

bers to be appointed rather for their recognised abilities than for their political opinions.

To sum up, Gentlemen, I am ready, beforehand, to accept every other reform which you may please to suggest, convinced, as I am, that whatever your decision may be, it will be marked by that wisdom and devotion which have always characterised you since I have had the distinguished honour of knowing you, and of presiding over your deliberations. The whole humbly submitted,

L. H. MASSUE,

President of the Council of Agriculture, P. Q.

Quebec, Jan. 31st 1883.

OUR ENGRAVINGS.

Shorthorn Bull, Duke of Hilldale—43429: out of 7th Duchess of Hillhurst by 22nd Duke of Airdrie. Great grandson of the wonderful cow, 10th Duchess of Airdrie, still alive and breeding at the age of 15 years.

Imported English Shire Stallion, Devonshire; winner of the sweepstakes at the great La Fayette fair in Sept. 1882. It is rare to see so fine a head and neck, coupled with such a thoroughly draught-horse body. Quarters, tremendously powerful.

Incubators.—Voitelliers, Christy's, Eureka.

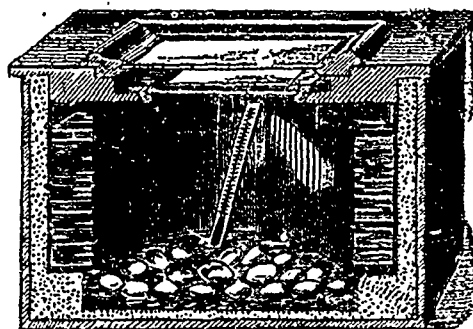
POULTRY BREEDING AND FEEDING.

BY JAMES CHEESMAN, ESQ.,
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In approaching the consideration of this subject I do not profess to offer anything new as to principles, but to restate well-founded truths, and perhaps to propose some fresh application of common rules of farm practice. We shall all agree that enough eggs and chicken flesh is not at present produced. Although I cannot offer elaborate statistics proving the consumption of these articles within the United States, there is very much evidence showing how large is the deficiency of the home supply. I believe that more than one million of dollars worth of eggs were last year imported from Canada alone. The extensive use of chicken flesh and eggs in the country, and more especially in the great cities, has undoubtedly stimulated poultry raising; and the use of incubators has enabled poultry-keepers to largely augment their produce. A reference to the market reports of every large city in any State in the Union at the present moment shows how high the prices obtained for winter eggs are. Take New-York, Boston, and the city of Chicago itself, and we have the lowest price as high as 28c., while the highest is 33c. the average being 31c. per dozen for fresh eggs.

How can we increase the supply of winter eggs? It seems to me that we must copy a leaf out of the book of the Danish Dairyman and secure early chicks, and get them laying at five to six months old. Many of your readers are aware that in Denmark the common practice of the farmers is to calve their cows in the late fall or early winter, just when fresh butter in the English markets will fetch the highest prices. These people get their cows to calve in November, December and January, and begin their feeding on 2 lbs of cake per head at once. They feed liberally and variously, and pay great attention to all the physiological requirements. Their cows are well housed in light, well ventilated, clean, comfortable buildings. The result is, physiological action goes on unimpeded, and the cows are on the best of terms with themselves and their keepers. As Huxley would say of the new beginner in life, as long as they are able to conform to the laws of their mother earth they get on splendidly with her and she makes the most of them—they as the ever obedient, and she as the ever beneficent mother, giving with overflowing generosity where much is already possessed, and withholding increase where there is little or none at all.

Now, how can we apply this example of Danish dairying to the requirement of the American poultry yard? In the first place the poultry man must have an incubator of some sort or other, unless he has secured a race of fowls with an incubating instinct which he can control in the same way as he can command any other animal habit. As we have no such race at present, it is better to use the artificial method and hatch out all the eggs one can as soon after the moulting season as is possible, consistent with the health and vigor of the birds. I believe it would be quite possible to begin in the first week of January and get a first brood by the end of that month. Of course, if incubators are resorted to artificial brooders must be also, but these are necessary in any case, and I strongly advise every man to use them whether he hatches artificially or not. I wish it to be distinctly understood that I am considering poultry on the farm only, because we shall now consider how these little creatures are to be fed on coming out of the shell. Time honored practice recommends egg as the first meal. I think this a waste of money, as very coarse oatmeal, steamed and some warm skim milk, is preferable. This should not be fed in a pasty or damp condition, but just as dry as the hard boiled egg itself, steamed as we should steam potatoes for table. And warmed food of any kind should never be fed at a higher temperature than blood heat. Mild doses of pepper and salt are desirable, and ample supplies of fresh cool water. If grass is not avail-



VOITELLIERS' INCUBATOR.

lable and hay or clover is, then these chopped fine in the hay cutter, say in lengths of one-eighth of an inch, and steamed to soften the fibre and render soluble the nutritive matter. Steamed bone with all its gelatine might also be fed in very small daily allowance, along with some fine sand. I cannot help thinking that the feeding of refuse meat is rather a mistake, unless it can be had for 1½ cents a pound. Cattle feeders and dairymen know something of the value of linseed meal, made under the new process, and cotton-seed meal, either of which might be used liberally during the early stages of chicken growth, but I don't think linseed meal should be fed within five or six weeks of the killing time, nor cotton-seed meal within one month of it. These rare products can be bought, I judge, at varying rates, but never higher than 1½ to 1½ cents a pound. The new process linseed meal contains a low percentage of oil, 1.50, and a very high one of albuminous compound, 38 per cent., the muilage, sugar and digestible fibre is 39, or a total of nearly 80 per cent. of feeding value. The moisture is seldom more than seven, hence this material cannot be fed dry. Cotton-seed meal has much more oil than can be assimilated, unless fed cautiously. It is a first-rate food in the moulting period and in winter time. I should give chicks a morning meal of granulated corn meal mixed with from 15 to 20 per cent. of new process meal, or 10 to 15 of cotton-seed meal made stiff with boiling water, and after this food should be given every three hours till a fortnight or three weeks old; for the second meal I would give granulated