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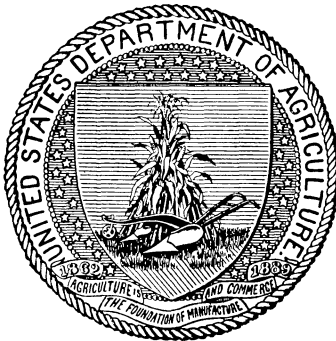
FARMERS' BULLETIN 452.

CAPONS AND CAPONIZING.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ANIMAL INDUSTRY,
Washington, D. C., March 8, 1911.

SIR: In the Twenty-second Annual Report of this Bureau there appeared a paper on "Capons and Caponizing," by Mr. Rob R. Slocum, which was reprinted in pamphlet form as Circular 107 of this Bureau. As the supply of that circular is exhausted, and as there is a continued demand for information on the subject, I have the honor to recommend that a revised edition, the manuscript for which is herewith transmitted, be published as a Farmers' Bulletin.

Respectfully,

A. D. MELVIN,
Chief of Bureau.

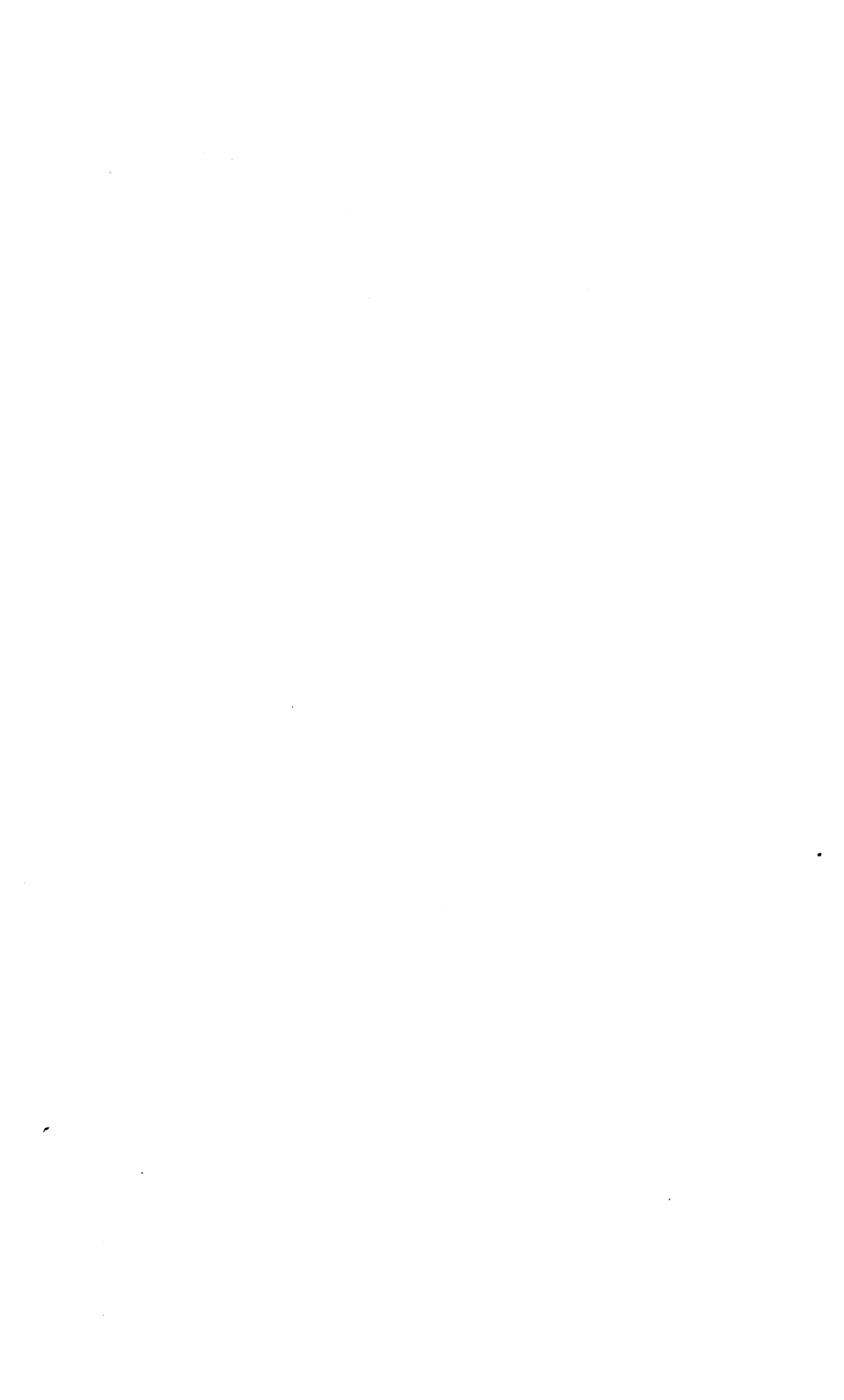
Hon. JAMES WILSON,
Secretary of Agriculture.

