

not early. On young trees the fruit is large for a crab and very oblong conic. On older trees it is roundish-oblong and truncate. In old age the fruit is still fine and saleable. It ripens about the middle of September. The "Montreal Waxen," another variety, is, it appears, propagated in Ontario and the Western states under the name of "Montreal Beauty," through a mistake on the part of Mr. Cleghorn or some other unknown person many years ago. Accompanying the Report is a list of premiums amounting in the aggregate to \$1400, to be awarded by the Society at its next exhibition, to be held in Montreal on the 12th, 13th and 14th of September next. The Society now numbers seven hundred members, and affords every evidence of being in a prosperous and flourishing condition.

Sunstroke.

EDITOR CANADA FARMER.—Referring to an article on "Sunstroke," in the last number of the FARMER, I would observe that I have always found a green leaf folded inside the crown of a straw or chip hat a very efficient protection for the head against the heat of the sun, however warm the day may be. I have tried a vine leaf, but find a basswood leaf is much better, because it is thinner and green on both sides, while a vine leaf is not. Were I living in a place where green leaves were not to be had, I should have my hat lined with thin green calico. That the light of the moon has a tendency to affect the brain is unquestionable. I have read of instances where men who have fallen asleep with the head exposed to the rays of the moon in tropical climates, had woke up in a state of lunacy. The peasants of Syria often sleep on the ground in the open air during the summer, but however warm the weather may be, they take care to keep their heads well covered by their *bar-nous* or cloaks, as a protection not only from the night dews, but from the rays of the moon. As regards the effect of light on vegetation, I have read an account of an experiment made by a gentleman, in England I believe, to try the effects of coloured glass on his hot-bed sashes. The solar rays, although apparently white, are in reality a compound of all colours. In the spring the green rays predominate; in early summer the yellow rays, and about harvest the red rays overpower the others. When his hot-bed was first made he used sashes filled with green glass; when the young plants were well up he substituted sashes filled with yellow glass; when the plants were farther advanced he used sashes filled with red glass; and, as might be expected, everything grew more rapidly, and matured much earlier than they would otherwise have done. But only wealthy amateurs can afford the expense of such experiments. Perhaps gardeners who supply city markets might find it worth while to try this experiment on a small scale by using sashes covered with thin calico of these three colours, as even this is too expensive and requires too much care and attention for farmers in the country, most of whose garden productions are consumed at home. SARAWAK.

Farmers' Boys.

EDITOR CANADA FARMER.—I am glad to see that farmers' sons are still attracting so much attention in your valuable paper, but I think Mr. Shisler gives them a harder name than they deserve. His remarks for instance about their preferring to lead a horse rather than work on a farm, I consider simply insulting to the average Canadian farmer's son, though, I must confess that, as both he and "Sarawak" state, many of them seem to prefer counter-skipping or something of that kind to farming, perhaps partly because it is not quite so hard work. But I have been studying this question for some time. When at school I noticed that, so soon as a boy found he could go ahead of his fellows, he seemed to conclude that he was too smart to be a farmer, and therefore insisted on having an education if possible, as he well knew he could not be a successful merchant or professional man without one, and then off he started to seek his fortune by his wits. Of course I was not at all sorry to see some of these boys leave the farm, as they were much more suitable for other occupations, but there were others well adapted both mentally and physically for agricultural pursuits, whom it grieved me to see leave for the city, or worse still, for the country store; and it still grieves me to see the same state

of things continued, especially when I consider the present hard times, and remember that the wealth and strength of a nation depend pretty much on the amount of her productive labor. Now, after I have asked myself time and again, what is the chief objection these smart boys have to a farmers' life, I have concluded that it is its apparent incompatibility with intellectual and social culture; and I believe that while the country was new, this apparent incompatibility was only too real. As a rule the men who had the most physical strength, could get along best while chopping and clearing up new land. But times are changing; the world is advancing, and farming is fast becoming more of a mental and less of a physical occupation, and now that the axe, hand spike, scythe, cradle, hand-rake and sick like are giving way to the reaper, mower, sulky horse rake, horse fork, seed drill &c., a one legged or one armed man, with capital and intelligence, can make more on one of these old farms than the stout, hearty man who chopped and logged it, and who could get along very well while the soil was rich and strong, but, so soon as the virgin richness had gone, he lacked the intelligence to make it pay, and so had to move back and leave room for some one who knew more of the principles of advanced agriculture. And, it seems to me the time is fast coming when intellectual culture will not only be considered compatible with a farmer's life, but a necessary element in his character, and then of course social culture will follow as a natural consequence. Then would it not be well for these smart farmers' sons to learn what they can, "stick to the farm" to see if they can't do something to develop a higher and better manhood in the agricultural class, and raise it socially, intellectually and politically.

Bramley.

YOUNG CANADIAN.

