

devoted much time and thought to the study of these interesting animals, and I am firmly convinced that in this, as in every pursuit where excellence is desired, a man's time and energies must be largely devoted to his business.

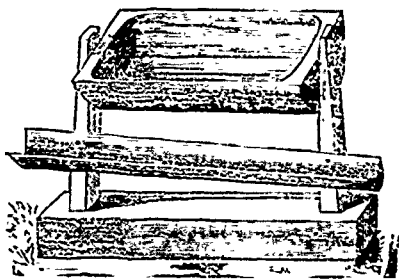
In founding a herd of short-horns, the young breeder should commence with a choice few, and spare no pains in procuring them. Nor must money be a consideration, as the first outlay will be the least, if the selection is good. The pedigree of the cows must be of the first class, and free from alloy. The animals themselves must be as perfect in form, and good in quality as can be brought; and they should be known as regular breeders, or from regular breeding tribes. The best short-horns cannot be purchased, but they can be bred; and any one commencing with five or six superior cows, and using a bull as good as can be found—the blood and quality of which must also be unexceptionable—may, by retaining his heifers, in a few years be the possessor of a splendid herd. "The Breeder's Complete Register of Short-horns, containing Forms of Entry for Registering the Pedigree and Produce of the Herd," by Mr. Torr, and published by Longman & Co., London, will be found fully to answer the purpose of a private herd book. Our national register, known as "Cotte's Herd Book," in 12 vols. 8vo., is published by the proprietor, Mr. Stahord, of Easton-square, London, who receives entries from short-horn breeders at certain times, of which he gives notice for future publication.

In the foregoing observations I have confined my remarks to the feeding and management of breeding stock in an ordinary and economical manner, consistent with fair conditions. The feeding and treatment of stock for exhibition at the best local and national shows is quite a different matter, and demands care and skill which few persons thoroughly possess, and an outlay and outwearing of expense which alarms prudent men. When expense is not a consideration, other requisites are essential and imperative, that although the competitors are numerous, the winners of prizes are generally a select few, verifying the words of an ancient motto, that—

"Many go out for work, and come home short."

—*Farmers' Magazine.*

Watering Trough.



Place two posts in the ground to support the frame for the trough. Hang the trough on pulleys. By means of the lever it is tripped so as to throw the water into the waste sport. When not in use the trough can be left bottom up to prevent it being filled with snow, sleet, &c.—*Practical Farmer, J. A. Bulsh*

Principles of Breeding.

The *National Live Stock Journal* says:—Scientific investigation and research have established the following propositions as true, in the transmission of hereditary animal characteristics.

1st. Like produces like, or the likeness of some ancestor.

2d. When there is great uniformity among the members of a species, the divergences of the offspring from the average type are usually small.

3d. When a considerable divergence has once been established, tendencies among the offspring are frequent and great.

4th. Any accidental variation from the established type in the form, disposition or habits of a species, may be perpetuated, and to a limited extent intensified, by careful selection and use.

5th. An unnatural strain of demand on any particular part of the animal machinery, long continued, tends to weaken or dwarf all the other parts not allied to the one so stimulated.

6th. Hereditary qualities are liable to be weakened, if not entirely lost, by disuse.

Poultry Yard.

Hints to Poultry Exhibitors.

Continued from page 288.

POLISH.—Three varieties of this breed are offered prizes, White Crested Black, and Gold and Silver Spangled Polish. The crest-feathers of the Silver Spangled Polish cock should be black at roots, white in middle, and spotted with black at tips; on old birds white feathers mingled; hackle white, spotted with black at tips; back shoulder coverts and wing-row, white spotted with black, similar to but broader than hackle and saddle-feathers; wing coverts white, head all round with black, the lacing broader or thicker at the ends of feathers, forming two symmetrically laced bars across the wings; secondary quills finely laced all round, the lacing broader at tips, with this exception, the outer web is white, the inner web white with more or less grey or greyish black mingled, but still clearly lighter than the black lacing; primaries very similar to secondaries; saddle-feathers white tipped with black at their bases; breast white, with a heavy crescentic spangle at tips of feathers, often running up the sides so as to form a lacing; tail white or grey, spangled with black at tips of feathers; sickles the same; tail coverts or side-feathers, white with more or less grey in the centre, heavily laced with very resplendent green black. The crest of the Silver Spangled Polish hen should be black, finely laced with white, the first year, after wards white laced with black, hackle white, laced at tips with black; breast, white spangled with crescentic spangles, running up almost into a lacing, remainder of plumage white, laced entirely round every feather with black even in the secondary quills, the lacing being rather thicker or heavier at tips of the feathers. In both sexes, the eyes bright red, beak dark horn color, face, red, legs, slaty blue.

The Golden Spangled Polish should be similar in all respects in both sexes to Silver Spangled as regards marking, only substituting the golden for the silver ground.