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CAPONS AND CAPONIZING.

HISTORICAL SKETCH.

It is impossible to say just how long the operation of caponizing has been performed. It seems quite certain, however, that the practice was familiar to the Chinese more than two thousand years ago. Later it was practiced by the Greeks and Romans and, through medieval times, by the people of middle and southern Europe, until in recent times it has been introduced into America. At present capons are most universally known and appreciated in France, although within the last few years the business of producing them has advanced rapidly in this country. Much the larger part of the industry is confined to that portion of the United States east of Philadelphia, though increasing numbers of capons are being raised in the North Central States. During the winter months capon is regularly quoted in the markets of the larger eastern cities. Massachusetts and New Jersey are the great centers for the growing of capons, while Boston, New York, and Philadelphia are the important markets.

DESCRIPTION AND CHARACTERISTICS OF THE CAPON.

What is a capon? A capon is an altered or castrated male chicken, bearing the same relation to a cockerel that a steer does to a bull, a barrow to a boar, or a wether to a ram. As with other male animals so altered, the disposition of the capon differs materially from that of the cockerel. He no longer shows any disposition to fight, is much more quiet and sluggish, and is more docile and easy to keep within bounds. The true capon never crows. Along with this change in disposition there is a change in appearance. The comb and wattles cease growing, which causes the head to appear small. The hackle and saddle feathers develop beautifully. Indeed, these feathers and the undeveloped comb and wattles serve to identify the capon and in consequence should never be removed when the bird is dressed for the market.

As a result of the more peaceful disposition of the capon he continues to grow and his body develops more uniformly and to a somewhat greater size than is the case with a cockerel of the same age.

For a time the cockerel and the capon make about equal development; but as soon as the reproductive organs of the cockerel begin to develop the capon begins to outstrip him in growth. Also when finishing off the capon fattens more readily and economically. As they do not interfere with or worry one another, a large flock of capons may be kept together. Coupled with the better growth is the fact that the capon brings a better price per pound. Cockerels up to 5 months old usually bring from 12 to 18 cents a pound; if held longer than this they become "staggy," are classed as old cocks, and do not bring more than 6 to 12 cents a pound. Capon in season brings 18 to 25 cents and often more a pound. There are two reasons, then, why it is better to caponize surplus cockerels than to raise them for market as such: (1) There is an increase in weight, and (2) the price per pound is materially increased. Yet in many localities where especially fine poultry is raised, while capons usually sell for a somewhat better price, the difference is not great. In fact, for the Boston market many capons are picked clean and sold as "south shore roasters." Hence it will be seen that the profit in capons must depend to a great extent upon local conditions. The demand for capons continues good, notwithstanding the fact that more and more are raised each year.

SELECTION OF BREEDS.

