Sir George Richard Farmer, Baronet

Chester 5 Mar 1842

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My Lord,

I had the honor to receive your Lordship's gracious communication of my name being noted by your Lordship for a Colonial Appointment? in October 1841.

I now take the liberty of addressing your Lordship to inform you that I have devoted much time and consideration during the last seven years to the preparation of the Phormium tenax and have recently made many experiments on the plant as imported, to discover a cheap and easy process to prepare it fit for manufacturing purposes. In these researches I have succeeded so far as to be able to prepare some specimens of the New Zealand Flax or Hemp in this country.

As I considered the early introduction of the New Zealand Flax into general consumption of national importance, as a substitute for Russian produce, I communicated my discovery to the First Lord of the Treasury with an intimation of my willingness to promulge it for the benefit of the Public stating that as I have a wife and seven children to maintain upon my hard earned Pension of one hundred and eighty five pounds per annum I could not afford to divulge my secret without receiving a moderate compensation for relinquishing personal emolument for the public advantage.

Sir Robert Peel has referred me to your Lordship. Applications of a private nature have been made to me. The compensation I solicit is an official appointment in New Zealand to enable me to bring the business to maturity. I have no hesitation in saying that I know the cause of the imperfections attributed to the New Zealand Flax and that I can prevent them by judicial treatment in the first stage of preparation when the plant is in the most desirable state to operate upon. I find but few of the specimens forwarded to me in a crude state, that will stand the usual tests applied to try the strength of European Hemp and Flax although all are apparently equally good prior to undergoing the process. Every specimen that I have met with that has undergone any preparation in New Zealand has failed. Some new specimens of the crude New Zealand Flax are stronger than the best Russian or Irish that I could procure. Some of the crude specimens I can prepare fit for manufacturing purposes while others under precisely similar treatment are totally worthless.

My object has been to devise a remedy for these imperfections without the aid of Acids; in this I have succeeded as my method is perfectly free from every chemical preparation. I beg leave to observe that owing to the different formation of the New Zealand and European Flax plant I consider the former capable of being prepared with much greater facility and less expense than the European. With suitable con_, I could prepare the New Zealand Flax ready to be shipped in one week from the day it is crop.

Never having seen machinery either constructed or in a drawing adapted to the preparation of Hemp or Flax, I have invented plain and simple machines for breaking and dressing the Phormium tenax, suited to the capabilities of the natives, and Immigrants who may be ignorant of Mechanical operations and such as can be made by any carpenter and blacksmith.

I calculate that a man and his wife or child of ten years old will break from four to eight hundred weights in a day and dress from half to two thirds of that quantity in an equal space of time; the quantity will depend upon the quality required.

Estimating the rate of wages in New Zealand at seven shillings a day for men, three shillings for women and two shillings for children: and allowing twenty shillings a Ton to be paid for the plant delivered at the Mills, dry weight, I expect that by water fewer machines of similar construction to the land machines. I can prepare the Phormium tenax fit for Ropemakers use at about four pounds per Ton; and for general manufacturing purposes varying from four to eight pounds; with an addition of about two pounds per Ton for finer fabrics.

I am led by observation and the results of my experiments to conclude that the improper treatment now applied to the Phormium tenax in New Zealand enhances the cost of preparing the little that is in a good state when imported. I have no doubt that in New Zealand I can impart that pliancy and softness of which is deficient in this country. I am fully persuaded that by my process the Phormium tenax will take and retain Tar, or any composition that may be applied to it.

I also expect that the fibre will receive less injury from my machines than by the ordinary method of breaking and _ by hand i.e. that I can produce a larger quantity of Flax and a smaller proportion of Ton, from a given quantity of the crude material.

The introduction of hand machines of simple construction and moderate price may induce many industrious persons to emigrate to New Zealand. The Females can be employed at this business while the males collect the plant or are occupied in Agricultural pursuits.

I have been in communications with Flax and Hemp dressers, spinners, manufacturers and ropemakers in various parts of the Kingdom. From their concurrent opinions I am led to believe that if the New Zealand Flax can be imported at a moderate price, it will enter in to the _ of numerous articles of Furniture hangings, Linens of all kinds, Drapers, Damasks, Sail cloth, Bagging, Ropes and Cordage and Paper; and that the consumption will be unlimited.