The defects in both the above varieties of the Polish are: Want of size and fulness of crest; presence of more than the merest rudiments of comb, dark breast, wings and tail badly laced, and want of size, symmetry and condition.

The White Crested Black Polish, in both sexes, should have beak black or dark horn color, face and wattles red, deaf ears white, eyes red, crest pure white, with only a few black feathers in the front. Rest of the plumage a deep rich black, legs a very dark slate color, approaching to black. In this variety, the defects are: Want of size and fulness in crest, too much comb, red deaf ear, too much black in crest, or bad white, want of gloss or richness of plumage, want of size, symmetry and condition.

In all varieties of the Polish breed, the following are disqualifications: Distinct two-horned comb, crooked back, wry tail, or any other deformity, presence of foul colored feathers, amputated combs, plucked crests, or any other fraudulent treatment, legs of any color but blue or black, or bluish black.

HAMBURG.—Four varieties of Hamburgs are included in the prize list, Gold and Silver Spangled, and Gold and Silver Pencilled. In the Silver Spangled cock the hackle should be silvery white, free from yellow feathers at bottom spotted as much as possible. On the back, shoulder coverts and wing-bow, the feathers should be white spotted with black. Owing to the pointed shape of the tip of the feathers, the spots will be long and narrow. Each feather of the wing coverts should be white, with a heavy round black spangle at the tip, forming two even bars across the wing. Secondaries, white, spangled at the tips, the spangle forming what is called the stepping of the wing. Primaries also to be spangled at the ends.

A black spot should appear at each end of the saddle-feathers, the rest white. Breast, under part and thighs, white, spangled with black, every feather having a rich, round, black spangle at the tip, the larger the better, and just arranged as barely to show the white between. The outside of the tail whitish, inside greyish, each feather spangled at the tip. The feathers of the sickles and the secondary sickles, clear white, with a large distinct spangle at the end of each. In the Silver Spangled hen, each feather of the hackle should be silvery white, spotted with black on the end, those towards the bottom becoming larger and rounder. Back, shoulders, saddle, tail coverts, breast, under-parts and thighs, white, each feather tipped with a large round, black moon or spangle, not arranged so close as to overlap and appear solid black, but so that the white can just be seen between. Tail feathers white, with a spangle at the end, which is, however, seldom perfectly round. Wing coverts tipped with very large spangles, so as to form two regular bars across the wing, and secondary quills to be white, tipped with a heavy crescentic spangle, so arranged as to appear like "steps" on the end of the wing when it is closed. Primaries, white, tipped with black. The marking to be as uniform as possible all over the body. In both sexes the beak a dark horn color; comb, face and wattles, a brilliant red, deaf ears, pure white, eyes, hazel, and legs, dark leaden blue. In the Golden Spangled Hamburgs the ground color of the cock should be rich reddish golden bay, the hackle and saddle striped with black, the stripes to be sharp and clear. The feathers of the back, shoulder coverts and wing-bow, should have black spots at their tips. Wing coverts heavily spangled with large round spangles, forming two bars across the wing. The ends of the secondary and primary feathers also spangled on the ends. Breast, under-parts and thighs, heavily spangled with rich round spangles. Tail, rich green black. The hen of the Golden Spangled variety should have a rich reddish golden bay ground color, but in other respects similar to the Silver Spangled, except that the hackle is striped instead of spotted with black, and the tail is black. In both sexes, beak, horn color, comb, face and wattles, brilliant red, deaf ears, pure white, eyes, red, and legs dark leaden blue. The defects in both varieties of the Spangled Hamburgs are: Bad head and comb; bad carriage of tail; stained deaf ears; deficiency in bars; marking of tail of Silver Spangled spangling too thick so as to appear black, or too thin and small, so as to appear spotted or irregular, or want of clearness in ground, or any other faults of color and marking, and want of general symmetry and condition. The disqualifications are: Single or lopping combs, hen-feathered cocks; actually red deaf ears; absence of bars on wings; legs of any other color but blue or dark leaden blue; wry tails, or any bodily deformity; trimmed combs, or any other fraudulent dyeing, trimming or dressing. In the Silver Pencilled Hamburgs the hackle, back, saddle, shoulder coverts and wing-bow, pure silvery white, lower web of wing coverts, pure white; upper web, heavily pencilled across, the pencilling to extend just at tip across outer web also, so as to form an indistinct and rudimentary bar; secondaries, white on lower web, except a strip of black next the quills, and black on inner web, except a little grey or white on extreme edge; primaries, white on outer web, and black on inner web; Breast, under-parts and thighs, white, except a few black spots behind the thighs. Tail, black in the true feathers; sickle and secondaries, rich glossy, green-black, with a narrow lacing or edging of pure white round. The hackle of the Silver Pencilled hen, silvery white. Remainder of plumage, except wing quills, a pure silvery white ground color, each feather pencilled across with black; the pencilling to be as fine or frequent as possible, to go as straight and squarely across as possible, and to be nearly as possible equal in width to the white spaces left between. The