In selecting the breed best suited for caponizing, several factors must be taken into consideration. Large capons bring the best prices. Consequently the breed should be large. It does not pay to caponize small fowls. Yellow legs and skin, as in other classes of poultry, are most popular. The Plymouth Rocks, Light Brahmas, Cochins, Indian Games, Langshans, and Wyandottes are all recommended by different producers, as are also various crosses of these. The Brahmas and Cochins possess good size. By some the Brahmas are claimed to be difficult to operate upon; by others this is denied. The Plymouth Rocks and Wyandottes are somewhat smaller, but sell readily and possess the advantage of yellow skin and legs. The Langshan is large and is easily operated upon. The Indian Game is probably most useful as a cross upon some one of the other breeds, thereby improving the breast meat without materially reducing the size of the fowl. In Massachusetts the Brahma was formerly the most popular breed for this purpose, because of the demand for large birds for roasters. Later, crosses between the Light Brahma and the Barred or White Plymouth Rock became quite popular, while at present the pure Barred and White Plymouth Rocks are also considered suitable and are widely used.

TIME TO CAPONIZE.

In so far as the effects of the operation and the rapidity and ease of healing are concerned, the time of year when the operation is performed is of little importance. The capons seem to recover and do well at any time. Certain other considerations, however, do influence the time. The age and size of the cockerel are very important. As soon as the cockerels weigh 2 to 3 pounds, or when 2 to 4 months old, they should be operated upon. The lower age and weight limits apply particularly to the American breeds, while the higher apply to the Asiatics. If smaller than this, their bodies do not give room enough to work handily. On the other hand, they should never be over 6 months old, as by this time the testicles have developed to a considerable extent, the spermatic arteries carry greater amounts of blood, and the danger of pricking these arteries and causing the fowl to bleed to death is greatly increased. The fact that capons are in greatest demand and bring the best prices from the Christmas season until the end of March, and that it takes about 10 months to grow and finish them properly, makes it important to hatch the chicks in early spring so that they will be of proper size for caponizing in June, July, and August. These are by far the most popular months for the operation, though in some cases it is performed still later.

CAPONIZING INSTRUMENTS.

There are several sets of instruments for performing the operation. These differ principally in the type of instrument used in getting hold of and removing the testicle. One type is the cannula (fig. 1, *a*). This consists of a hollow tube, the lower end of which is compressed and closed except for two small holes through which to run the horse hair or wire comprising the other part of the instrument. This type is very satisfactory but requires two hands to operate. Another type is the twisting scoop (fig. 1, *b*). This is a spoon-like scoop slotted in the center and mounted upon a slender rod. It is designed to slip under the testicle, allowing the spermatic cord to pass through the slot. By twisting the cord is severed. This type has the advantage of requiring only one hand to operate, but is more liable to produce slips than the cannula. A third style of instrument, (fig. 1, *i*) is also in the form of a spoon or scoop, but instead of being in one piece has two jaws regulated by a slide. The testicle is caught in the scoop with the spermatic cord between the jaws, and by tightening the jaws and gently moving the instrument the cord is severed and the testicle removed. Still another type, not now in common use, is the spoon forceps. With this the testicle is

simply grasped with the forceps and detached by a twisting movement. Here one hand can be used also, but the liability of slips is rather greater than with the other methods.

Figure 1, *k*, shows a type of forceps, consisting of two hinged arms, one of which terminates in a broad, flat surface, and the other in an

