

But one of these died after leaving the nests, which goes to prove the hardness of this variety. The young ducks thrive well, and when six to eight months old weighed five to six pounds on the average. A large portion were killed and eaten; the flesh was found to be remarkably juicy and tender. The retail market price of such ducks was about 25 cents a pound, so that each would be worth at least \$1.25. The second year it was necessary to provide larger accommodation, and a house was made for them on the bank of a pond adjoining a brook, in which there is an abundance of water cress and other food, both vegetable and animal. The water-cress is eaten with avidity by ducks, and has myriads of snails and other water animals upon it. A plan of this house is shown at figures 1 and 2. For 50 to 100 ducks it should be 30 feet long, 12 feet wide, and from 4 feet high in front, to 6 or 8 feet in the rear. Entrance doors are made in the front, which should have a few small windows. At the rear are the nests; these are boxes open at the front. Behind each nest is a small door through which the eggs may be taken. It is necessary to keep the ducks shut up in the morning until they have laid their eggs, and a strip of wire netting will be required, to enclose a narrow yard in front of the house. Twine netting should not be used, as the ducks put their heads through the meshes and twist the twine about their necks, often so effectively as to strangle themselves.

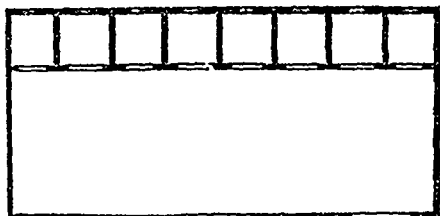


FIG. 2.—Ground plan of the house.

in its second year is 120 eggs, and 60 to 80 for a yearling. Their feathers are of the best quality, white, with a creamy shade, and 5 ducks weighing 5 pounds each, have yielded, killed in the winter time when fully feathered, more than one pound in all. It will be right to pick the ducks when moulting is beginning; the feathers are then loose, and are picked easily and without injury (1). This will considerably increase the yield of feathers, and will prevent a useless loss; otherwise the loose feathers from 20 ducks will be found spread over their whole range.

(1) Picking ducks and geese alive is a detestable piece of cruelty. The S. P. C. A. should look after any one guilty of such barbarity. It is a remnant of the days, when unhappy cats were skinned alive, because their fur looked the better for it.

A. R. J. F.

How Butter is Spoiled.—Winter and spring butter is often very much injured in flavour by allowing cows to eat the litter from horse stables. Cows are not unfrequently very fond of this litter, though it is impregnated with liquid manure from the horses, and, if allowed, they eat greedily, and the effect is that their milk and butter will be tainted with the taste of this kind of food, in the same way that the flavour is injured by eating turnips, but to a more disagreeable degree. If litter is allowed to be eaten, it should be given to cattle not in milk, and on no account should milch cows be allowed to consume other than the sweetest and purest food. Very nice butter-makers are sometimes at a loss to account for stable taints in butter, especially when extraordinary precautions have been taken to have the milking done in the most perfect manner, and so in all the processes of handling the milk until the butter is packed for market. Still, the butter has a disagreeable taint, and the

cause often comes from allowing the cows, when turned out to water and exercise, to feed about the horse stable, where they consume all the litter which, on account of its being soaked with liquid manure, is cast out of the stable.—*Pioneer Press.*

Science of cream-raising.—Professor Arnold's explanation of the rising of cream, resting on the assumption that the difference in the specific gravity between milk and cream is greatest when hot and least when cold, is controverted by W. J. Van Patten (in the *Country Gentleman*), who holds that this opinion had its origin in the common error of regarding cream as subject to the laws governing liquids, and the habit of speaking of butter globules as cream globules; whereas cream is not a distinct substance of itself, but a mixture of solid globules of butter, with more or less milk. He says: "Cream does not rise; only the butter globules do that, mixed and entangled more or less with milk, and then constitute what we call cream." "Being composed of solid butter they are subject to the law governing solids, and not to those of liquids." Hence, he argues that as cream, in the process of rising, is only the butter globules suspended in the milk, it is impossible for them to cool any more rapidly than the medium in which they are suspended; and as the liquid milk contracts more than the solid globules, the difference in the specific gravity of the milk and the cream, at a low temperature, must be greater than at any temperature short of the melting point, at which the butter would become subject to the laws governing liquids—and when, of course, it would come to the surface quickly. If his premises be correct, no theories of currents or of falling temperatures are needed to account for the cream appearing at the top of the milk; the simple fact of the difference in the specific gravity of the butter globules is sufficient, just as wood when thrown into water will return to the surface.—*Bulletin of American Jersey Cattle Club.*

Calves.—Diarrhoea or white scour carries off a large number of newly-born and carelessly-managed young calves. It spreads rapidly in crowded, insanitary places. It is contagious, and once occurring in the pens or stables, continues to haunt them until they are thoroughly cleansed and disinfected. But although distinctly contagious, several experimentalists have failed to produce it by giving healthy calves the intestinal secretions of those affected. It is most common where cows and offspring are housed, and amongst calves brought up artificially. Its chief causes are those above noted as producing indigestion. The first symptoms are the dirty tail, dullness, carelessness as to food, and abdominal fulness. The faeces are fluid and charged with mucus, are sour and bad smelling, yellow or white, from the imperfect digestion of the milk rapidly hurried through the digestive tube, and are discharged with violence and pain. Weakness is early apparent; the calf lies much; its eyes are weak from the reducing discharges and consequent anaemia; it is sometimes blind and unconscious, dying without a struggle. In foul, dark cowhouses young calves are frequently attacked, and die within twenty-four hours. The stomach and intestines are usually empty; their lining membrane covered with mucus of a dirty grey colour, studded with patches of congestion and oedema. Cases that have survived a few days exhibit spots of ulceration, especially of the lower bowels, with deposits of purulent matter, amidst which flow crowds of minute organisms (by different authorities regarded as microscopic entozoa or cryptogamic parasites), whilst neighbouring lymphatic glands are reddened, swollen, and infiltrated. The liver is small, pale, and bloodless; the muscles