Should your Lordship desire to see specimens of my method of preparing the Phormium tenax it will afford me much pleasure to forward them. As my humble services have so recently been before your Lordship I have only to add my humble request should your Lordship deem me worthy to secure an appointment in New Zealand to instruct the Colonists and Natives in my method and process of preparing the Flax, that the destitute state of my wife and family in the event of my decease may be taken into consideration, and a moderate provision secured to them.

Should your Lordship desire to make further enquiry about so humble an individual as myself, my cousin Mr Crosse M.P. for Wigan will afford your Lordship every information.

Thomas Bright Crosse (1796-1886), Member of Parliament for Wigan 1841-1842

Western Times 8 Dec 1846 Marriage
Nov 25 at Bideford, George Boydell, Esq., of Chester, to Jane, eldest daughter of Sir George Richard Farmer.

Marriage Register Bideford 25 Nov 1846
George Boydell, bachelor, Solicitor of the City of Chester, son of James Boydell, Gentleman
Irene Farmer, minor, spinster of Strand, daughter of Sir George R. Farmer, Baronet
Witnesses: George R. Farmer and George Farmer Junior

1851 Census Strand, Bideford, Devon
George R. Farmer, 61yrs, Baronet, born London; wife Irene 51yrs, born Ireland
Children: Sophia, 18; Harriet 16; Anne, 11; Richard Kenrick, 9; Robet, 7 – all born Monmouthshire

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Letters to the New Zealand Company CO 208

Newgate Street, Chester – 18 Feb 1842

Sir,

A manufacturer has applied to me to enquire if I could inform him where he could procure a quantity of New Zealand Flax similar to the sample he enclosed. This I saw was Manilla Hemp and wrote to ask him the use he intended to put it to. He replied that if he could get some similar to the prepared specimen he would weave it into beautiful figured patterns for covering chairs _ and for hangings for rooms in imitation of a piece of French manufacture then in his possession; that he had worked a small quantity of the material and that it resembled polished silver with a coloured warp. I can prepare the New Zealand equal if not superior to the Manilla Hemp provided. I can get it of sufficient length for being from thirty-three inches upwards; also any of it, as a substitute for, or to be mixed with Horsehair for cushions.

As it is desirable to keep the Manilla out of competition, if possible, with the New Zealand I take the liberty of soliciting a small quantity of the New Zealand if you have any left. The longer and coarser the fibre is the better it will answer for this purpose, but a little of any description will be most acceptable to me for I could not find a particle of it in Liverpool on Tuesday. One gentleman told me that he had an order from a Linen Manufacturer in Ireland to purchase some, and that he could not meet with a bit of it in Liverpool or London: do you Sir know of any for sale.

I have no doubt that it will enter into the composition of very many of our fabrics in a short time. I can prepare it with a fine gloss, and perfectly white without injuring the fibre. I have great pleasure in stating that my experiments in a small way have succeeded to my perfect satisfaction; I have no hesitation in saying that I know the cause of the defects in the Phormium tenax, which defects may be prevented in New Zealand much easier than remedied in this country, notwithstanding all Mr Donlan states in his address to the Governor of your Company, or in addressing letter to myself.

I can prepare the Flax at prices varying from five to eight pounds per Ton for manufacturing purposes, and under five for Rope makers use, according to the degree of firmness required. By the water power machinery, the expense of preparation will be below these estimates.

The cost of my hand breaking machine I expect, will not exceed ten pounds if made in this country. The dressing machines from twenty-five to thirty-five pounds, which will depend upon the requisite firmness of the Flax to be dressed.

Chester – 15 Mar 1842,

Sir,

I beg leave to offer my thanks for the Phormium tenax you so obliging sent me a short time ago. As the New Zealand Company is deeply interested in everything connected with the prosperity of the Colony I take the liberty of transmitting copies of communications addressed by me to the Government Offices, on the subject of my discovery of a method to prepare the Phormium tenax for the manufacturing purposes with a request that you will do me the honor to lay them before the Directors.

I have reason to know that every opposition will be given to the introduction of the New Zealand Flax. A very near connexion of mine is managing partner in one of the first London Russian Houses, this gentleman's near relative is an influential member of the Board of Trade. From Mr Donlan, whose published address to your Governor I read last week, I expect no quarter. I enclose a letter received from him. Under these circumstances I venture to _ the liberty of soliciting the powerful support of the New Zealand Company, their interest as a Company or individually by some of their conservative members might be attended with the most beneficial result. I have no funds available for this purpose or I would proceed to New Zealand by the earliest vessel.