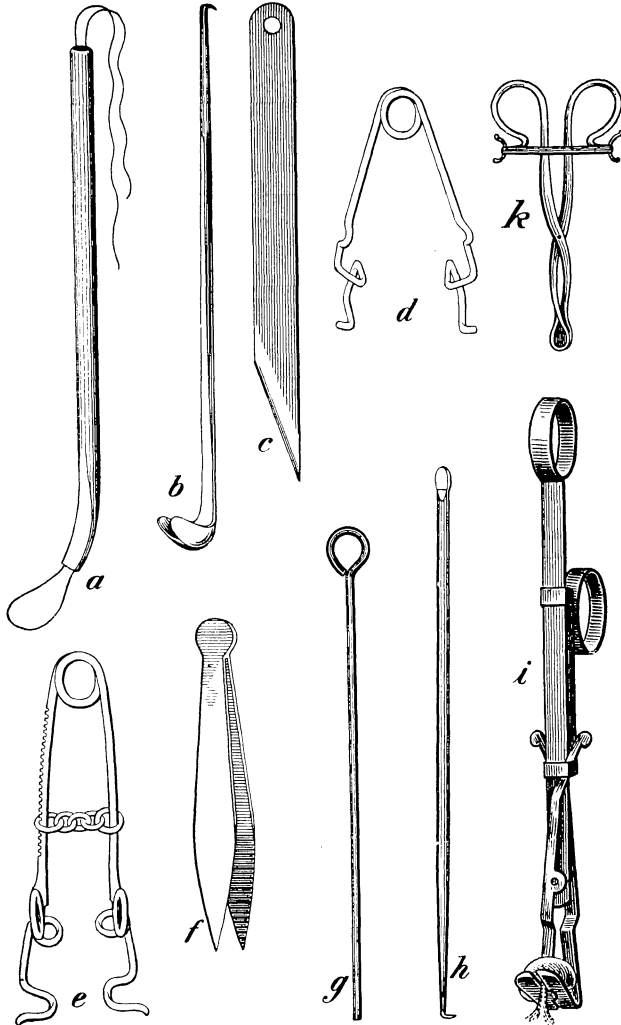


FIG. 1.—Instruments used in caponizing.

end of similar shape from which the center has been removed, leaving only a narrow rim. These two ends are held closely pressed together by means of a rubber band passing across the handles. In use, the ends of the forceps are separated, the solid one slipped under the testicle and the rim then allowed to settle down over it. The

cord is then caught and the testicle can be removed. Careless or too rapid use of this instrument is likely to cause slips. A knife for making the incision into the body cavity is of course necessary. Almost any sharp-pointed, thin-bladed knife will answer the purpose well (see fig. 1, *c*). Some sort of spreader to spring apart the ribs far enough to allow the instruments to be inserted into the body must be used. A plain spring spreader, as shown in figure 1, *d*, or a sliding spreader (fig. 1, *e*), allowing the pressure to be gauged, will answer the purpose. A sharp-pointed hook (fig. 1, *h*), for tearing away the thin membranes, and a blunt probe, of which figure 1, *g*, is one type, for pushing aside the intestines, complete the necessary equipment. A pair of small tweezers or nippers (fig. 1, *f*), is also useful in removing any foreign matter from the body.

THE OPERATION OF CAPONIZING.

Before beginning the operation two conditions are absolutely essential. If these are not favorable, do not attempt to operate. The first of these is that the intestines of the fowl should be completely empty, so that they will fall away and expose the testicle to view. This can be accomplished by shutting up the fowls and withholding all food and water for twenty-four to thirty-six hours before the operation. Thirty-six hours is better than twenty-four, especially for a beginner. The second condition is a good, strong light, so that the organs of the fowl may be clearly and easily distinguished. Direct sunlight is best for this, and in consequence it is well to operate out of doors on a bright day. Some operators have substituted the physician's head reflector and artificial light with good success. It has been suggested that a probe consisting of a small electric bulb on the end of a slender rod and operated by small dry batteries, so that it can be introduced into the body cavity, could be manufactured and used with good success.

METHODS OF HOLDING THE FOWL.

When ready to operate, catch the bird and pass a noose of strong string about the legs. Do the same with both wings close to the shoulder joints. To the other end of the strings are attached weights of sufficient size to hold down and stretch out the bird when placed upon the head of a barrel or box of convenient height, which is to serve as operating table. These weights are allowed to hang on opposite sides of the barrel or box (see fig. 2). A table, if so desired, may be arranged by boring holes through its top at proper distances from each other, allowing the strings to pass through these, and hanging the weights underneath. Still other ways of holding the fowl in place have been devised, but these are unimportant so long as the fowl is held securely stretched out.

