nearly all, of the saddle feathers. Also leaving all the feathers on both sides of the two outside joints of the wings.

Sometimes heavy springs or even heavy hens are dressed capon style and sell readily. At other times the feathers will have to be plucked by the receiver in order to find a sale for same. If you can find an outlet, pick some in this manner; otherwise, don't risk it.

Guineas.

Guineas are very easily prepared for market. All that is necessary to do is to break the neck and allow them to cool over night before packing. Do not pluck the feathers. In killing, the skin should not be broken, as this would spoil the

appearance of the bird. It is generally well to throw them in a barrel or large box until they are quiet, then place on shelves or racks with the head hanging down to allow the blood to gather in the neck.

Squabs should be bled and dry picked and the work should be done very carefully.

Pigeons are killed by breaking the necks, the birds allowed to cool and packed with the feathers on. If the neck is properly broken, no blood will appear on the outside of the bird.

Feathers.

All body feathers should be saved and the wing and tail feathers of all but hens, ducks and geese. Save from each kind of poultry separately. As the white feathers are much more valuable, they should be kept from the colored. Be sure to save the rooster tail feathers; save the whole "grab," that is, the whole handful as the picker removes the tail. Wing and tail feathers may be sacked at once, but it is well to place the body feathers in bins if the room can be obtained and stir well with a large fork every few days to keep from matting. You will find a ready market for all prime, properly cared for feathers.

All duck and geese body feathers should be carefully saved, each kind separate, as they bring a big price, and the white of each kind by themselves, as they are more valuable than the colored. If the feathers from steamed ducks or geese are thoroughly forked every day, they will dry out and become prime and are equally as good and sell for the same as what are known as live duck or geese feathers. The geese feathers will bring more money per pound than the duck. If duck and geese feathers are carefully handled, they will pay for the cost of dressing.

CHAPTER IX.

Cooling.

If this hand book had been written ten or fifteen years ago, it would have been proper to have devoted this chapter to drawing, as removing the entrails would have been at that time the next step in preparing the poultry for market.

Up to within a few years some markets required that the poultry be drawn before it was packed. Likewise in the immediate past, especially at the time of the pure food agitation, there was some prejudice and considerable agitation against undrawn poultry being marketed or put in the freezer. This prejudice has been demonstrated to be unfounded and the agi-

tation has gradually died down and at present one hears very little objection to undrawn poultry.

The standard requirement is now for undrawn poultry and I doubt that it ever will be changed. It would be impossible to put a good quality of poultry on the market under present conditions if it were necessary to draw it, as this would expose the inside to contamination and lessen instead of increasing the keeping quality.

It is absolutely necessary that the animal heat be allowed to pass out of a dressed bird as soon as possible after it is killed. The abundant bacteria that are always present begin to develop very rapidly as soon as the bird is dead unless it is cooled. Cold retards the development of bacteria, and when the temperature of the bird is near freezing the development is very slow, and when frozen it is practically suspended.

However, a dressed bird should not be placed at once where the temperature is too low, say at freezing or below, for in this case the bird will not cool out properly. We hear around poultry houses the common and paradoxical saying, "Cooling too quickly drives the heat in." An explanation that has been offered for this phenomenon, is that exposing the bird to quite intense cold does two things that prevent the radiation of the heat from the bird, or as commonly expressed, prevent the bird from cooling: (1) hardens the outside of the carcass causing it to act as insulation, (2) congeals the moisture near the surface and stops the flow of the juices of the body. The moisture or juices of the bird continue to flow from one part of the body to another for a considerable time after the bird is killed, especially if one part of the body is colder than another and this affords an avenue for the internal animal heat to escape, but when the juices are congealed at the outside the flow ceases. It is certainly true that if the bird is placed immediately in too cold a temperature, the heat is held within long enough to give the putrefactive bacteria a chance to develop to a sufficient extent to give the bird when cooked an offensive flavor.

Of late years the larger packers have equipped their plants with artificial cooling facilities and are thus in a position to box pack their poultry during the summer months as well as when the weather is cold. The rooms are held at from 40 degrees to 45 degrees, although some cool at 34 degrees to 37 degrees. If the poultry is to reach the freezer or market within two or three days it can be held in a room at from 32 to 34 degrees, but in the Southwest, where a great deal of summer dressing is done, it is customary to hold it in a room at about 27 degrees for from 48 to 72 hours before ship-

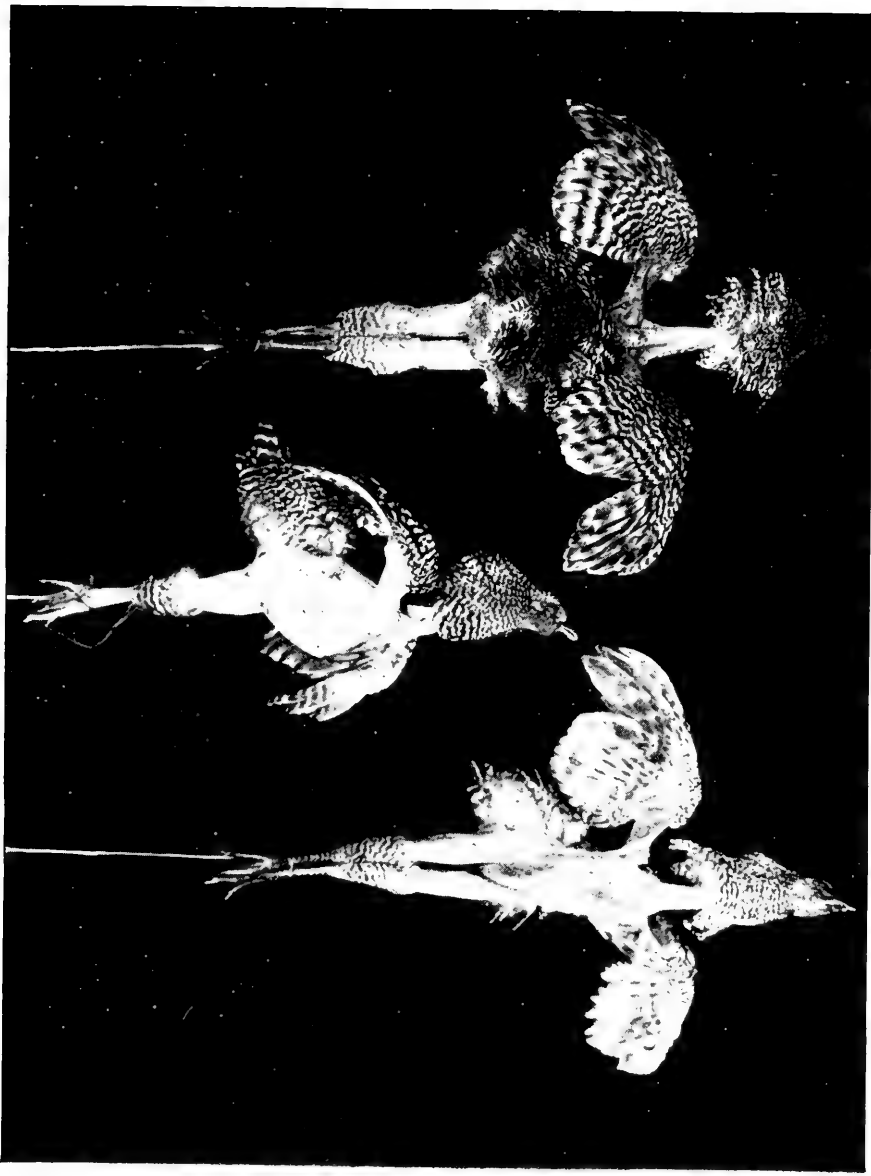


ILLUSTRATION 3.



ping, and thus thoroughly precooling. This will generally insure the stock reaching the market in prime condition if handled properly in transit even though it take from 7 to 9 days.

See Chapter XVI for additional information concerning precooling.

The small packer must depend upon the weather in putting up dry packed poultry. The safest way is to wait until the weather is thoroughly settled, which in Northern Iowa is by Nov. 15th, before starting to dry pack. Many, however, in order to get more stock put up, begin earlier, about the 1st of November. They cool out at night and pack early in the morning and get the boxes into a beef iced car on their side track. If the weather is warm, the birds are placed in the car to cool, being careful to get the birds as cold as possible before placing in the car to prevent the temperature of the car from rising and thus injuring the poultry already packed.

Some small packers who begin early ship each day to the freezer if the freezer is near at hand; and if the poultry will reach it the same day as packed, shipments can be made by freight, but if at a distance shipments should be made by express. If the weather should turn warm with dressed poultry on hand, it is customary to cool in ice water and dry off as much as possible before boxing, and shipping at once to the freezer. Some ship in ice to the freezer, where it is graded and boxed by the Cold Storage Co., and a charge made only for the actual cost of labor and boxes. As to the desirability of cooling in ice water, and then freezing, there is some question. A great deal of poultry is handled in this manner early in the season, and if it is merely cooled out over night in ice water, then dried well and boxed and frozen immediately, the appearance is just as attractive as that of dry cooled stock, and it will thaw out in just as good condition. If poultry is shipped a long distance in ice, or is held in ice a considerable time, then taken out, box packed and frozen, it will not freeze with as good an appearance, nor will it thaw out in the best of condition.

Cooling in ice, drying off, then boxing and freezing will eliminate considerable of the risk of handling stock early in the season, and will often save a big loss. It is not deemed practical to cool in ice, then dry pack, and ship to a market at a distance. Poultry handled in this manner should be frozen as soon as possible after being put in boxes.

Cooling Equipment.

In many large plants shelved trucks are used for holding the birds in cooling. The birds are laid on these in the picking room and when filled they are run into the cooling room and the birds left undisturbed until graded for packing. There is only one objection to this plan and that is the large amount of space required for cooling. The plan is certainly the most economical of any as far as saving of labor is concerned.

A good, practical plan is to have cooling racks with slatted bottoms, made to hold about two dozen birds, and made so one can be placed on top of the other. See Illustration 4. The sides are made to project about a foot beyond the solid ends and are used as handles for carrying or moving. These can be stacked one on top of the other and loaded on platform trucks and in the cooling room can be stacked up to a considerable height, using a small amount of space and thus increasing the cooling room capacity. See Illustrations 5, 6 and 7.

Fixed shelves in the cooling room are still used by some large packers, but this necessitates more labor, and is less convenient than either of the other two plans mentioned.

Cooling Squatted Birds.

Middle weight chickens ($2\frac{1}{2}$ to 4 pounds each) are quite generally packed squatted and it is well to squat them before cooling and allow them to cool in that position. In Canada and in some parts of this country shaping troughs are used with a weight for each bird. A more practical plan is to use slatted shelves to which are nailed for each bird squatted two strips $1\frac{1}{2}$ to 2 inches in height and about 9 inches long and fastened six inches apart in front and coming together and making an angle in the rear. Squat the bird and place on the shelf feet downward, spreading the feet carefully so that they will cool flat. The birds will be supported in this wedge-shaped form so as to retain the squatted position. The head hangs down in front.