To show you that I have grounds for the opinion I have formed relative to the imperfections attributable to the New Zealand Flax I enclose eight small specimens that have undergone precisely the same process.

The accompanying extracts from letters of _ practical men will give some idea of the consumption that may be expected. Several people have told me that if the introduction of the New Zealand Hemp and Flax only reduced the price of Russian it would confer a very great boon on their trade.

I have been accustomed to an active life; one of my objects is to obtain employment. If the New Zealand Company is disposed to think favourably of these statements and be inclined to _ me into their service it will afford me much satisfaction to furnish testimonials and give references as to character.

Letter from Michael Joseph Donlan (Transcript in Donlan document)
Abbot's Bromley House, Staffordshire – 11 Dec 1841

Chester – 1 Apr 1842

Sir,

An unexpected event has occurred in my family that induces me to withdraw my letter of the 14th instant addressed to the Court of Directors.

Chester – 29 Apr 1842

Sir,

I was not aware until this morning that the New Zealand Company had in conjunction with the Port Nicholson Committee offered reward for Machinery to prepare the Phormium tenax or I should have applied to you earlier on the subject. May I request the favour of particulars.

I am much surprised that Mr Chapman did not intimate it to me during our interview at Liverpool on the 2nd instant as I think he must have been aware from my conversation that I was ignorant of the matter.

I am more convinced by each fresh experiment of the supplicability of the New Zealand Flax for wearing purposes; and am borne out in my belief of its fitness for the finest fabrics (if properly prepared) by the opinion and trial of a practical specimen, an extract from whose recent letter I insert. With respect to its spinning qualities I had some of it spun by hand to numbers as high as are spun from the finest French flax by machinery. Several experienced Flax buyers to whom I showed the Article said it was finer in the fibre than the finest Leeswater flax. This latter is grown only in one small district and has hitherto been unrivalled for fineness of fibre which is essential for fine countries, but it cannot be obtained in anything like sufficient quantity to supply the demand. Leeswater flax sold last season from £160 to £174 per ton. The New Zealand fibre was acknowledged to exceed it in fineness and was more than a third stronger.

Another person informs me that he has passed fifteen months among the natives of New Zealand in endeavouring to ascertain their mode of manufacture as well as the choice of the plant itself and when fit to cut, which may be done all the year round. He says “your remark in the New Zealand Journal is very correct viz that the first thing to accomplish is to render the plant fit for machinery.”

That has been the sole object. From my own experience and experiment I am quite convinced that the New Zealand Flax is widely different from the Baltic. It is therefore irrational to anticipate its applicability and adaption for every purpose similar to the finest Flax. I think myself it can never be applied to spinning and weaving; the fibre is too friable. For small twine and ropes I think the New Zealand Flax, if brought to the manufacturing market in a clean state will be_

Mr Brydges sent me a specimen of Flax on Monday that arrived per *Bally* from Taranaki, for my opinion. It is decidedly the best that I have met with. I prepared and sent a part to Mr Chapman last night, and returned the remainder to Plymouth, and regret that I have not some to send the Gentleman from whose letter I have made the last extract.

Chester – 1 Nov 1842

Dear Sir,

I am much obliged for the Pamphlet received this morning. My opinion of the New Zealand Flax remains unaltered. I must decline expressing any opinion relative to the formation of a company for this purpose you allude to _.

Bideford, Devon – 7 Sep 1843

Sir,

I this morning received a letter from Messrs Rhodes & Co. of Wellington, New Zealand to say that they had forwarded _ *Clydeside* a specimen of Flax addressed to me to the New Zealand Company's House, Broad Street.

May I request the favor of you to inform me if it has arrived at New Zealand House with the amount of expense that I may remit it; also as the root is attached to the plant if it be still alive. You will further oblige by stating if there is confirmation of the *Westminster* having put into Port Nicholson on the 18th February as reported in the New Zealand Journal of the 19th ultimo. She is not named in the number of the Gazette kindly sent me by Messrs Rhodes. The only letter I have received from my friends on board is of the date of 29th November – 15 N Latitude, 26 E Longitude and standing to the south with _.