DETAILS OF THE OPERATION.

Having fastened the fowl, be sure that all the instruments are at hand. It is also well, though not necessary, to have ready some absorbent cotton and a dish of water to which has been added a few drops of carbolic acid. Having once started, carry the operation through as quickly as possible. Moisten and remove the feathers

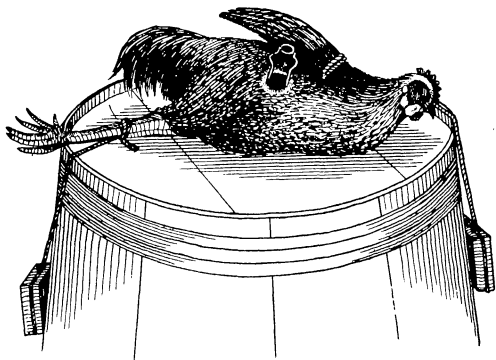


FIG. 2.—Method of securing fowl; also spreader in place.

from a small area over the last two ribs just in front of the thigh (see fig. 3). With the left hand slide the skin and flesh down toward the thigh. Holding it thus, make the incision between the last two ribs (fig. 4), holding the edge of the knife away from you as you stand back of the fowl. Lengthen the incision in each direction until it is 1 to 1½ inches long. Now insert the spreader into the incision, thus springing the ribs apart, as shown in figure 2. The intestines will now be visible, covered by a thin membrane called the omentum. Tear apart this membrane with the hook, and the upper testicle, yellow or sometimes rather dark colored and about the size and shape of an ordinary bean, should be visible close up against the backbone. By pushing aside the intestines this can easily be seen, and the lower one also, in a similar position on the other side of the backbone. Expert operators usually remove both testicles through one incision. This is a desirable practice, as it saves time and is not so hard on the bird. Inexperienced operators will usually find it well to attempt the removal of the upper or nearer testicle only and to make a second incision on the opposite side of the body for the removal of the other testicle.

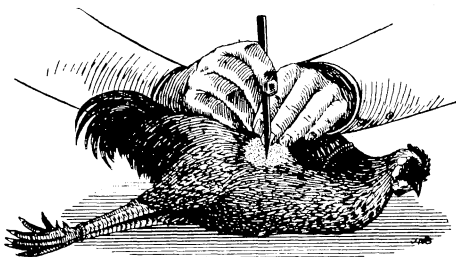


FIG. 3.—Ready to make the incision.

If both testicles are to be removed through the same incision, remove the lower first, as the bleeding from the upper might be sufficient to obscure the lower. Each testicle is enveloped in a thin membrane. This may be and probably is best removed with the testicle, though some operators tear it open and remove the testicle only.

The delicate part of the operation is now at hand, due to the close proximity of the spermatic artery, which runs just back of the testicle and to which the testicle is in part attached. If this is ruptured the fowl will bleed to death. The cannula, threaded with a coarse horse-hair or fine wire, or one of the other forms of instrument previously described, now comes into use. If the cannula is used, allow the hair or wire protruding from the end to form a small loop just large enough to slip over the testicle, as shown in figure 5. Work this over the testicle, being careful to inclose the entire organ. Now tighten up on the free ends of the hair or wire, being careful not to catch any part of

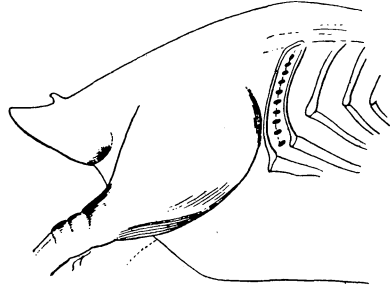


FIG. 4.—Diagram showing where incision should be made between last two ribs.

the artery. If the spermatic cord does not separate, saw lightly with the hair or wire. When the testicle is free, remove it from the body. If only the upper testicle has been removed, turn the bird over and proceed in exactly the same manner upon the other side.

