

Despatches.

(Copy.)

WHITEHALL WHARF, CANNON ROW,
Westminster, 28th October, 1845.

MY LORD,

By this day's Post, I have received from *Canada*, a copy of the "Royal Gazette," published by authority, and dated 1st October, 1845, wherein I find two Letters from Your Lordship, bearing date Downing Street, 30th August, 1845. One addressed to the Governor and the other to the Lieutenant Governor of that Colony, recommending to the consideration of the Colonial Government the propriety of adopting the Patent process of Sir *William Burnett*, in preparing wood for house and ship building, as a means of diminishing the risk of fire.

This recommendation on the part of Her Majesty's Government, appears to be founded on a Report (also given in the Royal Gazette) made by certain authorities of *Portsmouth Dock Yard*, detailing the result of a series of experiments performed by them upon different descriptions of woods, which had been saturated with a strong solution of *Chloride of Lime*. I beg to be permitted to state, that the *Chloride of Lime* is not the material patented by Sir *William Burnett*, but the *Chloride of Zinc*. If, therefore, Her Majesty's Government meant to recommend the adoption of Sir *William Burnett's* process, and which process, he in his letter to Your Lordship, (also given in the Royal Gazette,) states the Government were employing extensively in the Dock Yard here, it is evident the above Report must lead the Colonial Government into error; the *Chloride of Lime* being the material used and recommended in it, and not the *Chloride of Zinc*, the latter being Sir *William Burnett's* Patent. That the *Chloride of Lime* is effective in diminishing the tendency to combustion in wood, I do not doubt, and it forms one of the principal ingredients used and patented by me in my process, but certainly it forms no part of Sir *William Burnett's* Patent, and may be used singly by any person choosing to do so.

If used singly however, although effective in arresting the progress of fire, there is one serious and well known objection against it, namely, its extremely deliquescent nature, causing continued damp—an objection evidently fatal to its adoption in this state, for either house or ship building purposes. This objection is removed by my Patent, my process being in using this *Salt*, to combine with it a *metallic Salt*, and thus create a new and insoluble compound, equally protective against fire, and free from the objection of being any longer deliquescent.

Having thus brought these facts under Your Lordship's notice, it remains for you to adopt such measures as, under such circumstances, you may deem proper, and as may be best calculated to carry out the wise and humane intentions of Her Majesty's Government, in directing the attention of the Colonial Government to the adoption of some means for ameliorating, if not entirely preventing, the frightful consequences attendant on fires in these portions of the British Possessions.

Had I been made aware of Her Majesty's Government having instituted inquiries on this subject, and directed experiments to be gone into, I would not have failed respectfully to have claimed for my process a full and searching investigation, the result of which I presume to think, could not have been otherwise than satisfactory. These experiments however appear to have been confined simply to a process, supposed to have been that patented by Sir *William Burnett*, Physician General to the Navy, nor does any step appear to have been taken to ascertain whether the important object in view could have been obtained more effectually by any other means.

I therefore beg respectfully to ask of Your Lordship, to cause inquiry to be immediately made with reference to the statement I have herein submitted, and further that Your Lordship will give instructions to such competent parties as you may think fit, to investigate, and report upon my process, particularly as to its effectiveness for the object now contemplated; and in making this last request, I ask the favour of Your Lordship's perusal of Mr. *Richard Phillipp's* Report to the Commissioners of Her Majesty's Woods and Forests, copy of which I enclose.

Hoping to receive an early communication on this subject,
I have, &c.

(Signed,) CHARLES PAYNE.

The Right Honourable

Lord STANLEY, &c. &c. &c.

(Copy.)

MUSEUM OF ECONOMIC GEOLOGY,
20th September, 1842.

MY LORD AND GENTLEMEN,

I have, by your direction, and with assistance of Mr. *Payne*, submitted to numerous experiments his process for preserving Timber from decay.

This method consists in depriving wood of its air, by an exhausting process, causing it then to absorb a solution, and afterwards forcing into it another solution, which shall so act upon the first contained in the pores of the wood as by chemical decomposition to impregnate it with a solid material, and such as it is presumed will be efficacious in preventing its decay.

In order to prepare for the more direct experiment, it appeared to me to be proper to determine whether the process proposed by Mr. *Payne* is such as to ensure the penetration of the Timber by the solutions which he employs. With this view, a block of wood was immersed in water for twenty-four hours, and on weighing it at the expiration of that time it was found to have absorbed less than seven per cent of water; whereas a block of similar timber, submitted for only ten minutes to Mr. *Payne's* exhausting and forcing process, gained upwards of fifty per cent of water. Being thus satisfied that it is easy to penetrate Timber with a liquid to a great extent, I afterwards tried repeated experiments with Mr. *Payne's* decomposing process with some of the various solutions contemplated in his Patent; which of these it would be better to employ, it would require experience to determine. I found, however, that it would be easy to deposit eight per cent of solid, and presumed protecting matter, in the body of the Timber.

This was determined by subjecting the Wood, after impregnation, to a very high temperature, and afterwards weighing from time to time during ten days.

Time only can determine whether any substance thus introduced into Timber, can preserve it from decay, and there is much evidence in favour of the actual existence of such protecting power; and I am of opinion that Mr. *Payne's* plan will probably prove the most efficacious that has hitherto been proposed, on account of the great penetration which it effects, and the insolubility attending much of the matter introduced.

I therefore take the liberty of adding, that should you contemplate the use of any preservative material, Mr. *Payne's* process is, in my opinion, well worthy of being submitted to the test of experiment on a considerable scale, and I may add that some of the substances employed by him diminish the combustibility of Timber to a very considerable degree.

I have, &c.

(Signed,) R. PHILLIPS.

The Commissioners of

Her Majesty's Woods and Forests,
&c. &c. &c. &c.