Chester – 1 Apr 1844

Sir,

I have this morning seen the account of your successful application to Government on behalf of the New Zealand Company for pecuniary assistance in this unfortunate crisis of the Colony.

Being desirous to contribute my mite towards retrieving the affairs of Colony I take the liberty of forwarding to you Sir, as Governor, for the consideration of the Company, a copy of a letter I addressed to Lord Stanley on Saturday last. If the Honourable Company coincide in the opinion therein contained and will do me the honor to use their interest with the Colonial Secretary to obtain my object, it will afford me much pleasure to enter into full explanation.

I have reason to know that the Colonial Office is favourably disposed towards our enterprise. On applying for a few free passages for our people per *Westminster*, thirty-six were placed at our disposal by direction of Lord Stanley. His Lordship also furnished my friends with a letter to the Governor to desire he would render us every assistance in his power to forward our views, which Mr Shortland has done.

I must state that by my last advice from my relative Colonel Thomas I find some slight modification has been made in the machines; the specification of which is to be sent by the first direct vessel from Auckland.

There is one delicate circumstance attending this affair that in vindication of my own character I submit in confidence, in the accompanying note for your private information, with a request that you will be pleased to use it if requisite.

If I attach too great importance to my discovery, I trust my anxiety to benefit the Colonists of New Zealand will be admitted by you Sir, as an excuse for the liberty I have taken in addressing myself to you.

Enclosure – Copy of letter to the Colonial Office – 30 Mar 1843

My Lord,

I had the honor to intimate to your Lordship in 1841 that I expected I had discovered a process whereby I could render the fibre of the Phormium tenax or New Zealand Flax fit for every purpose of manufacture to which European Hemp and Flaxes is applicable. I have not been disappointed in my expectation for my partners, Mr Charles Terry and my cousin Colonel George Thomas, who proceeded to Auckland in the *Westminster* in December 1842, have succeeded in preparing the fibre in a superior manner to any that had been previously seen by the Colonists or natives; particularly that of the seed stem, heretofore untried.

I flattered myself that the Earl of Devon who takes a lively interest in all New Zealand affairs would at this important crisis have done me the honor to introduce the subject of my discovery to your Lordship's notice. His Lordship informs me that he is so fully occupied with the Irish Commission that he cannot attend to this affair.

Under these circumstances and having good reason to anticipate that Governor Fitzroy's expected dispatches will convey a lamentable account of the affairs of the Colony and most persons interested in the prosperity of New Zealand being of opinion that nothing but an expensive support of the staple product of the Islands viz Flax can avert impending ruin, I presume humbly to submit the following particulars of our discovery for your Lordship's consideration with an offer to promulge it for the benefit of the public, or our obtaining moderate compensation for so doing.

My friends state that they obtain 8 cwt of dry flax per day from each machine at a cost not exceeding 3s per cwt exclusive of collection the leaves, sorting the flax when dry and packing. The expense of collecting leaves is very great at Te Puru; they advertised for them at 10s per ton on delivery for green or dry. Although they are established on the edge of a large swamp, for some reason, the natives only supplied 1½ tons during the first six months and none afterwards. Work is not to be expected from them.

One very important discovery that we have made is that dry leaves can be as easily prepared as the green, at a small additional expense, about 1s per cwt. The fibre is equal if not superior to that obtained from green leaves.

Your Lordship will perceive the vast consequences attached to this discovery in an article of such great bulk. It will enable the settlers to harvest the crop at the proper season, which I understand is immediately after the plant has seeded; and enable them to prepare it at leisure, or it may be sent to this country for that purpose. At the present rate of colonial wages to Europeans viz 3s 6d per day, I calculate that the flax may be shipped by preparers at ten pounds per ton or under, according to the distance from a Port.

Within the last three years about 300 specimens of New Zealand Flax have been submitted for my inspection and experiment. I have not found above fifteen per cent of sound fibre in them. From the first I attributed these defects to the leaves having been cut at an improper season. I now find that my opinion was correct. It is of much less value if cut at an improper season, but the flax will answer for inferior fabrics, especially for the manufacture of paper.

Subsequent to the departure of the *Westminster* I obtained a sufficient quantity of green leaves in Devonshire to test the power of my model machine, the particulars of which I take the liberty to state, as the return accords with the working machines at Te Puru, and may be considerably increased.