Often the buildings used by small packers are very badly overrun with rats, as they are used only a few months of the year and sometimes are old shabby buildings. To keep the poultry from becoming rat eaten at night, some hang it by the feet from cords dropped from the ceiling, but this is not desirable because it causes the bird to cool in a position that makes it appear long and thin.

Often cooling racks are placed with a milk can under either end of the stack and this has been found to be an inexpensive and handy arrangement. See Illustrations 6 and 7.

CHAPTER X.

Standard Grading and Packing.

All poultry should be put up in attractive style sanctioned by custom. It should be selected for quality, assorted for size, and packed in approved style in new boxes of proper size and suitable material, holding twelve birds each. These are essential requirements of what we shall designate as Standard Packed Poultry.

It is still possible to sell poultry to fair advantage, at times, packed in barrels, and in odd shaped second hand boxes, with little or no grading, or assorting. But each year it becomes increasingly difficult to do so, and this method of putting up poultry for market is rapidly being discontinued.

Whether it is sold immediately, or if it is frozen for a later market, it will bring a higher price if closely assorted and packed a dozen in a box, as the butcher or shop-keeper at all times prefers a small box of one kind of poultry, each bird of the same quality and of uniform size and weight, to any other package. He can buy just what he requires of each kind and size, and does not need to buy any stock for which he has little or no sale, as he would frequently have to do in buying barrel packed stock. Likewise, on a slow market, the speculator will buy box packed poultry when he would not look at barrel packed stock. It rarely, if ever, pays to freeze barrel packed poultry, especially if it be spring chickens or fowl. (Dressed hens are commonly called fowl.)

This chapter, and the following four chapters, are devoted to grading and packing. As the two processes are so closely interwoven, and as they are done at the same time, they are discussed under the same heading.

Grading or determining quality is outlined in this chapter; the sizes or weights into which poultry is assorted are enumerated in Chapter XI; packing is discussed in two chapters; in Chapter XII the styles of packing are defined; in Chapter XIII, boxes and boxing are described and specifications given. In Chapter XIV, the information given in Chapters X to XIII inclusive, is summarized and tabulated and additional necessary information given.

Quality.

The determining of the quality, the assorting as to size, the style of packing and the appearance and shape of the boxes used, are approaching a uniform standard. Each year a larger proportion of the poultry marketed by different packers is of the same general style and quality and thus Standard

Packing is constantly becoming more fixed. In this hand book nothing is described as standard, but what has been tried out by the largest packers, or approved on the great markets.

While the writer has exercised his judgment in selecting the information given, it has been his aim to aid in furthering any work previously done towards standardizing poultry grading and packing. Acting with this purpose, many of the class numbers given in Chapter XIV are the ones recommended in an article that appeared in a leading publication in the fall of 1908, and since used by a number of packers.

Grading and packing should be done as soon as the birds are properly cooled. In practice the birds are dressed one day, cooled over night and packed the next morning, or as soon as possible after that. No birds should be packed the same day that they are killed. If the birds are picked or dressed properly before they are cooled, the work of an expert grader is simple, but requiring good judgment, and the more experience he has had the better he will do. The grader examines each bird carefully. If it is not dressed properly, but if the quality is unimpaired, he first remedies the defects. Most of the defectively dressed birds are found in the stock that is prepared in the country, and shipped to the central grading plant, although at times poor dressing is done at the central plant.

There are five most common defects in birds that come to the grader: Birds not picked clean, too many feathers are left on the neck, a garter or ring of feathers around the joint between the shank and "drum stick" is left, and the wings are not picked clean. See middle bird in Illustration 2. At times the whole body of the bird must be gone over to remove feathers or pin feathers. If poultry is very poorly dressed, it should either not be purchased or a deduction in price to cover the cost of labor and expense of finishing the birds should be charged to the shipper.

(2) Birds often reach the grader with some food remaining in the crop; this should be removed.

(3) If any dung remains in the vent it should be squeezed out.

(4) If the heads are bloody and the feet dirty they should be washed.

(5) If the birds arrive sweaty or damp, they should be racked up in the cooling room to dry.

In grading, a bench with from four to ten or even more compartments may be used to good advantage. Some determine the size of the bird by weighing it on a small platform spring scale. See Illustration 7. An experienced grader

knows at a glance the quality of the bird, and the weight, as soon as he picks it up, and only uses the scale occasionally, while a grader with little experience will weigh nearly every bird. However, if a man knows poultry as to quality, you will take no risk if he has to weigh many birds in assorting for size and weight. Some graders assemble twelve fancy quality birds of the same size, weigh them and thus determine the class they are in, choose the proper size box and pack them.

Fancy Poultry.

Only the best quality of poultry should be put into the fancy grades; do not include torn, pinny or hump backed birds. Remember that the consumer really does the grading, and if a box should contain a bird that is off in quality, you are likely to suffer for it, as the buyer has to sell the stock to the consumer and he knows what the consumer demands; and consequently will reject a line of poultry not properly graded as to quality.

X. X. or No. 2 Poultry.

Include all birds that are a reasonably good No. 2 grade, including all hump backed, deformed, pinny and torn birds, but do not include any strictly cull (canning stock) birds.

Choice Poultry.

At times there is a considerable amount of poultry of a quality not sufficiently fine to be packed with the fancy, and yet too good to go in as X. X. or No. 2. This will be found especially in ducks and turkeys. Some packers select this out and pack it separately, and quite frequently stencil same as "Choice," to distinguish it from "Fancy," and also give it a different class number.

X. X. X. Poultry.

Strictly cull or canning stock are frequently called X.X.X. grade or "canners." These are chickens taken from the various classes of broilers, fryers, roasters and fowl, and are not good enough to go into the X.X. or No. 2 grade. They should not contain ducks, geese or turkeys, and are generally packed in barrels.

Stags.

Your grader should take exceptional care to sort out all the stags from your Fryers and Roasters. By Stags is meant all chickens that have a dark or bluish or hard meated appearance and that will freeze very dark.

A large spur is erroneously taken to indicate that a bird is staggy. You will very often find that staggy, hard meated chickens do not show large spurs, and you will also find, especially as the season advances, quite a number of chickens that show large spurs that are not coarse, blue or hard meated. If the Chicken is nice, bright, soft meated and shows medium large spurs, continue to pack it with your Roasters, but if it is a dark, blue Chicken and does not show large spurs, then pack it with your stag Roasters.

Head Wraps.

The heads of all classes of standard packed birds should be wrapped. The only exception is the squatted or export packed birds. The heads of these are now generally left unwrapped.

Either 30lb parchment paper or grease proof imitation parchment can be used. Some of the smaller packers use sacks, which are not desirable. Sheets 8 by 11 inches have been used much in the past, and also smaller and square sheets. These are wrapped and twisted on with an attempt to get the birds into the box without the heads becoming unwrapped, but it is very difficult to do this with any degree of success and without considerable bother.

Improved Head Wraps.

The most attractive and practical head wrap is one made from a sheet of paper cut as follows: Use 24x32 size sheets of parchment paper. Cut in strips 24 inches long and from $6\frac{1}{2}$ to $7\frac{1}{2}$ inches wide. Fold the strips once so that they will be in the form of a try square, each arm of the square of equal length. Cut along the fold and you will have from each strip two sheets of the same size and shape with four sides, and with two corners at an angle of 90 degrees each and one corner at an angle of 45 degrees, and the remaining at an angle of 135 degrees. The sheets of paper will be the width of the original strip but one side will be considerably longer than the opposite.

Directions for Putting on the Special Head Wrap.

Grasp the head of the bird with the left hand. Lay the square end of the wrap on top of the neck with about an inch margin to the left of the neck and at an angle of about 100 degrees with the neck. The longest dimension of the paper should be toward the body of the bird. Grasp the paper with the right hand and wrap around the neck; when wrapped correctly the bird's head will lie in an open funnel or cone with

the neck in and passing through the apex or narrowest end. Now tuck over the edges all around and continue until all the slack is taken up to the bill and head of the bird. This tucking in of the edges will bind the paper on so that it will be impossible to remove or pull the wrap off without tearing same. See Illustrations 5, 6, and 7.

The publishers enclose with each hand book a specimen sheet or head wrap, which should be retained as a pattern. Also see Illustration No. 5 to gain an idea of how to use this wrap. Additional sheets will be mailed by publishers on receipt of a two cent stamp to pay return postage. For ducks, geese, turkeys and old roosters larger or wider sheets should be cut, but of the same shape.

CHAPTER XI.

Classification.

Standard Packed Poultry should be assorted very closely as to size or weight.

Classes of Spring Chickens.

Spring Chickens are first divided into three general classes, Broilers, birds under $2\frac{1}{2}$ pounds each; middle weight chickens, birds weighing from $2\frac{1}{2}$ to $3\frac{1}{2}$ or sometimes up to 4 pounds each; and roasting chickens, weighing 4 pounds each and up. Sometimes birds weighing $3\frac{1}{2}$ to 4 pounds each are classed as roasting chickens.

Three classes of fancy broilers are made with an average difference of $\frac{1}{2}$ pound per bird between the classes. (1). $1\frac{1}{2}$ pounds each and under. (2). $1\frac{1}{2}$ to 2 pounds each. (3). 2 to $2\frac{1}{2}$ pounds each.

Middle weight chickens are divided commonly into three classes with an average difference of $\frac{1}{2}$ pound per bird between the classes. (1). $2\frac{1}{2}$ to 3 pounds each. (2). 3 to $3\frac{1}{2}$ pounds each. (3). $3\frac{1}{2}$ to 4 pounds each.

Some packers, especially when squat packing, assort their middle weights into classes with only an average difference of about 1-3 pound per bird between classes, thus making five instead of three. (1). 29 to 31 pounds per doz. (2). 32 to 35 pounds per doz. (3). 36 to 39 pounds per doz. (4). 40 to 43 pounds per doz. (5). 44 to *7 pounds per doz.

Assorting this closely for weight is done because in England chickens are sold by the pair and the shop keeper desires to buy stock each box holding birds of apparently the same size.

When middle weight chickens are put up by small pack-

ers, especially if not squatted, it is recommended to class together all chickens weighing from $2\frac{1}{2}$ to $3\frac{1}{2}$ pounds, packing a double layer box, roaster style.

When the two grades, $2\frac{1}{2}$ to 3 pounds each and 3 to $3\frac{1}{2}$, are packed single layer, broiler style, the $3\frac{1}{2}$ to 4 pound grade is packed roaster style and called a light roaster.

Roasting chickens above 4 pounds each are divided into two classes, roasters weighing 4 to 5 pounds each, and heavy roasters, weighing 5 pounds each and up.

Classes of Fowls.

Dressed hens are called fowls. No. 1 or fancy fowls are assorted into five classes by many of the larger packers and by some into six classes, and should not be divided into less than three classes.

The five classes are: (1). Under 35 pounds per doz. (2). 36 to 42 pounds per doz. (3). 43 to 48 pounds per doz. (4). 49 to 59 pounds per doz. (5). 60 pounds and up. If the sixth class is added, make it 72 pounds up.

When three classes are made, they should be assorted as follows: (1). 38 pounds per doz. and under. (2). 39 to 53 pounds per doz. (3). 54 pounds up; and if a fourth is added, 66 pounds per doz up.

Old roosters are not commonly assorted as to quality or weight.

Classes of Turkeys.

