

taken place and only confirmed the first impression, some hitherto overlooked feature will suddenly strike the eye, and at once necessitate mating with quite another bird to that originally intended. In the case of adult birds, what they have already bred with the same or other mates must also be taken into consideration. A hen may have been matched up the previous year apparently with judgment, yet the produce may have been most grievously disappointing, for such mishaps may occur occasionally to any amateur. In such cases, by studying the character of the unforeseen result, and tracing the probable causes, success for next season with the same bird, but differently paired, may be almost insured, and the loss thus more than repaid. Some of these unexpected disappointments are very curious, and for a long time were thought unaccountable. They usually occur at the commencement of a strain, or when a cock is purchased for fresh blood to recruit an old one.

With regard to the ages of the birds which are to be bred together, there is no universal rule. Cocks and hens in their second season, will always breed well together, and the chickens usually sledge more kindly than the produce of either older or younger birds. The offspring of cockerels and pullets mated together are worst in this particular, and in large breeds are also more subject to leg-weakness. A cockerel mated with adult hens is preferred by most amateurs, and usually produces very vigorous and large chickens but if only two or three hens be put with him there is almost sure to be a preponderance of cockerels. An adult cock mated with pullets is also a good arrangement. A valuable hen may be kept and her eggs set as long as she lays; but except in rare cases, a cock is of little or no use after he is four years old, unless for exhibition, for which purpose some birds have been preserved for seven years and even more. In some cases productive vigour may be maintained beyond four years; and so long as a breeding bird of proved value shows indisputable liveliness and vigour it would be a pity to discard him.

It has long been verified by general experience that the breeder has some control over the sexes of his produce by adhering to definite rules, though numerous exceptions will occur. 1. If a vigorous cockerel be mated with not more than three adult hens, the cocks almost always largely predominate in at least the early broods; later this becomes uncertain. 2. If an adult cock be mated with not more than three pullets, the result is very uncertain, the one sex being as likely to occur as the other, but usually there is a decided predominance on one side rather than equality. 3. If an adult cock be mated with five or more pullets the pullets are generally in excess; and what cockerels there are will be most numerous in the earlier eggs. 4. young birds or adult birds mated together are very uncertain; but the fewer hens and the more vigorous the cock, the greater is the proportion of cockerels, which are always more numerous in the earlier eggs of a season than the later. It is also a curious fact that chickens hatched late in the season are often perceptibly more short-legged than the earlier birds. From these facts, while nothing like certainty can be obtained, it is manifest that the breeder possesses considerable power of obtaining such results as are desired.

After the birds are properly mated, they should not, if possible be disturbed, as such disturbance frequently leads to unforeseen disappointment. A cock separated from the hens he has been mated with, and put to others after an interval, not unfrequently turns sulkily and thrashes them severely, instead of showing them proper attention. For this reason it never answers well to make a practice of exhibiting stock birds during the breeding season once carefully mated, let the brood stock remain quietly in their runs till the season is over, when the chickens will probably do credit to the parents from whom they are descended.

POULTRY DIFFICULTIES.—I notice, once in a while, some poultry fancier is troubled with a hen that eats her eggs, and another who has hens that pick the hackles off the cock. The surest and only remedy in either case is to burn the end of the bill off, from an eighth to one-quarter of an inch, with any piece of iron, heated to a white heat. In a case of feather-pulling, after burning the end of the bill, take a sharp knife and scrape the edges of the bill near the point so they can get no hold upon the feathers. After this treatment the fowl can pick up grain, gravel and all necessary to sustain life, but cannot break the shell of the egg, or pluck the cock, and by the time the bill has again grown out, the habit is forgotten. Don't be afraid of burning too much, especially on a strong bill. In case of egg-eaters, if one burning won't do, burn again. In case of rump in brood, cock, or hen, cut the head off, as, although palliatives may be resorted to, the disease is surely generated. In the case of very valuable fowls, of the coarse cold blooded strains, out crosses will absorb the disease.

HENS THAT EAT EGGS.—The best way to break hens of egg-eating is to break their necks and re-stock with birds that have not acquired the habit. Fowls that are expert in egg-eating first attack the egg with their bill. If it is a thin shell, a few strokes will break it, and the rest is an easy job. If, however, the shell is a thick one, they generally fail to break it with their beak; then they begin to scratch in the nest, and, with their feet, throw the egg against the hard sides of the box until it is broken. First of all, make hens lay hard shelled eggs, so hard that they cannot be readily broken by a hen's bill. This can be done by feeding freely with slacked lime, ground or broken bones, oyster shells, etc. To prevent breaking against the sides of the box, the nests should be high and lined upon the sides with cushions filled with hay or other soft material. Their only chance then is that they may throw two eggs forcibly against each other. To prevent this, I rob them of the nest egg, and gather the eggs several times a day. It is a good plan to leave a few China eggs near the nest for them to work at, which will make their bills so sore that they will strike the real egg with less force. —*Cor. Poultry World.*

The variety of Pigeons you should Keep.

Under this heading WILTSHIRE RECTOR, in the *Journal of Horticulture* furnishes a very readable article, from which we make the following extracts:—

"Fancy pigeons are very numerous as well as very beautiful, and there are almost infinite varieties of form, as well as blending of feather. Where will you find such varied beauty? Nowhere, I think, in one class of bird. Hence tastes the very opposite may be gratified. Does the eye delight in color? That can be gratified; witness especially some of the German Toys, especially the Suabians. Does another delight in gracefulness of form? That can also be gratified; witness the slender Dragoon, and stronger Carrier; or another delight in size? Runts the long, and Pouters the tall, will please; or another delight in smallness and colour? there is the Almond Tumbler.