Each machine made in this country will not cost above ten pounds. It is so simply constructed that any common carpenter or wheelwright can make it. The only iron work consists of four one-inch square bolts and nuts with two gudgeons or small axles for the motive power. The length is seven feet six inches by three feet six inches. The height will depend upon the shed in which it is to be fixed as the four upright posts must be fastened to beams to keep all steady. It can be worked by hand by a small waterwheel attached to the axle, or by bolts as in circular saw and other mills. By adjusting two small wedges it is applicable for either course swamp of fine upland leaves. The daily quantity prepared will depend upon the rapidity of the motive power and expertness of the person who feeds the machine.

The Devon leaves, between five and six feet long, averaged 3½ ounces. At two ounces each leaf, and one leaf to pass through the machine each second a return is obtained of 56 feet and a fraction of dry flax per hour. A quick feeder after a little practice can multiply the number of leaves per second to ten, twelve or more, but I cannot say from experience that the fibre will be as well prepared at this rapid rate, as it will at more moderate speed, although I cannot see why it should not. The leaves are delivered by the machine on to an inclined board to conduct them into a small running stream wherein one shake frees them from the epidermis and _. They are then spread out to dry, sorted and packed. The proportion of green leaf to dry flax is about eight to one.

Impressed with a belief that nothing would tend to promote the rapid success of New Zealand Colonists equal to an introduction of their staple product into extensive use in our manufactures I had instructed my friends to accept any reasonable compensation the Governor could make, should his Excellency take this view of the business, for throwing our invention open for the benefit of the community, feeling satisfied that cheapness alone could enable a new article of commerce and manufacture to compete with powerful and long established interests. This cheapness I consider more likely to be obtained if the process and machinery for preparation are unfettered with the trammels of a Patent. In compliance with my instructions my friends advertised in the Auckland papers of the 24th June ultimo that a caveat had been entered preparatory to taking out a Patent and that licenses would be granted, and machines could be purchased at the works of Te Te Puru, as soon as the Patent was obtained. This advertisement was necessary for our protection in consequence of the decease of Governor Hobson.

If your Lordship coincides in this opinion and compensation can be made to us without prejudice to two other parties who I know are applying for Patents for machinery of or a similar purpose, I humbly conceive it might be done without entailing any expense on the Mother County by imposing a small external export duty on all flax shipped. Or in such other way as your Lordship may think proper.

From my earliest experiment on this article, I have had the advantage of my Country as much, in view as any private emolument to be derived from it. If my memory is correct, I intimated to your Lordship in 1841 when I had the honor to solicit an official appointment in New Zealand to carry on my experiments on the plant, my willingness to promulge my process as soon as I brought it to a successful issue.

One great benefit to be derived by the Colonists from the knowledge of a cheap and easy method to prepare the flax is that a man, his wife and children may at any time prepare two or three hundred weight of it for market, in case of emergency.

Here my Lord is an opening for the employment of thousands of Colonists, who if they do no more than reduce the value of European Hemp and Flax some ten or fifteen per cent, will confer a great boon upon our manufacturers: but my Lord I look forward to far greater results than this. There is now to be seen in London forty-five different kinds of cloth made with New Zealand Flax. Some of them I am told beautiful and many equal to silk.

From my extensive correspondence with manufacturers in different parts of the Kingdom, I have no hesitation in saying that this fibre will enter into the composition of materials for which Hemp, Flax, Cotton, Silk and Wool are now used, it if is properly prepared in the first instance which hitherto has not been the case.

I do not entertain a doubt that cultivation will materially improve both the quantity and quality of this flax. According to the published estimates of the Honourable Mr Petre and others an acre of transplanted roots will yield upwards of two tons of dry flax per annum. Dr Dieffenbach mentions having met with leaves upwards of eighteen feet long in old Potato ground and Mr Brodie, a Gentleman recently returned from New Zealand informs me that on the banks of a river, he met with them thirty feet in length.

Having seen it stated in last years report of the Belfast Flax Improvement Society, that your Lordship had recommended the introduction of this plant into Ireland to their_ I submitted the fibre of the Devon grown Phormium tenax for the opinion of the Secretary Mr Skinner, and also to Mr Brodie. Both these gentlemen agree with me in thinking it very far inferior in every respect, to the product of New Zealand.

