

much sooner by an uncomfortable pair of shoes. A good, comfortable shoe, with a low or spring heel, will add a great deal to the comfort of the housewife who has to be much on her feet. I would not advise a spring heel where one has to be out in muddy or slippery weather, as one is more apt to slip than with a low heel,—although at such times the feet should be protected by rubbers—but for housework they are much more comfortable than even the low heel. When one is very tired, bathing the feet will be found to be very restful. There is something in the soothing influence of a good foot-bath which seems to be magical to tired nerves and muscle.—(Mary V. Shutt.)

Lemons keep well immersed in Indian meal.

Ground Coffee keeps well in glass fruit jars with cover screwed on. One pound of ground coffee will a little more than fill a quart can.

Pancake Turner.—A short-handled pancake turner is much better than a spoon for taking up eggs from a frying pan.—E. R.—A. Ag.

A little fun for the boys, and girls.—Simple steps in science.—An amusing contest.—A candle and tub of water are the materials required for a novel and amusing contest. Put the candle in the water and offer a prize to the boy or girl who can lift it from the water with the month. It looks a very easy thing to do but experience will prove that it is not so simple as it appears to be. If any of the contestants object to a candle, a small rubber ball, such as children play with can be substituted, and it will do just as well. J. BRE.

Game of Curtesying.—This is how to play a very merry game. All join hands in a circle, one of the party starts running round them on the outside of the circle. When passing, he touches some one lightly on the shoulder, this one immediately leaves the circle and also runs round, not however, after the person who touched him, but in the opposite direction. When they meet they must curtesy three distinct times to each other, and then run on quickly to see who will reach the gap in the circle first. The winner takes the vacant place, while his adversary repeats the running, touching and curtesying to some one else, and so the game goes on until each player has had a run, or the children want a change.

What is Home?—Home, a world of strife shut out; a world of love shut in. The place where the great are sometimes small, and the small often great.

The father's kingdom, the children's paradise, the mother's world

Where you are treated best and you grumble most.

The comfort youth does not fully appreciate, which young men and maidens desire, which the middle aged generally possess, which the old rightly value.—A. AG

Nut Candy.—2 cups white sugar, $\frac{1}{2}$ cup of milk. Boil 20 minutes and add one cup of nuts. Now beat until very thick, and pour on buttered plates.

The Poultry-Yard.

Something more about Winter Rations
—Cut Green Bones as a perfect food
—Why they are so good Difficulties to be overcome—Inducement to procure eggs in winter.

A. G. GILBERT.

In my last article I mentioned some rations which were calculated to stimulate the hens to lay eggs in winter. In preparing a ration for winter the aim should be to embrace in it all the constituents that go to make the egg. What are the constituents? Mr. Warrington, a chemist of note says in the *Agricultural Gazette* of London, England, that the white of an egg is rich in the alkalies, potash and soda, a part of the latter being apparently present as common salt; the yolk is extraordinarily rich in phosphoric acid; it contains also much more lime than the white. "The largest ingredients in eggs," he continues, after giving several analyses of the different constituents "are lime, nitrogen and phosphoric acid." These are fundamental facts to be borne in mind when arranging the diet of a laying hen. It is apparent that lime is an important constituent, and yet how often are winter rations prepared without any thought of the material to make the shell? Investigation and experiment, up to date, have led to the conclusion that cut green bones are the most perfect egg producing food, at present known, because they are rich in phosphoric acid, albumen and phosphate of lime. Cut green bones are also preventives of egg eating, feather picking and the laying of eggs with soft shells.

WHAT TOO MUCH GRAIN WILL DO.

If nothing but grain is fed to a laying hen in confinement during the winter season, after a while she will lay an egg with a thin shell. This is a hint that she is not able to extract enough lime from her food to make a perfect shell. In other words, that there is not enough of egg shell forming material in her diet. If no attention is paid to this hint, soon eggs will be laid without any shells at all and then the fowls learn to eat them, and I shall probably get a letter to the following effect:—"Dear Sir, my hens have been laying well up to a recent date, when they began to lay eggs with thin shells, and lately the eggs have no shells at all and the hens are eating them. Please tell me what is the matter and you will greatly oblige." Of course, I answer at best I can, without being told what the laying stock are fed on, how much, or how often they are fed, or how many are in their quarters—but from a knowledge of the ordinary treatment of his laying hens by the average farmer—that they are getting too much grain and too little lime to make the shell and it is also very likely that the hens are too fat from so much grain food and, it may be, they have no exercise. As for the egg eating that is no easy vice to cure, after being indulged in. It is far easier to prevent, as will be obvious from the foregoing remarks. But we are only treating of winter rations at present.

DIFFICULTIES TO BE GOT OVER.

