

745. Did your stevedores at any time refuse to take flax because of its dampness?—It is the surveyor from the Underwriters' Association who examines the bales, and he has, of course, a proper machine for testing them.

746. Can you tell the Committee how it is tested?—He has a board with a thermometer upon it, this he forces into the bale, and can tell if there is any moisture by the temperature.

747. From your experience, do you think that flax would fire if it were shipped damp?—I could not say that; but I have seen it here in such a condition that you could not hold your hand inside the bale, and it has been sent down for shipment in that way. Almost anything is possible, if it is shipped in that state: for instance, if there was any friction with a wooden beam, or anything near flax shipped in that condition, I should not like to say positively, but I think the possibility is it would fire.

748. It has been stated—not in evidence before the Committee—that water has been seen running out of the bales when under the dumping press: have you had any case of that kind?—Oh, yes; we have heard of it.

749. I suppose the underwriters inspecting it would refuse to take flax if they could?—Oh, yes; if they could.

750. When does the Underwriters' Inspector examine the flax, before it is dumped?—Not always; some comes here dumped, so that we would not have so good a chance of inspection as we would before it were dumped.

751. Assuming that the dumping were done here at the wharf, and water was seen running out of the bales under the influence of the dumping, would it not indicate that there must have been some carelessness in the inspection?—That is, if it is inspected before. That bale might have been passed over. The outside does not show you anything to indicate that the inside is damp.

752. *Mr. Walker.*] Are these running bales put on one side for further inspection?—They are supposed to be sent away for drying.

753. They are not allowed to be shipped when they are seen?—Not when they are seen.

754. *The Chairman.*] You would not accept them on board your ships?—No.

755. *Mr. Walker.*] There are only the Harbour Board men dumping?—The Harbour Board men dump; but they have instructions, if they see anything, to point it out at once. And the Harbour Board are very particular; they take more care even than the Underwriter's Surveyor.

756. You have reason to think they are more careful?—They are very careful indeed, as far as they can be.

757. Because every bale comes under their hands?—Yes, they do the dumping; but a little of it comes here dumped. If there was moisture, it would lie on the floor a long time before it would show anything of it. In my experience I have known flax rejected by one steamer, supposed to be sent away and dried; but it has been accepted for the next steamer, and found to be as bad as ever, so that it is very difficult to get at it.

TUESDAY, 5TH AUGUST, 1890.

Sir JAMES HECTOR examined.

758. *The Chairman.*] What is your official position?—Director of the Geological Survey Department.

759. You have taken a great interest in all questions relating to the flax industry?—Yes, I have for many years—since 1863.

760. And, generally speaking, the results of your investigations will be found in this book: *Phormium tenax* as a Fibrous Plant?—That is a collection of all the information I was able to obtain up to the beginning of last year—January, 1889. I was the Chairman of a Commission appointed in 1870–71 to investigate this subject. After that time it did not occupy my attention much until last year, when an application was made to the Government to appoint a Commission to investigate the subject. I then pointed out that a great deal of information had been got together which was difficult of access, and that it was better to republish such information before undertaking a new investigation, especially as hardly any of the suggestions seemed to have received the attention they deserved, through the trade, during the interval, having fallen off or declined. That was the origin of Ministers then instructing me to give all the information desired, and I produced this pamphlet.

761. Generally speaking, this is the result of your experience?—Yes, it is the result of the evidence I took, the experiments I made myself, and a digest of all the experiments and researches made by other persons which bear on the subject.

762. Is there any new point that has arisen since the publication of this work which you think would interest the Committee?—I would like to call attention to the introductory part of the work as containing the newest information on the subject of the chemical applications for treating the fibre. It will be observed, in the preface to the second edition, I described how the fibre has been used for various purposes, and mentioned the reaper- and binding-twine as a special application. And on the following page, after the diagram, I pointed out that there is reason to believe that the fibre may be, and perhaps is, applied to other purposes. All the latest information I derived upon that subject was obtained from this work, entitled, "Reports on the Colonial Sections of the Colonial and Indian Exhibition, London, 1886," which contains the most valuable information relating to all the natural productions of these colonies. In the report on "Miscellaneous Fibres," Mr. Cross, the writer of the report, who is a very well-known authority on the subject, goes into the matter very fully and describes the new process of cleaning fibre by the use of "basic alkaline sulphites." It was following up the treatment suggested by myself and Mr. Skey in 1865; but we did not then use any such sulphites. We employed soap, with the addition of a certain quantity of bi-carbonate of soda, the result of which was to produce very much the same chemical effect.