Chester – 1 Jul 1844

Sir,

I had the honor to receive your letter of the 4th April ultimo, since which date I have been in communication with the Board of Trade relative to my offer to promulge my process and improved Machine to cleanse the fibre of the Phormium tenax. The result of that Board's report to the Colonial Office I do not yet know.

The purport of this note is to state for the information of the New Zealand Company (and others interested in this Colony) that I have further simplified my process so as better to adapt it to the want of mechanical knowledge of the natives and enable them to cleanse at least three or four times the quantity they now do in a given time by scraping; and in a very superior manner, without the slightest injury to the fibre, also without any additional labour.

The cost of the apparatus will be trifling. A board of close-grained wood two inches thick ten feet long and eighteen inches wide, a few screws, and less than two days labour for a carpenter will be the entire expense.

The quantity I judge from what I, an infirm man, can prepare, being of the rate of twenty pounds in eight hours. If it is true that the natives only obtain one part in seventy or eighty, this apparatus is of much notice, as dry return from Devonshire grown green leaves is one in eight. I have sent to Belfast for a few leaves and hope to forward specimens to the New Zealand Society by Wednesday fortnight prepared by my process and by boiling with _, as recommended by Dr Martin of Auckland; not that I think boiling such a bulky article can ever pay, for Messrs Wright and Whitaker calculated that expense alone at twelve pounds per ton although the works are situated on the verge of a Forest at Te Puru.

Chester – 14 Aug 1844

Sir,

I had the honor to receive your favor of the 2nd instant in due course. I have this week made an important advance towards rendering the New Zealand Flax available for the manufacture of fabrics to which the finest European flax is applicable.

As it may be satisfactory to the Directors of your Honourable Company at this critical period of the Colony, to see what really can be done with the fibre of the Phormium tenax I take leave to enclose the only specimen that I have as yet perfected for their instruction on Friday next. Small as it is it will evince the value of the plant.

I also enclose part of a specimen prepared by a French gentleman and presented to me by _ by a gentleman interested in New Zealand affairs: he thought much of it.

I have very recently made great improvements in my machinery for preparing the fibre in the green leaf. I cannot say that I have doubled the product, but I have so arranged it that the first and second processes are performed at the same time with one motion power; consequently, in half the time the two processes required separately and with only the same number of hands that the first process requires.

I have now some experiments in hand that promise to reduce the cost of preparing the flax. If it will be interesting to the Company to know the results of these experiments it will afford me pleasure to forward particulars to you in a few days.

Chester – 17 Aug 1844

Sir,

I have the honor to acknowledge the receipt of your letter of yesterday. I have this day completed a second experiment on New Zealand flax to my perfect satisfaction; but on too small a scale to communicate the result to the Board of Directors. It leaves no doubt on my mind that I can place this fibre in competition with Russian flax of every quality in the British market at prices that will ensure a ready demand and yield a fair profit to the Colonists of every denomination employed on it.

I am under the impression that I can reduce to cost of preparing this fibre but am quite at a _ for material to experiment with. Can you oblige me with the address of any person who has is on sale: a small quantity of _ would answer my immediate purpose, even if but a pound or two to enable me to make my calculations. I was in hope that I should have obtained this information from Mr Bridges, secretary to the New Zealand Society this week but am disappointed.

Chester – 6 Sep 1844

Sir,

I am particularly obliged by your polite attention to my request for a little New Zealand hemp and have now the pleasure to forward to you a few specimens of different qualities of it with one very superior sent in from Liverpool; all are prepared according to my new process which is slightly chemical as well as mechanical. All have been treated alike. The difference in colour I can only attribute to the dark being originally worse cleaned by the natives. I find that when a large quantity of the inner bark or epidermis is left on it produces shades of yellow, deep in proportion to that state. Moreover the finer the quality of the hemp the easier it is prepared.

The ingredients for this chemical application are with one exception to be found in the Colony. It does not contain anything that can possibly injure the fibre unless by the grossest neglect. To test it I have left some of this under its influence for seven days and nights, and believe it may remain for as many months without injury. The cost of materials in this country will not exceed three pounds sterling per ton of hemp.