Turkeys are commonly divided into three classes; Hen turkey, young and old, mixed; young Tom turkeys; and old Toms. It is desirable to pack 12 birds in a box, but in order to fill the boxes properly it is sometimes necessary to put in more or less than 12. Sometimes if the old hen turkeys are heavy or very coarse, they are selected out and packed separately from the young ones.

When a great many turkeys are graded it is desirable to divide the hen turkeys into two classes, above 8 and under 8 pounds each. Likewise the young toms into two classes, above 14 pounds and under 14 pounds each.

Classes of Ducks.

Fancy Ducks are divided into two classes: (1). Those weighing 53 pounds and under per doz., and (2) Those weighing 54 pounds or over per doz. The young ducks are sometimes assorted out and packed separately, but this is not commonly done.



ILLUSTRATION 4.

Geese.

Fancy geese are divided into two classes: (1). Under 10 pounds each. (2). Over 10 pounds each.

Guineas.

If guineas are divided at all, they are not divided as to weight. Of late it has been the practice to assort the old from the young and pack separately.

Squabs.

Are sometimes divided into four classes: (1). 7 to 8 pounds per dozen. (2). 8 to 9 pounds per doz. (3). 9 to 10 pounds per doz. (4). 10 pounds per doz. up.

Pigeons are not graded as to size.

Capons.

Capons are divided into the following classes: (1). Under 6 pounds each. (2). 6 to 7 pounds each. (3). Above 7 pounds. The slips are packed separately.

CHAPTER XII.**Style of Packing.**

There are four styles of packing generally used, each of which has one or more variations; and two styles not so commonly used.

The four principal styles being the Broiler or Single Layer Domestic Style; the Squatted, or Single Layer Export Style; the Roaster, or Double Layer Domestic Style; and the Duck Style. The two styles not so commonly used are the Capon Style and the Single Layer Roaster Style.

The Broiler or Single Layer Domestic Style.

This is the way in which the majority of spring chickens under 2½ pounds are packed.

Standard Broiler Style (A).

Wrap heads; line boxes with parchment paper; feet clean; shank feathers, if any, picked off.

Pack one dozen birds to the box. The birds should all be practically of the same size, not differing over ½ pound in weight. Pack six birds on each side of the box with feet extended past the center of the box; breasts up; heads and feet hidden; head packed in under and to the side of the bird it belongs to, and the feet crossed with those of opposite bird and tucked in under opposite bird. Be careful not to draw out the legs too far so that the bird will lose its plump appearance. See Illustration 1. Box 21.

Variation 1-(B)—The packing is the same with the exception that the legs are not buried, but are extended crossed with those of the bird opposite at the top of the box. When broilers are packed this way, they sometimes are graded as to color of shank, the yellow and dark shanked birds being packed separately.

Variation 2-(C)—Same as in Variation 1-(B) excepting that the box is packed upside down and consequently the legs of the birds on one side are not crossed with those of the other. This is a very rapid way to pack the Broiler Style, but is not quite as attractive in appearance as the regular Broiler Style of Variation 1-(B).

The box is stenciled upside down so that it will be opened on opposite side to that packed.

Variation 3-(D)—Each bird is wrapped in parchment paper and packed breast up without crossing legs. This style was formerly used extensively in packing fancy broilers, but is now only used in packing No. 2 stock.

The Squatted or Single Layer Export Style.

This is the style in which a great many of the middle weight chickens, $2\frac{1}{2}$ to $3\frac{1}{2}$ and sometimes up to 4 pounds each, are packed. These are the weights or sizes of springs most difficult to sell on the domestic markets, and it is advantageous to have them packed in the English style, and thus they are in a condition most attractive to be exported and are at times in reasonably strong demand by exporters. Also light weight hens, if fat and smooth, sell well packed in this style.

In order to make the package the most attractive, the birds of these weights ($2\frac{1}{2}$ to 4 pounds) should be squatted while warm. (See Chapter IX.)

Standard Export Style (E).

Pack in single layer boxes. Boxes lined with parchment paper. Heads not wrapped; birds not wrapped.

This style should be used when the birds are cooled squatted. Pack six birds breasts up; six birds backs up; heads and feet clean; heads brought forward and turned sideways so that eyes show. A box packed in this style has the same appearance on both top and bottom.

Birds put up in this way will often sell readily when birds packed otherwise, even though squatted, will not attract more than a glance.

Variation 1-(F)—Same as the above, excepting that all twelve birds are packed heads up and the heads all appear on

the top of the box. Heads all turned sideways so eyes will show.

It is difficult to pack birds in the Regular or Squatted Method (E) unless they have been cooled in the squatted position, and therefore Variation 1 or (F) is recommended for the packers who receive a part of their stock dressed and cooled. It takes some practice to pack birds squatted, squatting them after they are cold. If the middle toe is bent back until the tendon snaps, it will be found that the bird can be more easily Squatted and packed.

Variation 2-(G)—Same as Variation 1 or (F) excepting that the heads are wrapped. See box on extreme left of Illustration 1, marked 19.

The Roaster or Double Layer Domestic Style.

This is the style in which practically all of the roasters and medium or heavy fowl and also turkeys are packed. Some middle weight chickens are packed in this manner, but it is recommended only to the smaller packers, who get few, to be used on the middle weight classes. Some packers pack their capons in this style.

Standard Roasting Style (H).

Boxes lined with parchment paper. Heads wrapped. Parchment paper between layers. Pack twelve birds to the box in two layers. Bottom layer heads and feet up; top layer heads and feet down; both layers packed on sides and butts locked. To accomplish this, three birds packed breasts one way, three birds breasts the opposite way. See Illustration 1, Box 34.

Variation 1-(I)—Packed the same as the Standard Method, but on the top layer the upper leg of each bird is not packed under or hidden, but brought forward and extended straight to show color of shank. Only yellow shanked birds and birds with shanks free from feathers should be packed in this manner. The dark shanked birds should be packed in the bottom layer, and if in the top layer the shank should be hidden or dropped under opposite bird.

Variation 2-(J)—Same as the Standard Method only the birds are each wrapped in a suitable sized sheet of parchment paper before packing and it is not necessary to wrap heads or line boxes. Some packers have put up in the past some of their fanciest birds in this way. Others use this variation in packing their No. 2 stock.

The Single Layer Roaster Style. (K).

This can be used when putting up some very fine stock

for a particular customer.

Pack in single layer boxes in the same manner as the upper layer of the Double Layer Roaster Style is packed. See Illustration 8.

Variation 1-(L)—Pack with upper leg exposed, same as in upper layer of Variation 1-(I) of the Double Layer Style.

Capon Style (M).

Pack in two layers in a deep box, twelve to the box. Line box. Wrap heads. Parchment paper between layers. Lower layer, breasts down, heads and feet up; upper layer, breasts up, head and feet down, legs crossed with those of opposite bird and feet buried.

This is the most approved method of packing capons. Sometimes roasting chickens and heavy fowl are packed in this manner, if of an especially fine quality.

Standard Duck Style (N).

Ducks and geese are packed in this manner. Pack in two layers, twelve to the box; line boxes with parchment paper; wrap heads; sheet of parchment paper between the layers; lower layer, breasts down, feet and heads up; upper layer, breasts up, heads and feet down; both layers packed butt to butt. See Illustration 7, Box 75.

Variation 1-(O)—Same as Standard Method only butts are lapped.

Variation 2-(P)—Same as Variation 1-(O) excepting that birds are wrapped separately in parchment paper. When birds are wrapped it is not necessary to wrap heads or line boxes.

CHAPTER XIII.

Boxes and Boxing.

Poultry boxes are not bought made up, but the lumber comes K. D., which means knocked down. This lumber is sawed to the exact size, so that when nailed up it will make a box of the size specified. The lumber comes in bundles of 25 parts each, the sides in one bundle, the ends in another, and the tops and bottoms in a third. The lumber for some of the larger sized boxes sometimes comes twenty parts to the bundle. If the bundles come twenty-five to bundle, two bundles of each kind or six bundles in all will make twenty-five boxes. The bundles of lumber as they are shipped are called box shooks.

Special cement coated 5d or 6d box nails are used in making up the boxes.

If the poultry is to be marketed immediately, pine boxes can be used to good advantage and are cheaper, but if the poultry is to be frozen and stored, use whitewood or cottonwood boxes. A prejudice exists against using pine boxes in which to pack poultry for freezing, as some buyers think that pine wood affects the taste. If the shooks are bought in car loads, the freight rate is low, and generally K. D. boxes can be bought in car loads delivered at the same price as small shipments are furnished at the mill. The small packer will find it difficult to buy whitewood lumber at a reasonable price in small lots, and if it is necessary for him to use basswood, he should insist that same be furnished free from dark colored wood so that it will nail up as an attractive box. Basswood shooks are low priced, and if they do not contain dark wood they can be used.

Formerly all poultry was packed in large boxes or barrels. Later small boxes holding two dozen or more were used. At present in order to obtain the highest price and sell to the best advantage, almost all classes and grades of poultry with the exception of chicks, old roosters, and possibly old tom turkeys, should be packed one dozen to the box. Care should be taken not to put the birds into the boxes too loosely, that is, don't use too large a box. It is better to crowd the birds into the boxes, for when they fit snugly and the box is opened, they look plumper and meatier than the birds put into the boxes loosely.

Box Specifications.

In different parts of the country, the boxes used for packing various classes of poultry vary a trifle in size and shape. This is caused by the average type of chickens varying. However, practically the same size and shape boxes can be used in one locality as well as in another. The specifications herewith given have been tried out by a number of packers and have generally been found satisfactory for Iowa and Illinois raised poultry.

Box No. 1—16x15x3½ inside. This is the standard broiler box and will hold twelve broilers, twenty-four pounds and under per dozen.

Box No. 1A—15x14x4 inside. This is the Missouri style. This can be used when broilers are more framey, that is, not so plump.

Box No. 5—17x16x4 inside. This is the standard heavy broiler box and will hold twelve broilers, twenty-five to thirty pounds per dozen.

Box No. 5A—16x15x4½ inside. This is the Missouri style broiler box.

Box No. 5B—16½x15½x4½. This is a box used for heavy broilers by some packers, especially when they run close to thirty pounds per dozen.

Box No. 10—21x15x3¾ inside. This box will hold twelve export, squat-packed chickens weighing from thirty to thirty-five pounds per dozen. Will also hold twelve export, squat-packed fowl, weighing under thirty-eight pounds per dozen.

Box No. 15—23x15½x4 inside. This box will hold twelve export, squat-packed chickens, thirty-six to forty-two pounds to the dozen. Will also hold twelve squatted fowl, thirty-six to forty-eight pounds per dozen.

Box No. 20—24x16x4¼ inside. This box will hold twelve export, squat-packed chickens, forty-two to forty-seven pounds to the dozen. If desired, it will also hold twelve squat-packed fowl, weighing fifty-four to sixty pounds per dozen.

Box No. 21—25x17x4¼ inside. This box will hold twelve export, squat-packed chickens, weighing forty-five to fifty pounds per dozen. Also can be used for squat-packed heavy hens weighing about sixty pounds to the dozen.