THE BRITISH GOVERNMENT has at length introduced a measure in which vivisectionists and their opponents appear to have found a practical ground of co-operation. It provides that all experiments must be performed in places approved by the Secretary of State (the operator also being licensed by him), and with a view only to the advancement, by new discovery, of knowledge that will be useful in saving human life, or alleviating human suffering. During the operation, the animal must be kept under the influence of some anæsthetic sufficiently powerful to prevent pain, unless there is a certificate from one of these scientific bodies, that insensibility would defeat the object aimed at. The animal must also be killed before recovering from its torpor if the pain is likely to continue, or if serious injury has been inflicted, unless a certificate (as above) has been obtained to show that such a course would frustrate the object of the experiment, and even then the animal must be killed as soon as the object has been attained. Experiments for mere demonstration are strictly prohibited, unless under similar certificate of their absolute necessity for instruction, with a view to save life or alleviate pain, and are not allowed for the purpose of simply obtaining manual skill. Lord Shaftesbury who has taken a deep interest in the question on behalf of the humane societies, while asserting that the general feeling was in favor of total abolition, still accepted the Government Bill, as going a long way in the right direction.

SOME OF OUR AMERICAN exchanges inform us that Professor Collins, of Whitefield, Maine, has invented a new method of generating light and heat. The discovery he terms "aqua" or water light. He professes that a quart of water, treated with five cents' worth of some chemical substance known to himself, can be made to produce more light than the same quantity of kerosene; and that a barrel of water, with one dollar's worth of chemicals, will produce more heat than a cord of maple. The light, he asserts, is entirely safe, and accompanied by neither smoke nor an unpleasant odour. "For ten days his laboratory has been lighted with a jet of water no larger than a cambric needle, and he will contract to warm and light any house in Whitefield, at a large reduction on the present cost, although his invention has not yet been quite perfected." Repeated applications to the professor for information, have evoked his promise that a public exhibition of this wonderful discovery will be given at an early day, in the presence of a number of eminent men of science. This exhibition will be looked forward to with interest and not a little dubiousness in view of the well-known tendency among our neighbors to invent "stories" if nothing better.

THE IDEAS BROACHED in another column relative to the use of glass hot-beds and transplantation for farm root crops, will, no doubt, induce some ominous head-shakings and not a few incredulous smiles. The bare idea of transplanting, by hand, ten or twelve acres of turnips, certainly seems at first sight, too formidable, too preposterous to be entertained for a moment. But we must not forget that apparent impossibilities have ere now repeatedly dwindled down into problems of very ordinary and easy solution, when submitted to the test of cool, calm and deliberate analysis. At all events our correspondent boldly asserts confidence in his theory, claiming, from the results of his own experience, that its practical application will be attended with less labor, less expense, and much greater success than the ordinary method of sowing out, hoeing and singling. We call attention to the subject, not because we endorse the new departure by any means, but because of our desire to afford any fresh light on a matter of so much importance as our Canadian root crops. Our readers will of course judge, and test for themselves.

LORD KINNAIRD recently addressed a letter to the Dundee Advertiser (Scotland), the import of which may be gathered from the following extract. "I observed in your journal of the 13th a letter signed 'J. A. S.' suggesting that some public memorial should be erected to the inventor of the reaping machine, naming the Rev. Patrick Bell as the first, at least, in Scotland, who invented a reaping machine which was 'of service and profit in the harvest field'. There is no doubt that the Rev. Patrick Bell, in conjunction with his brother, Mr. Geo. Bell, invented a reaping machine. The two brothers made a model which they used to experiment with by moonlight, for fear of anyone seeing them. They planted sheaves of corn in the ground to represent growing grain. It was, however, the practical farmer, Mr. Geo. Bell, who got the machine made and brought into actual use. He was able to introduce several very important improvements in the working of it, and got one made for me about the year 1829, and subsequently took a farm from me, which I helped to stock. Being a first-rate practical farmer, he was enabled to take another farm from me; but, alas! he did not live long after he got possession—a very great loss to his landlord and the district generally." To this a pointed and unmistakable denial has been published by the late Rev. P. Bell's widow. She claims that her husband alone, and unaided, was the sole inventor, and any assistance rendered by his brother was merely mechanical and under immediate directions. Her remarks are also confirmed by Mr. R. Scott Skirving of Edinburgh, who, in a letter to the *North British Agriculturist*, reminds Lord Kinnaird of the fact that as early as 1854 a complete history of the invention had been published in the *Journal of Agriculture*, giving all the facts of the case.

Agricultural Implements at the Centennial.

The correspondent of the Manchester, England, *Evening*, writing home from Philadelphia says:—It annoys English visitors to the great agricultural hall to find how far the Dominion of Canada excels the British exhibit in agricultural implements, and when they see, besides, such countries as Brazil and Spain making really magnificent displays, their national pride is still further wounded. Nothing would have interested American farmers more than to have had an opportunity of seeing the machinery and implements used by their kinsfolk on the other side of the Atlantic, and the grains, grasses and fruits produced there; but this opportunity, unfortunately, is not given them. Of course it is understood in this country that the English exhibit in all departments, like the American, is voluntary, and made under very limited governmental supervision, and that, for the most part, it proceeds from commercial motives, the articles sent being such as the exhibitors believe they can dispose of to advantage here, and use as samples for future sales. It would seem, however, that if the agricultural implement makers did not find it for their interest to exhibit, we might at least have had some collective displays of farm products made by some country societies; something to compare with the exceedingly interesting and complete exhibits which the State Agricultural Boards of several of our Western States have contributed. To which the English Farmer adds.—Long since we predicted that the show of English-made implements would be insignificant, and for a very sufficient reason. So