After removing the testicle, if the bleeding is at all

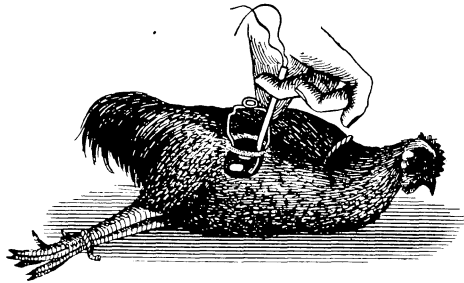


FIG. 5.—Cannula in use. (The lower aperture appears in the illustration simply to show cannula in operation, and of course is not made in the fowl.)

profuse it is well to remove a portion of the blood by introducing small pieces of absorbent cotton into the body by means of the hook or nippers, allowing them to become saturated and then removing them. Be sure to remove all blood clots, feathers, or other foreign matter. After the testicles and all foreign matter are removed, take out the spreaders, thus allowing the skin to slip back over the incision. The method of using the twisting scoop is shown in figure 6.

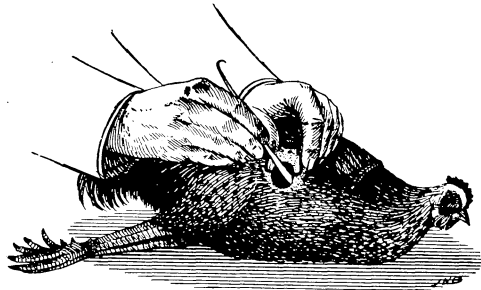


FIG. 6.—Twisting scoop in use.

LOSSES DUE TO CAPONIZING.

Some birds are sure to be killed even by experts, but the loss is small, seldom exceeding 5 per cent where any considerable number

are caponized, and usually not more than 2 or 3 per cent. With beginners, of course, the percentage is much larger, but with a little practice and care this is soon overcome. Any fowls which may be killed in this way are perfectly good to eat and are therefore not wasted.

A great deal of practice is required to become expert enough to operate rapidly. Consequently it is quite common in localities where many capons are grown to hire experts to do the work. These men are able to caponize a fowl every two to five minutes, and charge from 3 to 6 cents a fowl for the service. It is most humane for the beginner to make his first trials upon dead fowls.

SLIPS.

Many times, particularly with beginners, while the operation seems to be entirely satisfactory, the bird will turn out to be what is known as a "slip." A "slip" is neither cockerel nor capon, but is between the two, possessing the mischievous disposition and the appearance of an ordinary cockerel, but, as a rule, being unable to reproduce. This condition is due to the fact that a small piece of the testicle is left in the body. This piece often grows to a considerable size. As the "slips" possess the same restless disposition as the cockerels, they grow and fatten little if any better, while they do not bring as good a price in the market as the capons. Consequently it is well to use every precaution in order to avoid "slips," as they are unprofitable as compared with capons. With the greatest care, however, "slips" are more common than are deaths due to the operation. The percentage varies all the way from 50 per cent with beginners down to 2 or 3 per cent with experts.

CARE OF FOWLS AFTER THE OPERATION.

Upon being released from the operating table the capons are usually put in a closed yard where they can find shelter, food, and water and can be kept quiet. No roosts are provided, as the less flying and jumping they do the sooner will the wound heal. The capons seem to be very little inconvenienced by the operation, and water and soft feed mixed with sweet skim milk can be given immediately. Some feeders give this in unlimited quantity, while others feed more sparingly for a time. Some growers observe no precautions whatever, giving the birds their full liberty immediately after the operation and allowing them to have any sort of feed.

For a week or 10 days the newly made capons should be carefully observed to see whether they become "wind puffed." This is a condition caused by air gathering under and puffing out the skin near the wound. When observed it can be readily relieved by pricking the

skin with a needle or knife and pressing out the air. In about 10 days or 2 weeks the incision into the body should be entirely healed, and, although no special antiseptic methods are employed in the operation, blood poisoning or any other trouble seldom results.

FEEDING CAPONS.