Box No. 25—18x17x4 inside. This box will hold twelve domestic packed chickens, packed broiler style, weighing from thirty to thirty-five pounds per dozen.

Box No. 25A—17x16x5 inside. This is Missouri style box, and is used when the chickens are more framey.

Box No. 26—19½x18x4½ inside. This box is to hold twelve domestic packed chickens, packed broiler style, packed thirty-two to forty-two pounds per dozen.

Box No. 27—21x19x4¾ inside. This can be used if desired in packing domestic broiler style chickens weighing forty-three to forty-seven pounds to the dozen.

Box No. 30—19x16x8 inside. This box to contain twelve roasters, forty-eight to fifty-nine pounds per dozen; also twelve fowl, weighing fifty-four pounds and up per dozen; also twelve ducks weighing fifty-three pounds and under per dozen.

Box No. 30A—18½x16x7¾ inside. This is a Missouri style box, and is useful when roasting chickens do not average over fifty pounds per dozen.

Box No. 35—20x16½x8½ inside. This box to hold twelve roasting chickens sixty pounds and up per dozen. It can also be used for very heavy fowl weighing about seventy pounds per dozen. Also for capons under 6 pounds each.

Box No. 36—18x17x9 inside. This is used for heavy fowl weighing sixty pounds and up, and is more desirable for this purpose than box No. 35 as it is shorter and deeper.

Box No. 37—21x17½x9. This is a box that is rarely used and can be used for holding twelve old cox, weighing seventy-two pounds a dozen and up. Can also be used for capons, packed roaster style weighing 6 to 7 pounds each.

Box No. 40—14x12½x7 inside. This is an ideal fowl box and will hold twelve fowl weighing thirty-eight pounds and under per dozen. Could be used for twelve roaster style packed middleweight chickens weighing from thirty to thirty-six pounds per dozen.

Box No. 41—15½x14x6½ inside. This box will hold twelve double layer roaster packed chickens weighing thirty to forty pounds per dozen. It is the ideal box to use in packing middleweight chickens roaster style. It can also be used for packing twelve fowl weighing thirty-eight pounds to the dozen.

Box No. 45—16x15x7½ inside. This box holds twelve fowl, thirty-nine to forty-three pounds per dozen; also holds twelve Double Layer Roaster style packed chickens, weighing forty-three to forty-eight pounds per dozen. This is an ideal fowl box. No. 46 is better for chickens.

Box No. 46—17½x15x7 inside. This box will hold twelve Double Layer Roaster style packed chickens, weighing forty-three to forty-eight pounds per dozen and is the ideal small roaster box, and is used for that purpose universally. It will also hold to quite good advantage, twelve fowl weighing up to fifty-three pounds per dozen.

Box No. 47—20x14x11 inside. For capons under 6 pounds.

Box No. 48—21x15x12 inside. For capons weighing 6 to 7 pounds each.

Box No. 49—22x16x12½ inside. For capons weighing over 7 pounds each.

Box No. 50—24x19x11 inside. This box will hold twelve hen turkeys of mixed weights; will also hold twelve geese weighing under ten pounds each; will also hold eight old tom turkeys of small size.

Box No. 55—28x22x12 inside. This box will hold twelve young tom turkeys, twelve geese weighing ten pounds or over each, and eight medium sized old tom turkeys.

Box No. 60—32x24x6 inside. This box will hold from ten to twelve young hen turkeys weighing under eight pounds each, packed single layer.

Box No. 61—32x24x6½ inside. This box will hold ten to twelve mixed young and old hen turkeys weighing eight pounds each or over.

Box No. 63—32x27x7. This box will hold ten or twelve young tom turkeys weighing under fourteen pounds each.

Box No. 64—32x27x7 $\frac{3}{4}$ inside. This box will hold from ten to twelve young tom turkeys, weighing fourteen pounds each or over.

Box No. 70—30x17 $\frac{1}{2}$ x3 $\frac{3}{4}$ inside. This box will hold twelve small roasters, weighing from forty-three to forty-eight pounds per dozen, packed single layer roaster style.

Box No. 71—32x19x4 inside. This box will hold twelve roasting chickens weighing forty-eight to fifty-nine pounds per dozen, packed single layer roaster style; also twelve fowl weighing sixty pounds up per dozen.

Box No. 72—33x20x4 $\frac{1}{4}$ inside. This box will hold twelve heavy roasters weighing sixty pounds up, packed in single layer roaster style.

The specifications used by some manufacturers call for thinner lumber than those of others. Nothing should be made of less than $\frac{1}{4}$ in. lumber for sides, tops and bottoms, and the ends should not be less than $\frac{1}{2}$ in. The following is recommended: Boxes No 1, 1A, 5, 5A, 5B should be made with sides tops and bottoms $\frac{1}{4}$ in. Ends $\frac{1}{2}$ in. The balance with the exception of 50 to 72, inclusive, that is, 10 to 49, inclusive, should be made with sides, tops and bottoms $\frac{3}{8}$ in. thick and the ends should be $\frac{5}{8}$ in. Boxes No. 50 to 72, inclusive, should have sides, tops and bottoms $\frac{1}{2}$ in. and ends $\frac{7}{8}$ in.

With the exception of Boxes 47 to 55, the following class of lumber is recommended to those who wish to insist on having a strictly first-class box. One piece sides, one piece ends, no cleats, tops and bottoms not to exceed three pieces. The larger boxes, 50, 55, 60, 61, 63 and 64 may be made from lumber as follows. The sides, ends and tops are to be free from rot, shake, wane or worm holes. Small round knots are permissible. The bottoms may contain stains, small worm holes and sound knots, but must not contain defects that weaken the boxes.

The specifications adopted by the National Association of Box Manufacturers are recommended.

Each and every piece must be up to grade, must be sawed smooth and even; the ends and sides must be straight and square; and when boxes call for cleated ends, cleats must be nailed on ends and ends delivered cleated.

If the above is followed out strictly you will have boxes that are strictly standard and which will not be excelled by those of any other packer.

Of late years, however, Northern mills especially have been furnishing a great many boxes with two-piece sides and ends. The sides are grooved and the ends are either cleated or clinched together with a corrugated iron staple-like fastener



ILLUSTRATION 5.

which is embedded firmly into the wood. Some ends are glued and cleated both. Also the tops and bottoms sometimes consist of four pieces. While these do not make as good boxes as the above either in strength or appearance, they can be used. Some manufacturers make part of the single layer boxes of larger size than the 1 and 5, say the 25 and 26, and boxes of about the same size with sides, tops and bottoms $\frac{1}{4}$ in. Ends $\frac{1}{2}$ in.

CHAPTER XIV.

Summary.

In Chapter X, grading for quality is described and discussed; in Chapter XIX, the classifying or assorting for weight or size is fully outlined; in Chapter XII the various styles of packing are fully described; and in Chapter XIII directions for boxing poultry are given including specifications for a very complete line of boxes. In this chapter, the information of the preceding four chapters is summarized and additional information given, so that the packer will have information at hand that will enable him not only to put up Standard Packed poultry, but any other attractive style he may desire to use or that he may have call for.

The information is classified under three SYSTEMS. The first, System A, is very complete, the second, System B, is a practical system to be followed out by a large packer, and the third, System C, is one that is recommended to a small packer.

System A.

The following table is designed to show practically all the different styles that are attractive in which any and every class of Poultry can be put up. It is too comprehensive to be used for anything excepting as reference. For systems to be used in practice you are referred to Systems B and C.

EXPLANATORY—In the first column of each table or system is given the Class No. This, in addition to indicating the kind or variety of poultry, indicates the quality and size of the bird, also the general style of packing. For instance, Class 18 means that in a box marked in that manner, are packed spring chickens of fancy quality, weighing 3 to $3\frac{1}{2}$ pounds each, packed Standard Export style (E).

The remaining columns describe what the Class No. indicates. In the first column following the class is given the quality, in the second and third the weight per bird and the weight per dozen, in the next column is given the style of packing, indicated clearly and made easy for reference by the

letters (A), (B), (C), etc. See Chapter XII. The next column shows the box to use, the number referring to those used in Chapter XIII. The last column gives the description to stencil on the box, if stenciling is desired. See Chapter XV for a full description of stenciling.



System A Tabulated.

Spring Chickens—Broilers.

Packed 12 birds in a box.

Class	Quality	Weight Per Dozen	Style of Packing	Refers to Chapter XII.	Boxes Used	Stenciling if Used
5	Fancy	Under 1½	Standard Broiler	A	1	Fancy
5 A	"	"	Variation 1	B	1	D. P. Broilers
10	"	1½-2 lb	Standard Broiler	A	1	Fancy
10 A	"	"	Variation 1	B	1	D. P. Broilers
15	"	2-2½	Standard Broiler	A	5	Fancy
15 A	"	"	Variation 1	B	5	D. P. Broilers
16	No. 2	Under 2½	Standard Broiler	A	1	D. P. Broilers
	No. 2		Variation 1	B	1	"
			Variation 2	C	1	"
			Variation 3	D	1	"

Spring Chickens—Middle Weights.

(Exports or Fryers).

2½ to 4 lbs. each.

Packed 12 birds in a box.

17	Fancy	2½-3 lb	Standard Export	E	10	} Fancy Chickens.
17 A	"	"	Variation 1	F	10	
20	"	"	Standard Broiler	A	25	
20 A	"	"	Variation 1	B	25	
20 B	"	"	Variation 2	C	25	
23	"	"	Standard Roaster	H	40 or 41	
18	Fancy	2-3½ lb	Standard Export	E	15	} Fancy Chickens.
18 A	"	"	Variation 1	F	15	
21	"	"	Standard Broiler	A	26	
21 A	"	"	Variation 1	B	26	
21 B	"	"	Variation 2	C	26	
24	"	"	Standard Roaster	H	45 or 46	
19	Fancy	3½-4 lb	Standard Export	E	20	} Fancy Chickens.
19 A	"	"	Variation 1	F	20	
22	"	"	Standard Broiler	A	27	
22 A	"	"	Variation 2	C	27	
25	"	"	Standard Roaster	H	46	} Fancy Roasters
37	"	"	Single Layer "	K	70	
26	No. 2	2½-3½	Standard Broiler	A	25	} D. P. Chickens.
26 A	"	"	Variation 2	C	15	
26 B	"	"	Variation 3	D	15	
27	"	"	Standard Roaster	H	40	
28	No. 2	3½-4	Standard Roaster	H	45	} D. P. Chickens.
29 A	"	"	Variation 2	J	45	

Exports.

Packers who desire to have their squat packed middle weight chickens in the very best possible condition or style to be exported, assort them very closely of a size as described in Chapter XII.

All are fancy stock, packed 12 in a box.

Weight per dozen

28	Fancy	29-31 lb	Standard Export	E	10	} Fancy Chickens.
28 A	"	"	Variation 1	F	10	
29	Fancy	32-35 lb	Standard Export	E	15	} Fancy Chickens.
29 A	"	"	Variation 1	F	15	
30	Fancy	36-39 lb	Standard Export	E	15	} Fancy Chickens.
30 A	"	"	Variation 1	F	15	
31	Fancy	40-43 lb	Standard Export	E	20	} Fancy Chickens.
31 A	"	"	Variation 1	F	20	
32	Fancy	44-47 lb	Standard Export	E	21	} Fancy Chickens.
32 A	"	"	Variation 1	F	21	

Spring Chickens—Roasters.