It being admitted that "cut green bones" are the most perfect food so far discovered for making egg and shell we are met with the difficulty:

"How can the average farmer feed them to his hens?" Undoubtedly there is the difficulty that the bones have to be cut up by mills made for the purpose, and these mills cost from ten dollars upwards, and so far they are not made in Canada. The question of cost is no doubt a serious one to the individual farmer, but it may be made comparatively light by a number clubbing together to purchase a small machine and by placing it so that it can be used in turn. Or place a larger one worked by power in a cheese factory or oromery, where there is always machinery, and when the farmer brings his milk, he can bring his bones and have them cut up while he is waiting. It takes a short time to cut up enough bones to feed 100 hens once a day. And it is but reasonable to suppose that when there is demand enough the mills will be manufactured in Canada. And the same may be said of the cut bones. As soon as the demand for them becomes general the large abattoirs, or butcher-establishments, will cut up the waste bone and dispose of it to farmers at a moderate price. Under no circumstance should the cut bone cost more than a cent per pound.

OTHER RATIONS.

I have devoted considerable space to cut green bones as an egg producing ration because they are such a cheap and perfect food. There are other rations, although of secondary import, such as outlined in my last article, but the necessity of lime as an egg shell maker in some shape must not be overlooked. Red-clover hay is stated by P. H. Jacobs, editor of the *Poultry Keeper*, to be rich in lime and a necessary constituent in the winter ration. It may be fed as the laying stock like it, steamed and mixed in the soft mash, or given alone if the hens will eat it in that state. The *Farm-Poultry* editor, Mr. A. F. Hunter who is a practical poultryman as well as a good writer gives the following as a good winter ration:—3 lbs. oatmeal, 1 pound dried blood, 1 pound green cut bone, 4 lbs. pea meal, 1 quart skimmed milk. Feed to 40 or 50 hens. The objection to this ration will be its expense. What I am trying to get at is a cheap and effective ration for the farmer. It is a subject of no small dimensions, and will be a lengthy but important one to discuss, and it will likely be taken up again.

THE INDUCEMENTS.

After I do get the eggs what shall I get for them? may be asked. I will answer by quoting from a letter I received lately from M. Gilmour, of St. Therese de Blainville, P. Q., who says: "I have built a fowl house this fall with the view of procuring eggs from eighty pullets during the winter. I have a milk round in the city of Montreal and can get from forty five (45) to fifty (50) cents per dozen for eggs during the winter and nothing lower than twenty (20) cents in Summer."

It is not necessary for me to add a word to the statement. If the prices are not such as to induce farmers to profit by them, what other department of the farm will offer him greater?

Wheat for Swine.—An Ohio swine man fed 21 shotes for a week on wheat. The hogs weighed 1900 lb. when feeding began and after seven days 2345 lbs., a gain of 355 lbs. The wheat was soaked 24 hours and 12 bu. fed. The hogs were sold to be delivered Sept. 15 at \$4.80 p. cwt. The wheat realized about \$1.33 p. bu.

RULES FOR FATTENING FOWLS.

Recently I have been favored with a statement from one of our most successful poultry fatteners, as to the rules which guide him, and the methods he adopts to secure success. The following is a summary of his observations:

1. In fattening fowls the actual quantity of food supplied goes only a little way in the production of flesh, as compared with the conditions under which the birds are kept.

2. There is considerable difference in the readiness with which fowls fatten, even of the same variety. In selecting for this purpose, a large framed bird should be chosen, and one that has well grown.

3. The birds thus selected should be placed in a large run (outside), and for the first three or four weeks fed on no more than one meal a day; then gradually increasing the quantity until they have as much as they can eat, when they are finally finished off by cramming, which in itself occupies three weeks. The object of this treatment is to reduce them as much as possible at first, and then gradually build up the flesh upon the frame. This method is not suitable for young chickens, which are fed right off, but for large fowls to be killed about Christmas.

4. When cramming commences each bird should be placed in a separate pen, or half a dozen of the same age and sex together, in a quiet, sweet, and, if possible, rather dark room or shed, and for the first few days be fed from a trough finishing off by the crammer. The food should consist of either fine barley meal, or fine Kontish ground oats, mixed with a little fat, and made with milk into a paste when feeding from the trough, and like very thick cream when used with the crammer. The fat should be small in quantity at first, but may be gradually increased during the process.

5. Before a bird is crammed each meal the crop is felt, and if there remains any food in it from the previous meal, no food is given until the next time of feeding. Observations should be made as to the quantity assimilated, so as to give a fowl each time as near as possible just about as much as it can digest. Should a bird show any signs of sickness during the process it should be placed in an open run for twenty-four hours without food. To aid digestion grit may be kept in a dish before each pen, and boiled nettles mixed with the food twice or thrice a week, as an aid in keeping the blood cool. Young chickens may be fed thrice a day, but for older birds twice a day is much to be preferred.

6. After the birds are killed, to prepare for which they should be kept without food for thirty-six hours, the blood is drained from the body, and the fowls are plucked immediately. The meat is then drawn by the hands forward to the breast, and the legs tied back to keep it in place. The bird, while still warm, is dipped into cold water, and thus becomes stiff, but it is an improvement to wrap the body in linen cloths dipped in milk or water.

The above indicates the method adopted for producing the best table fowls, and while entailing trouble and care, brings its own reward, for the specimens so produced command good prices.

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