The result of these experiments is that on the best fibre (in every case I mean that prepared by the natives) similar to that you sent the loss does not exceed 25 percent and increases up to 32 on the courser and dirtiest. 22 percent on the first or cleansing operation and 3 on course hackling. This is as near a calculation as I can arrive at by weighing such small quantities.

I leave the specimens in the state in which I would ship the hemp. One of the finest I have dressed with a little _ so share the effect on the fibre. I know that it facilitates the spinning and corrects the great tendency to over twist.

I have recently condensed the operation of my machinery. The first and second processes are now performed by one motion and one set of work people. When the fibre is dry after having passed through the machine I would _ it to free it from short or broken fibres or rough _ and then submit it to the chemical process. This separation of defective from the good fibre will enhance the value of the latter most considerably and the former may be packed similar to wool or cotton and sold to tissue manufacturers for excellent prices.

Every fibre prepared by my machinery and process will be equal in colour to the Liverpool specimen, which is the natural colour only, and perfectly free from every particle of epidermis. I believe that it may be prepared on a large scale at a cost not to exceed ten pounds per ton in the rough i.e. the best and worst fibre. In this state it will reduce the freight fully one half. The Liverpool broker told me he paid £9 15s 6d per ton on that sold last week; and also that the Tow herewith sent is of equal value to silk waste.

I consider the most generally useful part of my invention to be the application of my principal to portable hand machines for the natives and labouring class of immigrants.

It occurred to me during a recent conversation with an American Gentleman that the Tub waterwheel used in the United States would be very serviceable in many of the flax fields in New Zealand where the fall is not great. He told me that he has worked seven pairs of stones with a fall of only eighteen inches and a volume of water not exceeding a foot square. I give this hint for the benefit of those instructed.

I wrote to the Under Secretary for the Colonies on Tuesday to enquire if I was to expect any reply to my offer made on the 30th of last March, of if I am at liberty to dispose of my discovery to private parties having secured more than one application on the subject, subsequent to the report of the Committee of enquiry of the House of Commons. To this letter I have no answer, therefore conclude I may make the best terms I can. If I do not hear from the Colonial Office by Tuesday I will advertise it for sale, for I am not offered what my friends and myself consider a fair value. I have only to cross the Atlantic to ensure a large sum for it. I am well aware that all the best of the native prepared fibre goes to the United States and that it is worth double the price obtained in Liverpool this day week with viz £6 10s. The Newhaven and Nantucket people will soon avail themselves of a cheap and easy process to work it up.

Chester – 7 Oct 1844

Sir,

The answer from the colonial office is “that there will be no objection on the part of Government to your disposing in any way in which you may think fit of your invention and process of preparing the fibre of the New Zealand flax plant.”

This being the case, unless I meet with a purchaser in the current month, or can enter into some arrangement where by I can turn my knowledge of this fibre to advantage in this country, I shall close with a proposal made to me in July by an American Gentleman, and proceed in the spring to the United States to improve their method of preparing the black hemp and extend the cultivation of flax. I can now render the hemp nearly as white as my best New Zealand specimens that I have submitted for the opinion of persons in the Trade are much approved of, some saying it is _, some Dutch flax.

I find from repeated trials that the ingredients used in my process will answer as long as any remains, consequently I overrated the cost per ton of flax in my letter of the 6th ultimo. It will not exceed five shillings per ton.

I have a second chemical process that I consider suitable for the coarser of swamp hemp to render it fit for ropemakers use. This will not cost one shilling per ton, but the colour is not so good that you may judge of their effects I enclose specimens of each, with one solely mechanical. These have not been hackled; merely combed out; to show the state in which I would ship the fibre. The small portion of epidermis that still adheres will all be taken off in hackling. My machinery forces the fibre from every particle of it, when the leaf is applied green. The increase of expense in using the chemical ingredient will be very trifling as the fibre may be immersed without being dried, on being rinsed after leaving the machine.

Chester – 21 Oct 1844

Sir,

I am obliged by your favor of the 18th instant and much regret that Government will not; and that your Company cannot avail themselves of my green leaf machinery. An immediate and general preparation of the New Zealand fibre would induce a state of prosperity among the Colonists that would enable them to _ to Messrs Stephens and Cootes.

My terms for the machinery for the first process would have been found very moderate as I have an offer from a Scotch _ to join in the spinning of my _ prepared fibre, and my improved American hemp. This proposal it is not convenient to me to accept, having expended my _ funds in experiments on the New Zealand flax, machinery &c &c &c.

