

of very young children in flax mills; and the Commissioners having considered the matter, are of opinion and beg to recommend that it should receive the immediate attention of the Legislature.

In some of the mills now or lately at work, children of a less age than ten have been employed; and though the work is not oppressive, and though there are repeated stoppages during the working hours, still the lengthened confinement of very young children is injurious to health, besides depriving them of the chance of being educated. Some establishments, with the view of preventing smoking inside the mills, allow ten or twelve minutes each forenoon and afternoon for the smokers to go outside; and during these short intervals, the juveniles have generally a romp outside, by which the monotony and drudgery of their toil is so far relieved.

Wherever practicable, evening schools should be established. There will always be found men capable of doing a full day's work at the mill, and of giving two hours' instruction during four or five nights each week. Of course he ought to get extra pay for this, consisting partly of small fees from the pupils, and a fixed salary by the owner of the mill. Such schools would undoubtedly be very useful, not only in preventing the young growing up in ignorance, but from spending their evenings in vicious practices.

One of the Commissioners, Mr. McArthur of Southland, has written a very valuable letter on the necessity for issuing stringent regulations to protect the flax from destruction by burning and otherwise; and on the best way of procuring cheap labour for the mills. That letter will also be found in the Appendix, No. XVI.

The question whether the flax can be so improved as to admit of its being used in spinning some of the coarser fabrics, has been discussed, and the conclusion arrived at is that it can be so employed, and a sample of bags made from it, which has been in use in Mr. Kebbell's mill in Wellington for fourteen years, as well as samples of several other fabrics made by Mr. Nattrass, will be found in the Colonial Museum; and with the view of informing those interested in that question, an estimate of the cost of the necessary machinery for such a purpose is also appended, No. XVII. It will of course be seen that the steam machinery to propel the spinning appliances is not stated there. The estimate is also only approximate, in the absence of the knowledge of the peculiar requirements for the New Zealand fibre.

With reference to the application and recommendation by the settlers of Raglan, that the Government should in some way recognize the services rendered by Mr. Dougal, as the inventor of the machines now generally in use in the North Island and elsewhere, known by the name of their makers, the Messrs. Price, the Commissioners believe that Mr. Dougal is the person who invented the machine, and that the principle on which it is constructed has guided others in still further utilizing that principle, and thus giving that impetus which has raised the flax industry to its present position; still, as the value of the principle has not yet been fully established, or rather has been so far impugned, the Commissioners would suggest that further time should be allowed to elapse ere anything be done, in order to see whether that expectation shall be realized, or whether other machines now in course of making shall supersede their use altogether. Before the end of next year the Commissioners will be in a more favourable position to report upon this matter.

With the view of giving the fullest publicity to all applications for patents in connection with the flax industry, the Commissioners have got the permission of the Government to publish a short sketch of the principle sought to be covered by each of these patents, and of the mode of working the same, so far as explained in the specifications lodged in the Patent Office. That document will also be found in the Appendix, No. XVIII.

There are several other applications for patents; but as the law stands at present, no one is allowed to see these applications till they are granted, when it is of course too late to lodge objections by those interested in the invention sought to be protected. This was a great oversight on the part of the framers of the Patent Act; but a new Bill is now under the consideration of the Legislature to rectify this and other defects in the present law, so that in future it will be possible for any one to see all new applications, and to ascertain whether they really contain any new invention or any new application of an old one.

It may naturally be expected, after the opportunities offered to the Commissioners to obtain information with respect to the present condition of the flax fibre manufacture, that some definite conclusions could be arrived at with regard to the course which is best calculated for manufacturers to pursue at the present time. This no doubt is desirable, if it could possibly be done; but it must be recollected that the wants of the English manufacturers is the first thing to be attended to, as to whether the fibre is most in demand for rope or for spinning purposes. During the past year the demand for flax fibre for the purpose of ropemaking unduly stimulated its production, and in consequence an article of an inferior quality was forced on the Home market, and this led in a great measure to the suspension of farther demands. But this can only be of short duration, if manufacturers will take proper care to produce fibre of good quality. The great objection to the fibre seems to be that it is not sufficiently freed from the gummy and resinous matter by which in its natural state it is saturated; the aim, then, ought to be to endeavour to ascertain the best and cheapest way of removing this objectionable matter. The ordinary process of stripping, rinsing, bleaching, and scutching, does not seem to be sufficient to effect this. According to Captain Hutton's paper, printed in the Appendix, the gummy matter as it exists in the leaf is soluble in cold water, provided that it has not become dry before being subjected to its action. If this view is correct, it would appear that the proper course to pursue is to operate on the leaf by some of the ordinary mechanical contrivances which are used to remove the cellular matter which surrounds the fibre, and then, by a series of soakings and compressions by rollers, to dilute and squeeze out the gummy juices from the substance of and from between the bundles of fibre.

It is also stated that besides this gummy matter, there is also a gum resin which is insoluble in cold or warm water, which the previous treatment would fail to remove; the question then arises, Is the fibre injured by the presence of this substance? It can scarcely be so as regards causing the fibre to rot by inducing fermentation. The only way it can prove objectionable is by rendering it brittle, causing it to break short when subjected to a severe strain; of course the same would