Capons are usually kept till they are about 10 months old. At this time the market is at its best and the birds have made their most profitable gains. The feeds used and the methods of feeding vary greatly, so much so, indeed, that it is futile to try to give specific directions. For several months after the operation a good growing ration and not a fattening ration is required. It may consist of whole grains, ground grains, or a combination of the two, as each feeder finds most profitable and best suited to his locality. As with other poultry, variety must be given for best results. Late in the fall, when the capons have no pasture, green feed, such as cut clover or vegetables, should be provided. A somewhat more fattening ration than that required for laying hens seems to give good results.

As capons are not usually marketed before Christmas or the first of January they have to be housed during the late fall and early winter. Because of their quiet disposition they stand crowding quite well and have been successfully housed with only 2 or 3 square feet of floor space to a fowl. It is better, however, to allow 4 to 5 feet if possible.

During the last month or month and a half before marketing the corn in the ration should be gradually increased until the fowls are on a full fattening ration. For the last two or three weeks it is desirable to shut them up and feed them in crates, for every possible ounce at this stage adds to the appearance and profit. Machine cramming is sometimes practiced the last week with excellent results.

KILLING AND DRESSING CAPONS FOR MARKET.

KILLING.

The capons selected for killing should be confined for 24 hours without feed or water to completely empty their crops. The usual method of killing is known as the sticking method. The fowl is hung up by the feet, the head held in the left hand, and the whole body stretched to full length. The mouth is forced open, and by means of a sharp, narrow-bladed knife held in the right hand the blood vessels at the back of the throat are severed with a single sweep. The knife is then turned and the point plunged through the roof of the mouth to a point just behind and between the eyes. The brain is here reached, and if properly stuck all feeling is then lost. Convulsions ensue, the muscles are relaxed, and the feathers come out easily.

PICKING.

Capons should always be dry picked, as they look much better and as some of the feathers should be left on. The feathers of the neck and head, the tail feathers, those a short way up the back, the feathers of the last two joints of the wing, and those of the leg, about one-third of the way from knee to hip joint, should be left on. These feathers, together with the head of the capon, serve to distinguish it from other classes of poultry on the market, and consequently should never be removed. Figure 7 shows several capons dressed for market. Their condition, however, is rather poor and is capable of improvement. In picking be careful not to tear the skin. If bad tears are made sew them up. Capons scalded and picked bare bring very little, if any, better prices than other poultry in the same condition.

DRAWING.

Most markets require capons to be undrawn and the head and feet left on. If drawing is required the vent should be cut around and the intestine pulled out until the gizzard is reached, where it is broken off. Nothing else is removed. Care should be used to cleanse the head and feet of all signs of blood or filth.

COOLING AND PACKING.

After picking, the carcasses are hung in a cool place until the animal heat has entirely left the body, when they are ready to be packed. Like other poultry they should be packed in boxes of convenient size, holding about a dozen carcasses. Every attention should be given to neatness and attractiveness, as this helps the sale and the price. During the time of year when most capons are marketed—January, February, and March—no ice is necessary, but if for any reason they are shipped in warm weather they should be packed in ice.

PROFITS.

It is extremely difficult to make any general statement concerning the profits yielded by capons. That they do yield a profit in practically all cases is undoubtedly true, but whether the profit is sufficient to give up to them the time and room they require is a question which must be settled by each man's experience and by local conditions. Many poultrymen think that they can do better to turn off their surplus cockerels as broilers as long as the market holds up and rely upon caponizing only for later-hatched chicks. The house room thus saved they use for pullets or other laying stock, feeling that they make more money in this way. It is certain, however, that many poultrymen find capon raising profitable enough to induce them to continue