"Now supposing, gentle reader, you are in good easy circumstances, and that you delight in a country life, revel in a landscape, delight in a garden and green-house. Then if it is so, you have the greatest source of pigeon pleasure at your command, for you can keep all the varieties. You can go in for elegance of structure; a breeding-place furthest back, three sides of a square, shut in when needed from all cold, where you can sit in winter among your pets, or stroll round from box to box, cigar alight. This innermost compartment may open into a wired space for flight, that again opening into another, where a fountain may play a gentle jet only, and a shallow gravel-bottomed space beneath where the birds can wash; and pretty creepers may be outside both wired enclosures. A rookery and a fernery flanking all this would be ornamental, not detrimental, in a garden. Within, the pigeons of all varieties—the tall bulky Pouter beside the tiny dappled Tumbler; the long-beaked beside the short-beaked; the turned-crowned beside the smooth-crowned; the whole-feathered, the pied, the chequered, the mottled, the pure white, the raven black, the mottled, the splashed, the black-headed, the white-headed, the soft-feathered, the hard-feathered. What a lovely assortment of feathered pets you would be able to enjoy, and how much pleasure you would derive from them! If still a busy man at times, you would the more enjoy the leisure hour spent with your birds; and if quite a retired man, having abandoned your sword with which you cut your way to success in life, then you would, looking back, and talking over your past active career, have

an agreeable pastime for your well-earned repose. You would be the very man I should, if I dared, envy. "But all are not rich enough to possess all the varieties, therefore the best plan is to adopt one variety at a time, and study its capabilities, and breed it to perfection. Then each variety of man may be suited with some variety of pigeon. Thus there is in the world a walking class of men—a genus to themselves are these great walkers—they greatly benefit their shoemaker and their butcher, while their doctor regards them with great disgust. I know the men at once—these men, long-legged men, what there is of them is all bone and muscle; they have a tanned cheek, and peculiar expression of face. These are the men who might have been colonists, explorers, travellers; and they are the men who keep homing pigeons. They always want a walk and an object. Let them keep Antwerps. Further and further they may extend their walks, and toss their birds on some lone hill or breezy down, and timing their flight from their hand, stride home eager and hot and anxious to find how long their birds got there before themselves.

"But all men are not great walkers; habit, business, infirmity, or taste, keep some at home. To such their house and garden are all in all. They may suitably keep, if on a hill, or in an open spot, high flying Tumblers, who, like themselves, are "true to the kindred points of heaven and home," face upward, watching their birds or tending them, in which there is always a special interest, as Tumblers are the cleverest and tamest of pigeons. Little, confiding, bold fellows they are, who will feed out of your hand, and finding nothing in it, peck sharply at your fingers.

"Then there are the still more home-keeping varieties, who rarely fly save from the ground to the top of their house, and therefore, never stray away and annoy neighbors; at least, neighbors fancy they annoy them. Or, again, you are a little pleasant smiling fat man, with a dot for a nose, a double chin, and double the stomach allotted to most men, and with a little weakness for tasty viands? Then, if so, the full-fleshed Runt must be your love; not the prize birds, which are bad breeders, but the smaller, yet large-bodied, and exceedingly appetizing in pie or spit. Then, if you reside in town, where cats in brigades abound on roof or wall, and make night hideous with their music all out of time and harsh, and who would pounce on any poor bird if at liberty, still if you hanker after bird pets in the form of fancy pigeons, that hankering can be gratified by keeping the Londoner's pigeon, his bird for a century at least, the elegant-shaped and elegant-colored Almond Tumbler, or his kindred Short-faces. A little room or a tiny greenhouse will do, an invalid may tend them and enjoy them; as they must not fly they are the birds for the city, or for those persons who are obliged to remain in-doors.

"But there are the ladies: I can suit their special tastes, too. The older, who remember how neatly the cottage bonnet looked, and neater the face inside, they may have reminders of both in Jacobins, whose modest folding feathers half hide their pretty faces. Or a young lady of the present day, with chignon and tiny bonnet pinned to her hair? Then the Helmet and the Turbit will do for you. Are you Catholic? There are Nuns, Priests, Monks, and Carmelites for you. Or does some enamoured avain declare in your listening ear (foolish fellow!) that you are an angel? You can keep Archangels for company. Or are you matron, and has the lord of the house and of your heart begun to lose his ambrosial locks, and that youngest pet—his pet—thinks it fine fun to stand tip-toe behind papa's chair, and kiss the bald place, and run off with a shriek, hoping to be run after? Then like master like pigeons, for there are Baldpates to match; or has he a hirsute chin? there are Beards. Or are you tender on 'a soldier covered with lace,' as the nursery rhyme has it? you can have dashing Dragons, or heavier Horsemen, or puffing Trumpeters. Then ladies always love the pure White Fantail—the ladies' pigeon. If you do, be sure and have both varieties, the stouter and flatter tailed Englishman, and the tiny tremulous Scotchman. Some ladies, too, seem now-a-days always making point lace; they may keep Lace pigeons. Then, again, there is the odd little air Tumbler, or rather house Tumbler, which, though it cannot fly up to a bench without tumbling, delights some persons."

WHITE-FACE IN HAMBOURG.—This class of fowls are subject to a disease known as *White-face*,—that is, the face first appears partially spotted with white, which steadily increases until the whole face and comb become covered. It is contagious, and birds in the same coop soon catch it. The following is said to be a certain cure for it: A little oil mixed with the flowers of sulphur, and rubbed on the parts affected will speedily cure it.