4 lbs. each and over.

34	Fancy	4-5 lb	Standard Roaster	H	30	} Fancy Roasters.
34 A	"	"	Variation 1	I	30	
38	"	"	Single layer Roaster	K	71	
38 A	"	"	Variation 1	L	71	
35	Fancy	5 lb up	Standard Roaster	H	35	} Fancy Roasters.
35 A	"	"	Variation 1	I	35	
39	"	"	Single Layer "	L	72	
39 A	"	"	Variation 1	L	72	
41	No. 2	4 lb up	Standard Roaster	H	30	} Roasters.
41	No. 2	4 lb up	Variation 1	J	30	

Spring Chickens—Stagy or Hard-Meated Roasters.

In the past these have been quite comomlny called "S" Roasters." Dropping the term "S" is advised.

42	Fancy	Under 4 lb	Standard Roaster	H	45	} Fancy Roasters.
43	Fancy	Over 4 lb	Standard Roaster	H	30	} Fancy Roasters.

Fowls.

Packed 12 birds in a box.

45	Fancy	Under 3 lb	Standard Roaster	H	40	} Fancy D. P. Fowl.
50	"	" "	Variation 1, Ex.	F	10	
50 A	"	" "	Variation 2, Ex.	G	10	
46	Fancy	3-3½ lb	Standard Roaster	H	46	} Fancy D. P. Fowl.
51	"	"	Variation 1, Ex.	F	15	
47	Fancy	3½-4 lb	Standard Roaster	H	45	} Fancy D. P. Fowl.
52	"	"	Variation 1, Ex.	F	15 or 20	
48	Fancy	4-5 lb	Standard Roaster	H	30 or 31	} Fancy D. P. Fowl.
53	"	"	Single Layer R'r	K	71	
49	Fancy	5 lb up	Standard Roaster	H	35 or 36	} Fancy D. P. Fowl.
54	"	"	Single Layer R'r	K	72	
65	No. 2	All weights	Standard Roaster Variati on 2	H J	40 or 45	} D. P. Fowl

Ducks.

Packed 12 birds in a box.

75	Fancy	4½ up	Standard Duck	N	35	} Fancy Ducks
75 A	"	"	Variation 1	O		
76	Fancy	Under 4½	Standard Duck	N	30	} Fancy Duck
76 A	"	"	Variation 1	O		
78	No. 2	All weights	Standard Duck	N	30	} Ducks
78 A	"	"	Variation 2	P		

Geese.

Packed 12 to the box.

84	Fancy	Over 10 lb	Standard Duck	N	55	} Fancy } Geese
84 A	"	"	Variation 1	O		
85	Fancy	Under 10 lb	Standard Duck	N	50	} Fancy } Geese
85 A	"	"	Variation 1	O		
87	No. 2	All weights	Standard Duck	N	50	} Geese
87 A	"	"	Variation 2	P		

Old Cox.

90	All weights	Any number packed in bbls				Old Cox
91	Fancy	5-6 lb	Standard Roaster	H	35	Cox
92	"	6 lb up	Standard Roaster	H	37	Cox

Turkeys—Hen Turkeys.

	Young and Old					Fancy
100	Fancy	All weights	Standard Roaster	H	50	Hen Turkeys
	Young hen turkeys	10 or 12 to box				Fancy Young
101	Fancy	Under 8 lb	Standard Broiler	A	60	Hen Turkeys
	Young hen turkeys	10 or 12 to box				" "
102	Fancy	Over 8 lb	Standard Broiler	A	61	" "

Young Toms—All Weights.

						Fancy Young
103	Fancy	All weights	Standard Roaster	H	55	Tom Turkeys
	Young Toms,	10 or 12 in box				" "
104	Fancy	Under 14 lb	Standard Broiler	A	63	" "
	Young Toms	10 or 12 in box				" "
105	Fancy	Over 14 lb	Standard Broiler	A	64	" "

Old Tom Turkeys.

(8 to box).

107	Fancy	Under 16 lb	Standard Roaster	H	50	Old Toms
108	Fancy	Over 16 lb	Standard Roaster	H	55	" "
109	Fancy		Packed any number in barrels			" "

Guineas.

110	Young		Standard Roaster	H	40	Young Guineas
111	Old		Standard Roaster	H	45	Guineas

Squabs.

(5 dozen to box.)

115	Fancy	3 layers squatted 20 in layer	Box 40 or 45			Fancy Squabs
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Pigeons

(5 dozen to box)

120	Fancy	3 layers Roaster style, 20 in layer	Box 40 to 45			Pigeons
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Capons.

125	Fancy	Under 6 lb	Capon	M	47	Fancy Capons
125 A	"	"	Standard Roaster	H	35	" "
126	Fancy	6 to 7 lb	Capon	M	48	Fancy Capons
126 A	"	"	Standard Roaster	H	37	" "
127	Fancy	Over 7 lb	Capon	M	49	Fancy Capons
127 A	"	"	Standard Roaster	H	37	" "
128	Slips	All weights	Standard Roaster	H	35	Capons

System B.

The following table is recommended for the use of packers who handle a considerable amount of poultry.

As only one style of packing is recommended in this table for each class or size of bird, it has been difficult in some cases to choose between two or three commonly in use. This should be borne in mind by the packer and if the style given does not suit his fancy, he is referred to System A, from which table he can make a choice to suit his fancy.

Broilers.

					Fancy Broilers	
5	Fancy	Under 1½ lb	Standard Broiler	A	1	" "
10	Fancy	1½-2 lb	Standard Broiler	A	1	" "
15	Fancy	2 2½ lb	Standard Broiler	A	5	" "
16	No. 2	Under 2½ lb	Standard Broiler	A	1	D. P. Broilers

Middle Weight Chickens.

					Fancy Chickens	
17	Fancy	2½-3 lb	Standard Export	E	10	" "
18	Fancy	3-3½ lb	Standard Export	E	15	" "
25	Fancy	3½-4 lb	Standard Roaster	H	45	" "
26	No. 2	2¼-3½	Standard Roaster	H	45	" "
27	No. 2	3½-4	Standard Roaster	H	45	" "

Roasters.

34	Fancy	4-5 lb	Standard Roaster	H	30	Fancy Roasters
35	Fancy	5 lb up	Standard Roaster	H	35	" "
41	No. 2	4 lb up	Standard Roaster	H	30	Roasters.

Stag Roasters.

42		Under 4	Standard Roaster	H	45	Fancy Roaster
43		Over 4	Standard Roaster	H	30	Fancy Roaster

Fowl.

58	Fancy	4½ lb up	Standard Roaster	H	30	Fancy D.P. Fowl
59	Fancy	3½-4½	Standard Roaster	H	45	" " "
60	Fancy	Under 3½	Standard Roaster	H	40	" " "

If it is desired to sort Fowls closer, use Classes 45, 46, 47, 48, and 49, System A.

65	No. 2	All weights	Standard Roaster	H	40 or 45	D. P. Fowl
----	-------	-------------	------------------	---	----------	------------

Ducks.

75	Fancy		Standard Duck	N	35	Fancy Ducks
76	Fancy		Standard Duck	N	30	" "
78	No. 2	All weights	Standard Duck	N	30	Ducks

Geese.

84	Fancy	Over 10 lb	Standard Duck	N	55	Fancy Geese
85	Fancy	Under 10 lb	Standard Duck	N	50	" "
87	No. 2	All weights	Standard Duck	N	50	Geese

Old Roosters.

90 All grades unassorted packed in barrels or boxes.

92 Pigeons in boxes not assorted.

Hen Turkeys—Old and Young Mixed.

100	Fancy	All weights	Standard Roasters	H	50	Fancy Hen Turkeys
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Young Tom Turkeys.

103	Fancy	All weights	Standard Roaster	H	55	F'cy young Tom Turks
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Old Tom Turkeys.

(8 to the box)

108	Fancy	All weights	Standard Roaster	H	55	Old Toms
-----	-------	-------------	------------------	---	----	----------

X. X. X. Poultry.

141 Cull fowl, broilers, fryers and roasters, packed any number in barrels or boxes.

NOTE—Copies of System B will be furnished for 10c each, printed on heavy cardboard for use of graders. Address publishers.

System C.

The following table is designed for the use of small packers. All small packers should read carefully the information given following the table.

Spring Chickens.

(12 to the box).

Class	Description & Stenciling	Weight per Dozen	Style Packing	Box
200	Fancy Broilers	Under 30 lb	Standard Broiler	A 5
201	Fancy Chickens	30-42 lb	Standard Roaster	H 41
202	Fancy (Small) Roasters	42-47 lb	Standard Roaster	H 46
203	Fancy Roaster	48-59 lb	Standard Roaster	H 30
204	Fancy Roaster	60 up	Standard Roaster	H 35
205	No. 2 Roaster	(All sizes)	Standard Roaster	H 46

Fowl.

Packed 12 birds in a box.

58	Fancy D. P. Fowl	54 up	Standard Roaster	H 30
59	Fancy	39-53	Standard Roaster	H 46
60	Fancy	Under 38	Standard Roaster	H 41
65	No. 2	All weights	Standard Roaster	H 41

Ducks.

12 to the box.

75	Fancy	Over 54	Standard Duck	N 35
76	Fancy	Under 53	Standard Duck	N 30
78	No. 2	All weights	Standard Duck	N 30

You will note that the above system only requires a supply of five sizes of boxes, i. e., 5, 41, 46, 30, 35. As the small packer has few broilers, the box 5 can be most easily dispensed with. In fact, it is very easy to cut the number of boxes required down to three, using boxes 41, 46, and 30. To do this combine classes 203 and 204, using box 30; also pack all sizes of ducks in one size, box 30.

It may surprise the reader to be told that acceptable boxing of poultry can be done using only one size box, No. 30, though, of course, all grades cannot be packed a dozen to the box. Birds of one size should be packed in the box, packing 14, 16, 18, 20 or more, stencilling a class number in the upper left hand corner of the face of the box to indicate the size of the bird, and either stencilling the number of birds contained in the box in the upper right hand corner or marking it in pencil around the corner on the left upper corner of the side of the box, and invoicing to the receiver the number and kinds of birds in a box.

In packing grades 200, 201, 59, 60, 65 in box 30, it is often desirable to pack the lower layer either breasts up or breasts down, broiler variation 1 (B), or variation 2 (C), packing in as many as the box will conveniently hold, and packing the top layer Standard Roaster Style (H), packing same the narrow way of box 30, and instead of six birds on the top layer use 8 or even 10. This will make a good appearing box when opened and if the buyer gets the size chickens he wants, it is often of little consequence to him how many he gets in the box as long as he knows when buying how many are contained in the box. Of course, the above cannot be taken as a standard method, still the most desirable poultry, the Roasters, the Heavy Fowl, and the Ducks will all be packed a dozen to the box and standard. Using one box is immeasurably better than using barrels, and is recommended to those packers who desire to start in slowly in getting away from the old order of things.

CHAPTER XV.

Stencilling.