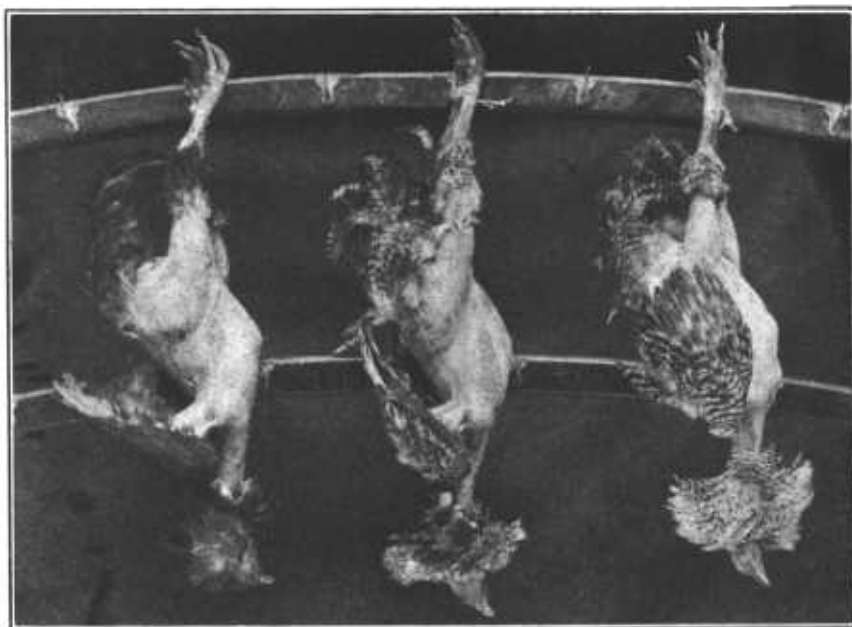
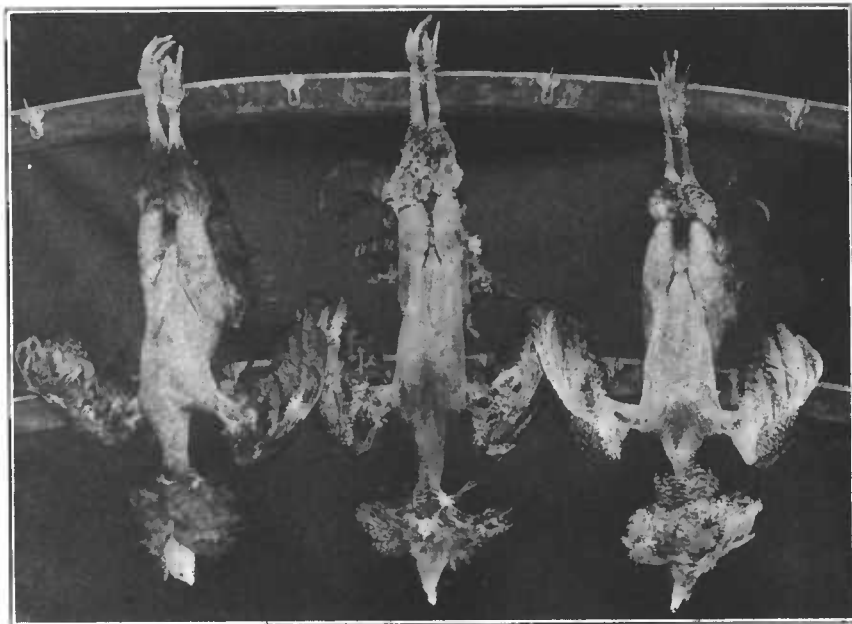


FIG. 7.—Capon dressed for market. These illustrations show appearance after picking, but do not show fowls in perfect condition of flesh.

in the business. On several farms in Massachusetts 500 to 1,000 capons are raised annually, and the writer knows of one farm on which in one season 5,000 cockerels were held for caponizing. Although the industry is growing rapidly year by year, the supply does not yet equal the demand. The best prices are commanded by capons produced near to the market, and consequently perfectly fresh. The markets of the West do not quote as good prices as the eastern ones, 13 and 14 cents being about the highest; hence most of the western-grown capons are shipped East, in which case the express rates cut down the profit materially. On the whole, the profit is probably rather greater for eastern producers than for those of the North Central States.

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