I believe that you are not aware of the extent of the cultivation of hemp in the United States of America. This article will prove a serious rival to the fibre of the Phormium tenax being far superior to it for spinning purposes. My relative who I expect here in a few days, has been concerned with hemp for the last twenty years in America and has visited St Petersburgh and other ports in the north of Europe on this business. In consequence of the decrease in the importation of foreign hemp into the United States during the last few years amounting to 75 per cent, and arising from the impost of forty dollars per ton; he travelled last summer through the States of Kentucky, Ohio and Missouri to ascertain the actual state of the produce and their method of preparation; previous to his coming to this country to invite me to join him in this business; and to promote the cultivation of flax.

He tells me that the estimated increase of the growth of hemp in those three states, within the last four years _ one million-fold is not far from the truth and that they know next to nothing how to prepare the fibre for market. The latter statement is evinced by the condition in which it comes to this country. I can render it of equal colour to my best New Zealand sample. Two Dundee gentlemen pronounced a specimen of my second attempt to improve it, to be Dutch flax, and a Ropemaker who has been in business upwards of fifty years _.

A few days must now decide whether I go to America or remain at home. I am averse to the former for general reasons, but my duty to a numerous family is imperative and paramount to all my objections. With reiterated thanks for your polite attention to my communications and procuring me the flax I beg leave _.

Chester – 1 Apr 1845

Dear Sir,

The period has arrived when I must decide on my future plans. Owing to the unsettled state of affairs in New Zealand, I cannot enter into arrangements to turn my knowledge of the flax of that country to advantage.

In the month of June last year I received a good offer provided I would go to the United States of America to improve their method of preparing the black hemp and promote the cultivation of flax. This I am averse to do, knowing that it must be highly injurious, if not ruinous, to our own Colony of New Zealand, and also detrimental to Ireland.

I had forwarded by the *Tyne* and *Louisa Campbell* specimens of my prepared New Zealand fibre to Mr Chapman and other friends at Wellington and Auckland, with an offer to furnish one full sized revolving working machine and six of my small ones, to the Colonial Office and New Zealand Company as models, provided that Government and the Company sanctioned the Colonists taxing themselves in one hundred tons of flax annually for twenty years, to be delivered to my agents at the different ports, free of expense, the flax to be of medium quality.

It was my intention to await the result of this proposal before I determined to accept or reject the proposal from my American friend. I last week received a letter from him stating that he expects to sail for New York on or about the 20th of this month; consequently, I have no time to lose as I cannot longer postpone my final answer.

From information I have obtained relative to the increase of hemp cultivation in the States of Kentucky, Ohio, Missouri _ I have not a doubt of there being a firm opening for me and in this I am borne out by the improvement I have effected on the black hemp now imported _ by the enclosed specimen. A vast extent of Prairie land is excellently adapted for the growth of flax. At present we receive little or none from the United States, but I see no reason why the Northern States may not in a few years export flax and hemp in quantities sufficient to rival the _ of the Southern. All that they require is a proper method of cultivation and machinery to break and scutch these fibres and this I can furnish so as to enable them to perform these operations at a cost not exceeding three pounds British per ton for flax or hemp.

I have sunk a very considerable sum in bringing the New Zealand fibre to the advanced state of perfection at which I have arrived and do not intend to be a loser by it. It is not for me to say how far these American fibres _ interfere with the prosperity of New Zealand _ under its _ state they will be a severe blow, and I shall much regret if I am obliged to be _ administrator, but my duty to a family of seven children is imperative.

If you, Sir, view this matter in the light that others interested in the prosperity of New Zealand do, you will perhaps deem this communication of sufficient importance to be laid before the Board of Directors that some method may be devised to carry my offer into effect. It was made chiefly in consideration of the non-arrival of well prepared flax from the Colony. Others may succeed as well as myself, but according to the last accounts from thence no one had or was likely to accomplish it.

I can assure you that in making this proposal I relinquish the certainty of obtaining very many times greater remuneration than I could ever expect to draw from a connexion with the New Zealand fibre.

P.S. I must beg to be clearly understood that this proposal was solely confined to my mechanical invention. It had nothing to do with my chemical process.
