

person suppose, provided it is gone about thoroughly and continued till the destroyers are destroyed. But entomologists have adopted a shorter and easier, but rather more expensive way. As soon in the season as their presence is seen by their depredation, take a load of freshly cut grass, and soak this grass with water in which Paris green or London purple has been well mixed in the right proportion. Scatter this poisoned grass over the patch or field at evening, applied at the rate of a pound to 150 gallons of water. The out-worms will eat the fresh grass and that will be the end of them.

CHURNING SUPERSEDED!—Within the last fifteen or twenty years dairy farming has made rapid progress, amongst which the Swedes have not contributed the least towards the manufacture of a more superior butter than was produced by our grandmothers. If my memory serves me, I believe it was some fifteen years since, in 1874, the first Continental skimming machine made its appearance, and the extraction of cream from the milk by the application of centrifugal power, was not the least important, after which we thought the climax of perfection had been achieved. Such I am informed is not the case, and in 1889 we are to welcome the appearance of the "butter-extractor," patented and invented by Mr. C. A. Johansson, inventor of the hand separator and emulsor; here again we have the Swedes to the front in the production of butter, to which they have paid great attention. If all that is said of the "butter-extractor" in producing the butter direct from new milk is correct, it will cause a great revolution in dairy farming, as well as a consternation to the churn manufacturers. At present it would be somewhat out of place to give more particulars of this remarkable invention, as to which I will in the future enlighten your readers.—COSMOPOLITAN.

FARM BUILDINGS.

LECTURE BY JULES N PAQUET.

Mr. President and Gentlemen,

We, a few members of the great Canadian family, are met together to facilitate the progress of agriculture by means of the dairy-business. Most of you can already reckon long and brilliant years of service consecrated to this noble cause, and have earned the right to contemplate, with very legitimate satisfaction, the results of your labours. Thanks to your encouragement, to your constant efforts, dairy work has regenerated the agriculture of our province, as the beneficent dews reanimate the languishing meadows. The different breeds of cattle—especially the milking breeds—are improved; the fields, better cultivated, are covered with a lush herbage; cows give more and richer milk; and of all our agricultural exports, the products of our cheese- and butter-factories reach the highest figure. Still this vast field is not yet thoroughly worked in every part. The French fable-writer makes his ploughman address his children in these words: "Work, take pains, it is this that is the most abundant source of wealth." The dairy-business is an inexhaustible source of wealth. The problems in agriculture which, up to this time, you have been studying, have brought about the introduction of the subject of the construction of farm-buildings in connection with dairying. I know that many of you, with the noble desire of spreading the light of agricultural knowledge, have put up, during the last few years, model buildings, either by way of experiment, or with a view to the introduction of our young men to the secrets of the management of the land. These fine

examples have remained, I dare say it, isolated, and have not won the publicity they deserve. We must now, then, plunge into the domain of the study and discussion of this question of farm-buildings, in order to make the subject widely known, and to make it bear fruit even at the home of the humblest of our farmers.

This, then, was the thought that triumphed over my hesitation when I consented to address a few words to you on this interesting subject. After having taken an active part in the improvement of old buildings, I thought I might possibly give some useful advice to those who were about, either to build new, or to remodel old buildings. Not having had good health, I have been unable to endure the heavy burden of the labour of the farm; still, in proportion to the humble measure of my powers, I have devoted my leisure to agriculture, I have been deeply interested in its development, and I have always thought it an honour to call myself a farmer. For the last year, the parish of St. Nicolas has had a creamery; its product is considered to be of the best quality; the maker and his patrons, regard being had to the unfavourable season just past, are satisfied with the results, and have a right to look forward with bright expectations to the future. I do not, I think, deceive myself, when I say that it is to the Dairy-men's Association that the establishment of this valuable manufacture is due. In the name of my parish, then, I desire, Gentlemen, to acquit myself of a debt of gratitude to you. If I cannot suitably discharge this duty of gratitude, I hope, as a farmer, that you will accept my attempt to do so with indulgence.

FIRST PART.

Before explaining the plans which I have the honour to show you, let us enumerate in a few words the reasons that should convince us, I do not say of the importance, but of the necessity of arranging our farm-buildings in such a manner that they may afford its full development to the dairy-work:

- Make the cowsheds more comfortable;
- Give the milch-cows more digestible food;
- Make more dung and keep it better;
- Diminish manual labour and make it less hard;
- This is a condensation of the first part of this essay.

Hervé, a French writer, used to say: "Confinement to stables and sheds is indispensably requisite to increase the production of meat and milk, but the stay of cattle in low, narrow, badly ventilated sheds, is often the cause of the ruin of the farmer; indeed, epizootics, diseases of all sorts which decimate the herds in many farms, proceed, in most cases, from the bad state of the buildings that shelter them." Making an exception in favour of some few farmers who are in advance of their neighbours as regards the steps taken in the road towards improvement, may I not say: "There; that is a true picture of the way in which the cattle of our country are housed?" Most of our stables are unfit for our cold winters, and not ventilated enough. Animals, though not endowed with reason, are sensitive enough, and require an atmospheric medium suitable to their nature. They have an interior furnace, continually fed by their daily rations; thence, they derive their animal heat, develop themselves, and yield to man either their produce or their labour, according to the purpose for which they were created. If the milch-cow lives in too cold a place, the food she consumes is employed in sustaining the heat of her body, to the detriment of the milk she yields. At the approach of autumn, when the soft dews of summer begin to give place to white-frosts, observe your cattle making their way to the buildings; listen to their lowings, loudly demanding a warm lodging. If you