Some of the very largest packers put out their poultry under a trade mark. It is an advantage for them to do it, because they generally market their own stock. But the ordinary packer markets his poultry through a jobber or makes use of a broker or commission merchant, and it is often desirable not to have too much stencilled on the box, as the jobber can in this way assemble the product of several, or quite a number of packers who have put up their poultry in a stan-

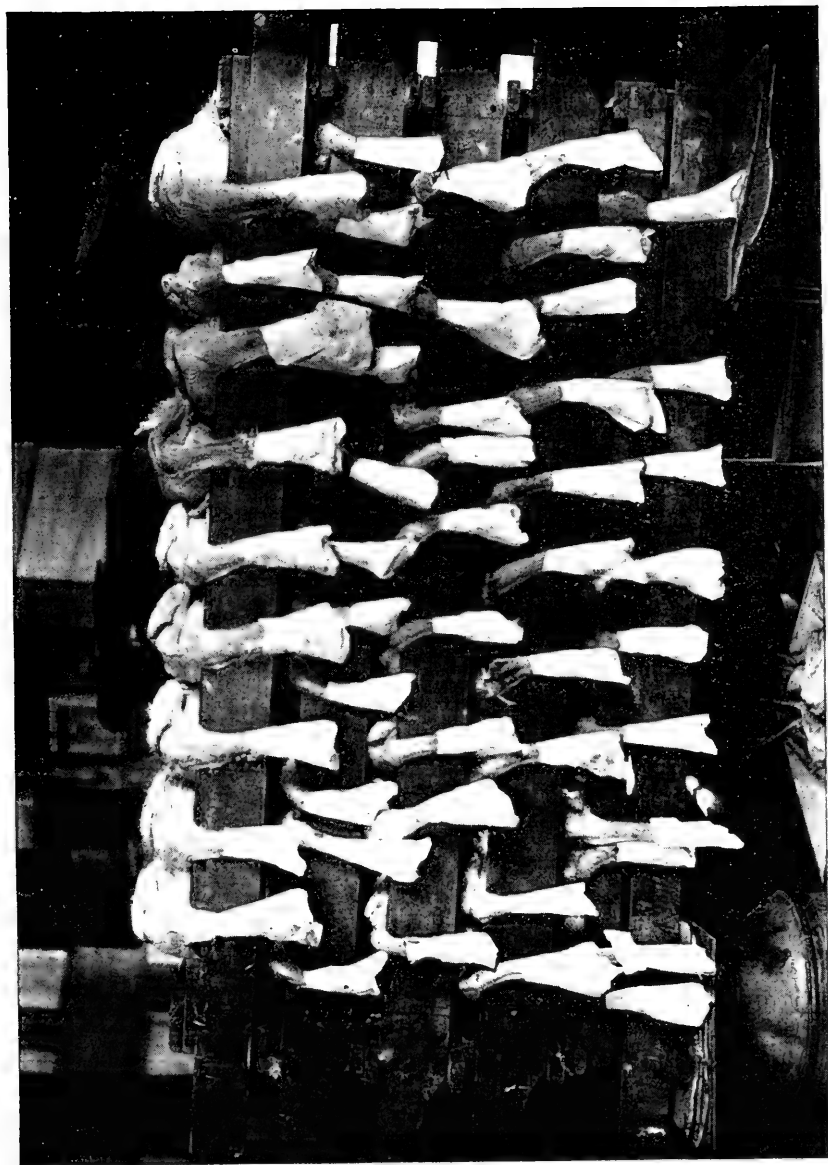


ILLUSTRATION 6.

dard manner and can put them out as the same "pack" or under the same name, or even under his own trade mark.

The simplest form of stencilling is to place the class number in the upper left hand corner and the net weight in the lower right hand corner, advising the receiver or buyer clearly as to what each class number indicates.

The following represents the end of a poultry box stencilled in the simplest manner and yet giving all the information necessary:

```

: ..... :
: 34      :
:         :
:         :
:         :
:         :
:                53 :
: ..... :
    
```

The above indicates that there are in the box 12 fancy grade spring chickens of roaster size and that they weigh 53 pounds net, and are packed Standard Roaster Style (H).

If it is desired to stencil more, the following should be taken as a model:

```

: ..... :
: 34      1001      12 :
:         W         :
:         FANCY     :
:        D. P. ROASTERS. :
: 61      8        53 :
: ..... :
    
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The figure 34 indicates that the roasters weigh between 4 and 5 pounds each, 12 indicates that there are 12 birds in the box; 1001 is the serial number of the box, and is changed with each box and is used in keeping an exact record in invoicing. W indicates at what house the stock was packed, and Fancy D. P. Roasters is the trade name. 61 is the gross weight of the box, and 8 the tare and 53 the net weight.

Some packers place a figure before the class number to indicate where the stock was packed, thus: 334 would indicate that the 34 class or Fancy D. P. Roasters were packed at a certain house or by a certain packer.

In stencilling X. X. or No. 2 Poultry use no indication other than the Class No. to show their quality. It will do no good, as the Class No. indicates the quality to the receiver. If it is desired to stencil a description of the contents, stencil the same as fancy goods, but omit using the word "Fancy."

If a trade mark is used, it is frequently printed on each

side. Sometimes it is printed on the opposite end to the one stencilled. When boxes are ordered in carloads the trade mark will generally be printed free of cost.

See that all stencilling is neatly done. Using rubber stamps in place of stencils may make a neater appearance.

CHAPTER XVI.

Precooling and Shipping.

If possible all dressed poultry that is dry packed should be precooled before shipping. If the weather is cold or in the case of the large packer, who has artificial cooling facilities, this is very easily done.

In cold weather the packer should hold his poultry before shipping at a temperature as near freezing as possible. It should not be allowed to freeze if it can be prevented. Little danger need be feared unless the temperature is below 27 degrees Fahrenheit for a length of time. Poultry in boxes will not freeze even if held at this temperature for some length of time, say 48 hours, or even 72 hours.

In loading poultry into a car, it should be at as cold a temperature as possible, but without being frozen.

The average packer has not in the past paid as much attention to precooling during the winter months as its importance demands. Poultry cannot be loaded into a car on a mild winter or fall day, even if fairly well cooled out before packing, with the expectation of its reaching its destination in prime condition.

When the weather is mild with the temperature at night dropping below freezing, it is better not to load into the car at night unless the same has been beef iced. Leaving the poultry in a room with the windows open is much better. If the weather continues mild, beef ice the car and separate the boxes well in order that the cold air can get at them readily. To "beef ice" a car, fill the bunkers with crushed ice and mix with it 10 per cent to 20 per cent of coarse crushed rock salt.

If the packer is equipped with artificial cooling facilities and if box packed poultry is shipped early in the season while the weather is warm and with the likelihood of the car varying greatly in temperature en route, especial care should be taken in precooling.

If the poultry will reach the market in two or three days' time, it may not be necessary to hold same before shipping at a lower temperature than 32 degrees to 34 degrees, but if the poultry is to be shipped a long distance and will be on the way from 6 to 8 days, or even more, it should be thoroughly precooled by holding in a room at 27 degrees from 48 to 72

hours before being loaded into "beef iced" refrigerator cars. Complete icing instructions should be inserted in billing out cars, and it is well to make a record of the temperature of the cooling room at the time of loading, and also of the car when it is loaded. Such records are often of advantage in settling claims against the railroad company for poor service.

Cars should be loaded carefully and the boxes should be piled to the same height in all parts of the car. Especial care should be taken in loading mixed cars. If eggs are loaded in the same car, they should be piled by themselves and be well braced. In summer, eggs as well as the boxed poultry should be precooled before loading. Eggs that have been held at a warm temperature, if loaded with poultry, even if the poultry is well cooled, will in cooling draw the cold from the poultry as much as from the ice in the bunkers.

In this connection it is well to insert a caution to those shippers who ship mixed carloads of butter, eggs and ice-packed poultry in summer. Hold the butter and eggs in the coldest room you have before loading into a car with iced poultry, or a large part of the ice in your poultry packages will be melted before the car leaves the railroad yards of your town. It is recommended to "beef ice" the car well and load the butter and eggs the day preceding loading the poultry, placing same on racks so as to keep the packages from becoming wet from the water escaping from the barrels of iced poultry. It is indeed an artist who can load a mixed car of butter, eggs and poultry, and have it reach its destination in first class order.

CHAPTER XVII.

Freezing and Marketing.

If one has a freezer at hand, either in his own plant or in the same town, he is certainly well equipped to handle the poultry business to advantage. I do not wish to be understood that it is advisable to freeze all the poultry that is dressed. Poultry always should be marketed immediately if a legitimate profit can be secured, but the nature of the business is such that the speculative element enters into it to such a large extent that freezing hardly can be avoided. A large quantity of stock each year of necessity has to be frozen to hold for a later market, as the marketing of poultry, especially in October, November and December is in larger volume than the consumptive demand and the surplus has to be frozen up for a later market.

Most poultry is frozen in the large cities. An expensive plant is required and a vast amount of poultry and other per-

ishable products must be handled by the freezer in order to make it pay. All freezers are operated in conjunction with and sell to the packer or may act as the agent of the packer, cold storage warehouses.

Poultry to be frozen should be kept cold without freezing until it is placed in a sharp freezer and held at from 4 degrees to 10 degrees below zero. If it is frozen slowly, it is apt to become discolored and dark and will not thaw out with a good appearance. The boxes should be stripped well, mere laths placed between the layers is not sufficient. At least two by fours or even four by fours are recommended to be placed between the layers, and the boxes should be placed about 4 to 6 inches apart in the layers; in other words, the cold air should be allowed free access to all sides of the box.

It should be left in this sharp freezer for several days and then can be transferred to a room 16 degrees above zero for permanent holding. The general charge for freezing and holding is from 1-10c to 1-8c per lb. per month, with a minimum charge of two months' storage; any rate above this is exorbitant.

In freezing stock some packers make it a practice to keep the stock frozen before the first of December separate from the stock frozen or packed after that date, as there is quite a difference in the quality of the stock. This applies especially to the spring chickens. After December first there is a larger proportion of semi-staggy chickens, chickens with large buttons or spurs and many have to be graded in with No. 1 that will freeze slightly dark. Generally as good a price or nearly as good can be obtained, but the outlet is narrowed and it is more difficult to move the stock. It is sometimes possible to sell the early packed stock at a premium by keeping out the later stock.

Marketing.

It would be out of place, misleading and possibly prejudicial to the business to map out any general method of marketing or to express any opinion as to the best outlet. Each packer must find his own outlet, and as in any other business he will find plenty of interested advisers.

It is not out of place, however, to describe the way in which many operate. Some freeze and hold in their own plant and sell direct from same, others sell what they can, sometimes at a profit and sometimes in order to realize ready money for carrying on further operations, storing the remainder in some large center. Others store all the "pack"

at some large center securing advances from the cold storage house for a considerable part of the cost or value. It is well to store in a large center as the chances are greater for securing a buyer, as many buyers come to the larger centers shortly after the first of the year and at the time that practically all the poultry has been marketed, to secure their supplies.

In general, storing nearest the ultimate consumer is the best policy if the storage charges and other accommodations are equal and if the goods can be put there without danger of deterioration in transit.

It ought to be needless to advise selling when the other fellow wants the goods if you have a reasonable profit.

CHAPTER XVIII.

Supplementary.

In this chapter has been collected information gathered from actual experience. There is no particular connection between many of the parts, a number of subjects relating to poultry dressing and marketing will be discussed.

Determining the Age or Class of a Dressed Chicken.

Late in the season it becomes difficult to select out some of the springs from the fowl or old hens. Especially is this true of the full grown pullets. It is not deemed advisable to grade the pullets separate from the other roasters as they will not bring much or any better prices than the old hens or fowl, excepting in isolated outlets. To determine whether a chicken should be graded as a Fowl or Roaster, press the rear end of the breastbone; if it appears hard and unyielding it is an old bird or fowl, if soft and yielding it is a young bird or Roaster.

Determining the Age of a Dressed Duck.

Some packers select out the young ducks from the old, which can be readily done by squeezing the windpipe between the thumb and forefinger; if it can be compressed and flattened with slight resistance the duck is a young one; if the windpipe resists and feels like a solid whipcord it is an old bird. By selecting out the young, the older birds can often be sold at the regular price, and a premium price obtained for the young. This practice is only mentioned without particularly recommending it, as most packers think it well not to select the old from the young.

Pigeons.

Some packers dry-pick pigeons, but the majority crack their necks, allow to cool, and pack with feathers on. Be

careful not to get the feathers bloody; if the neck is properly broken no blood will appear on the outside of the bird.

When sufficient pigeons are not at hand to fill a box holding five dozen, use a smaller box and pack to fill, marking and invoicing the number of birds.

Squabs.

Squabs should be dry-picked and some grade as to size. A great many are marketed by the raisers themselves, packing in ice and tying a half dozen of a size in a bunch, using for packing any suitable size box at hand.

The squab business was somewhat overdone a few years ago and many dropped out leaving their plants idle. But those now engaged claim to be making a profit. Few squabs are handled by the poultry packer.

If sufficient are not at hand to pack a five-dozen box use a smaller box and pack to fill, marking and invoicing the number of birds in the box.

Ducks and Geese.

Sometimes geese are packed in small barrels, though for freezing barrels are not as good as boxes.

The smaller grade of geese are not generally of as good quality as are those weighing over 10 pounds each, and often they are very red skinned or dark colored when dressed, and it may at times be necessary to pack a separate grade between the Fancy X. X. grade, which can be designated as "Choice."

Geese should be packed soon as cooled properly, for if left exposed to the air they take on an oily and disagreeable appearance.

Care should be taken not to pay too high a price for Geese as there is only ready sale for the finest. The "Choice" and the smaller size birds are generally difficult to dispose of.

In many communities, especially where the Germans are numerous, a great many fine ducks and geese are dressed at home in order that the housewives may keep the feathers. These dressed birds can generally be bought at a reasonable price, and will show up well with packers' dressed stock. The buyer should insist on the birds not being drawn and that the heads be left on. Generally the birds are brought in very well plucked.

In steaming or scalding ducks remove the outside skin of the shanks and toes. The underskin is of a fine orange color and improves the appearance of the bird. Often the wings are turned and folded over the back of the bird in packing. See Broiler, the bird on the left of Illustration 2.

Sometimes the condition of the ducks is such that it is necessary to make a grade between the X. X. and Fancy. These are hardly No. 2 birds, and yet they are not fancy. If you find that your fancy grade is not uniform in appearance, it is well to make the additional selection and call it "Choice" or some other name not fancy.

Capons.

Capons generally sell at a price near to that of turkeys, often at the same price, and occasionally at a higher price.

Considering the ease with which the operation can be performed, and the small cost of feeding compared with the price received for the finished bird, it stands to reason that the number marketed will gradually increase. They are now received from isolated communities. In some communities there are none raised.

For information concerning capons and caponizing you are referred to the supplementary part of "Feeding Chickens for the Packing House," published by the Egg Reporter.

Guineas.

The Guinea Fowl is becoming more popular each year. They are now served at all the leading restaurants and are considered a delicacy. They appear on the bill of fare under their own name.

Guineas are almost universally sold by the pair or piece. They are very easily prepared for market as described in a former chapter.

In the past young and old Guineas have been packed together and any number has been packed in boxes. It is recommended to select the young from the old and pack separately, a dozen to the box. Guineas put up in this manner will net you more money. Keep the feathers smooth and be sure to cool out thoroughly.

Turkeys.

In some parts of the country the turkey crop is growing lighter each year. Also the handling of turkeys has become so speculative by nature and the early holiday demand so fluctuating, that most packers do not try to handle any more turkeys than they actually have to.

A turkey will not fatten properly until the ground is well covered with snow. Before that time they will roam too much. After the snow falls they will stay around the farm buildings and can be fattened rapidly. Unless a turkey is fat it is not a

desirable table fowl, and will not bring a good price. Thin turkeys will dress out blue and unattractive in appearance, and such should not be purchased. Be careful also in buying live turkeys to select out the crooked-breasted birds and pay lower price for same, as you will have to sell them at a discount.

Old Roosters.

There is considerable difference in the quality of old roosters, and I will venture the opinion that some time in the future the best appearing and best meated ones will be selected out and packed separately. At present most of the demand is from canners, but I consider that the better grade of old roosters should be put up so that they could be marketed among the poorer classes desiring a cheap, but wholesome fowl.

Fancy Dry-Picked Roasters.

If a packer is located in a territory where there are a great many Plymouth Rocks raised he is lucky, as he will have a larger per centage of soft-meated roasting chickens weighing over 4 pounds each.

Not only do Roasters sell well at a higher price than do the middle weight chickens, but they can be prepared for market with less cost, especially of picking, as it costs no more to pick a 4 or 5 pound bird than it does to pick a 2 or 3 pound bird. Also the cost of handling, packing and boxing is some less per pound. It quite often pays to sell the middle weights alive, if a profitable outlet can be found for same, and dress only the heavy stock. Especially true is this where a large number of Leghorns are raised, for not only are they of desirable size and weight, but are generally staggy, dark and hard meated, due to their maturing at an earlier age.

When packing old roosters in barrels first line the barrel with parchment paper allowing the paper to come several inches above the top, remove the upper hoop and turn the edges of the liner down and replace hoop; this will keep the paper in place while packing the barrel.

Do not pack the barrel more than flush with the top. Some put a layer of parchment between each layer but it is not necessary; put a sheet of parchment over the top and take off hoop and turn edges of liner over. Head with burlap.

X. X. or No. 2 Poultry.

This grade of poultry may be packed either Broiler style or Roaster style. Boxes lined with parchment paper, heads wrapped, but birds generally not wrapped, although some

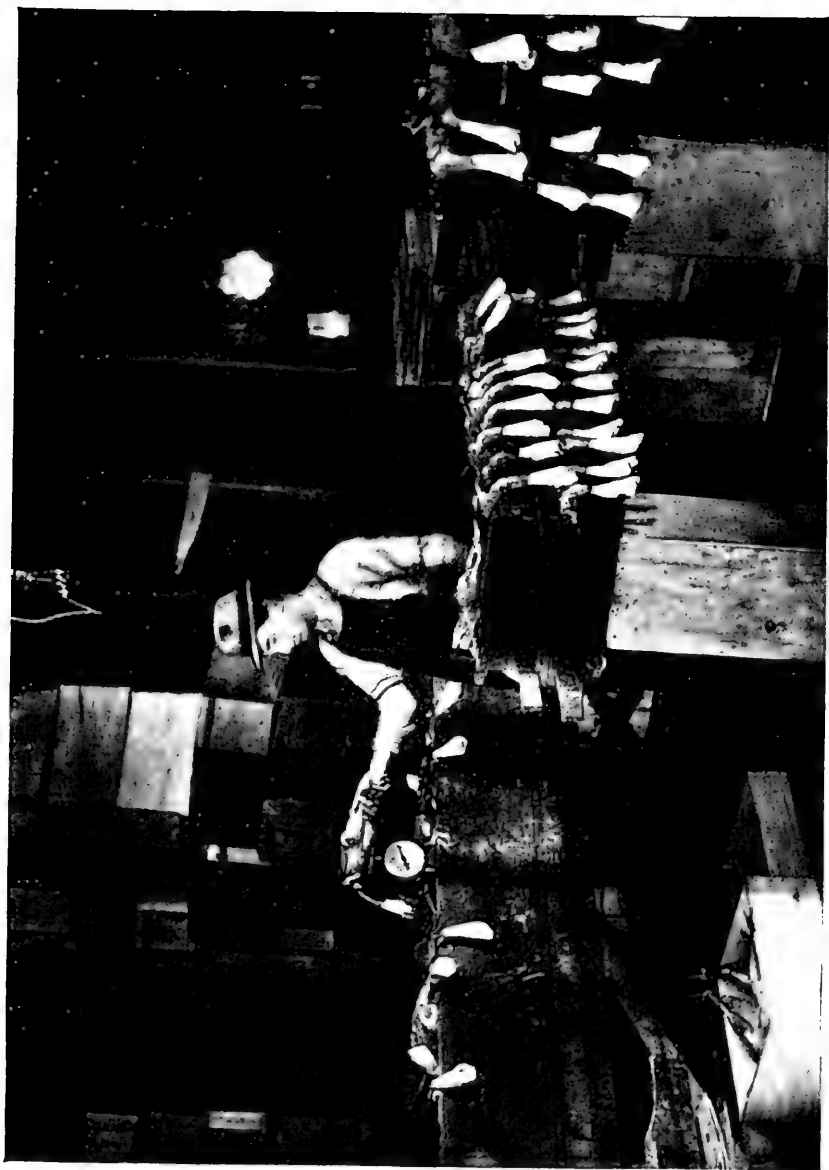


ILLUSTRATION 7.



packers make a practice of wrapping all No. 2 birds, thinking that they sell better. Less wrapping is done now than several years ago, which would indicate that wrapping is only an extra expense with no compensating gain in price. It is desirable but not necessary, to pack X. X. grade poultry a dozen to the box, but in order to clean up birds weighing $2\frac{1}{2}$ to 4 pounds can be packed in the same box. And if a dozen will not fill the box, pack more, and mark and invoice the number of birds contained in the box.

Fatted Chickens and Fowl.

A large portion of the fowl in Class 60 are not of any too good quality; they are not No. 2 or X. X. birds, but look a little rough and hard-meated. There are in some communities some very fine soft-meated stock in this grade that could be sorted out and packed separately, and this stock will bring a higher price and not materially hurt the sale of the remainder. It is well to put another grade number on the box and to use a different style of packing. Standard Export Style (E), or Variation 1-(F), is recommended.

It is also true that in some communities there are a large number of the heavier fowl that show that they have been especially fattened. They are of a better quality than most fowl that are put through a milk feeding station, and there is no reason why, if they run especially fine, they should not be selected out and packed separately; either Export Style (E) or Single Roaster Style (K).



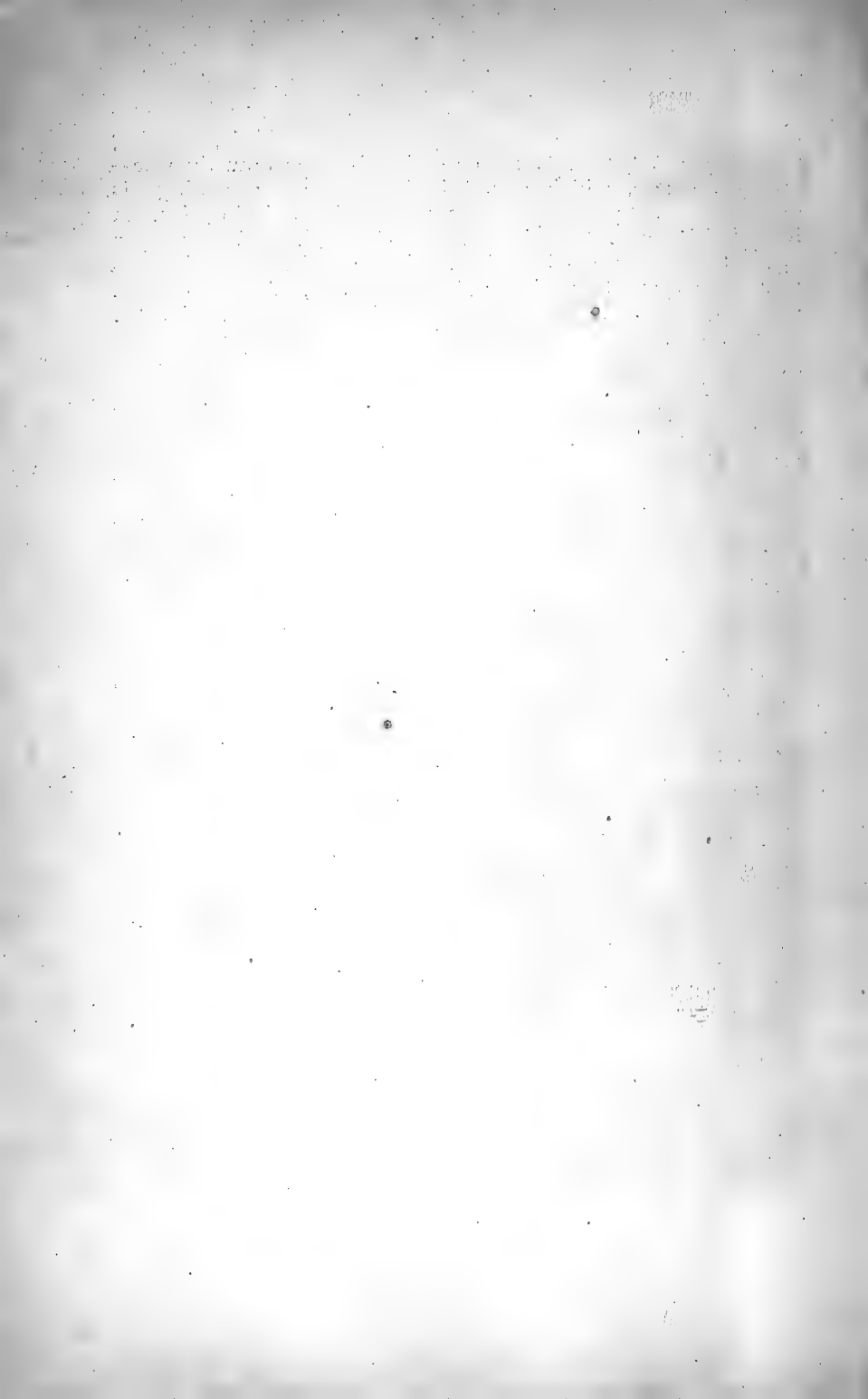


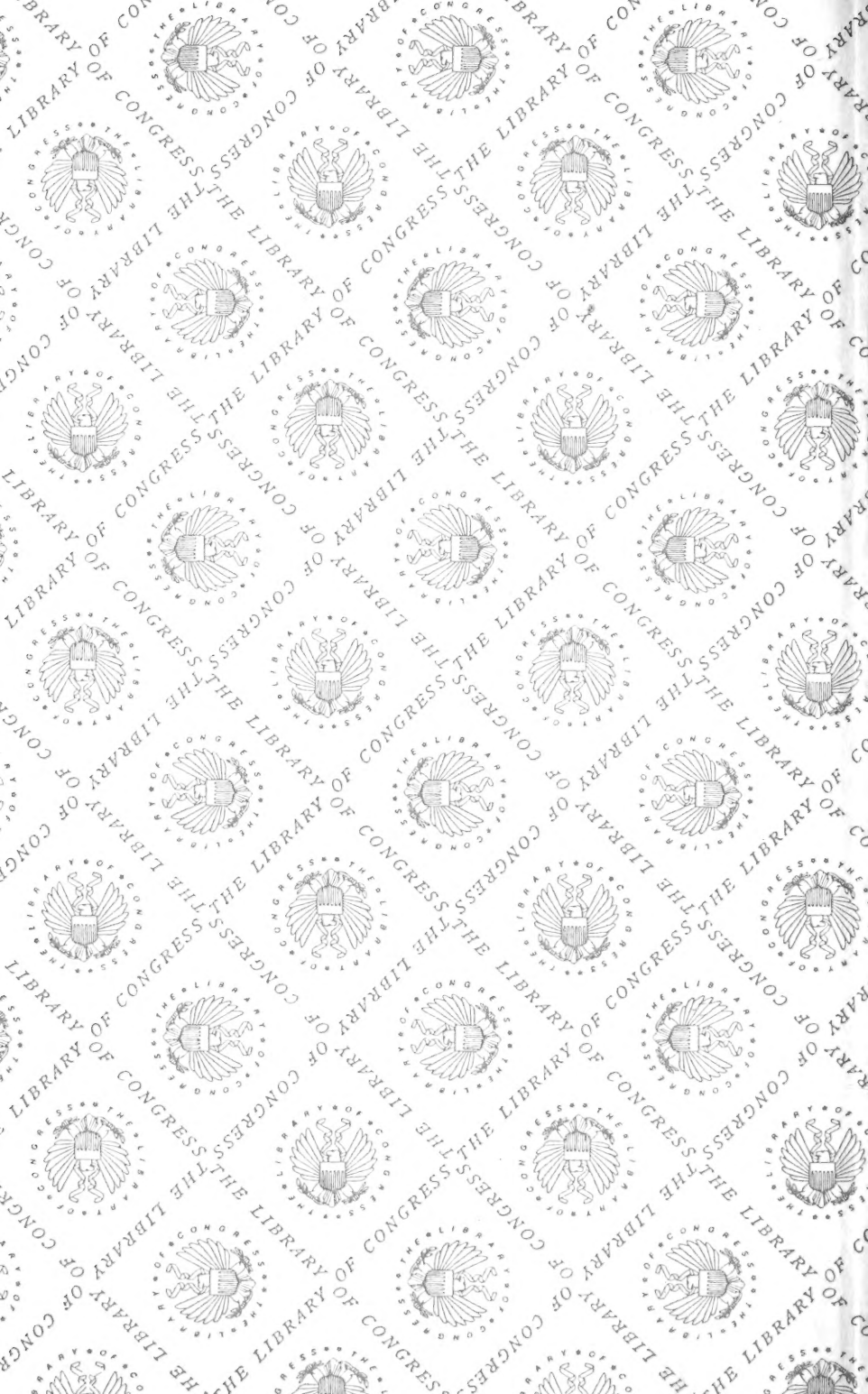


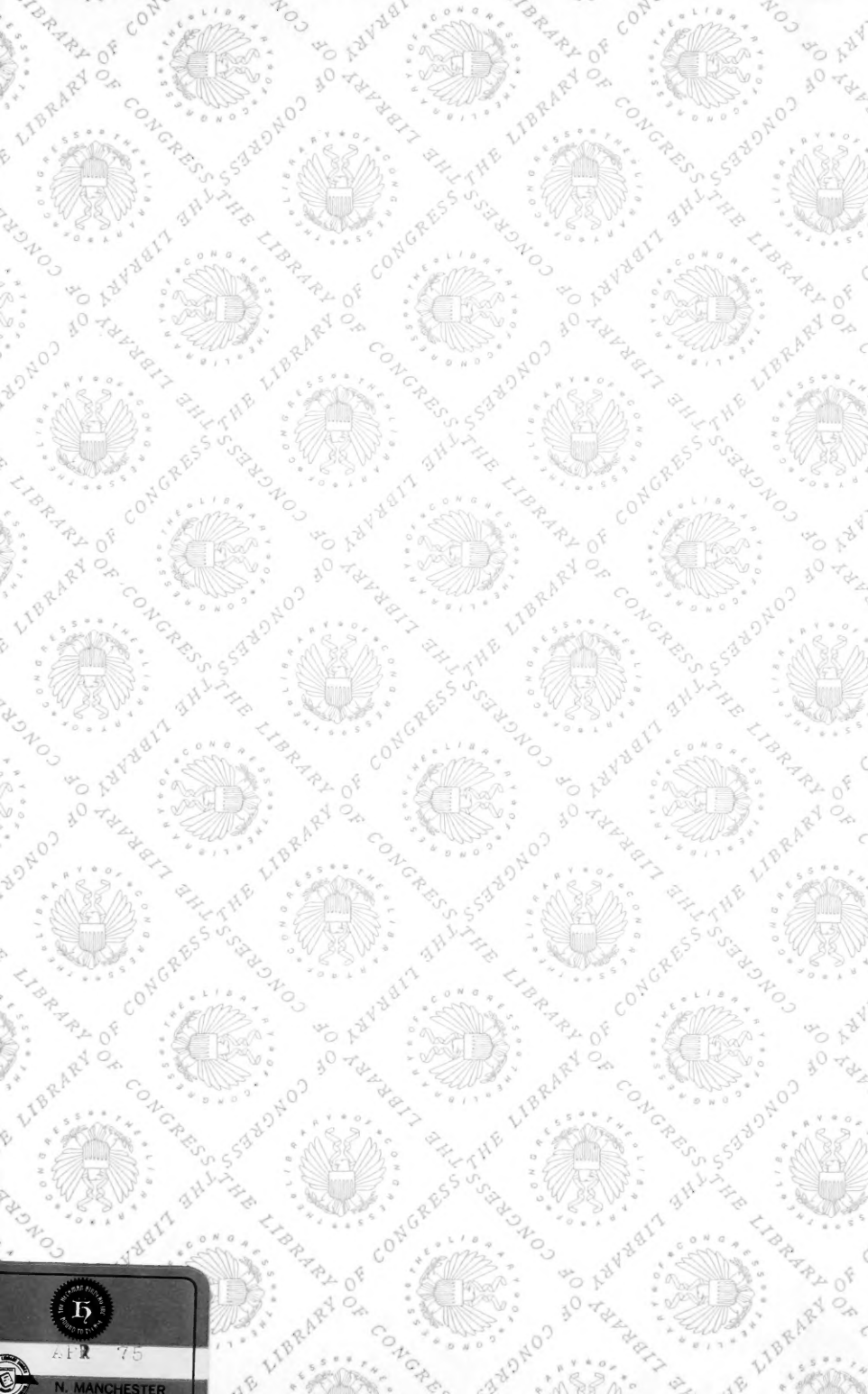
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