Preservation of Timber, Hemp, Linen, &c., by Sir William Burnett's Method.

We have, on several previous occasions, called attention to the antiseptic qualities of chloride of zinc, as used in the patented process invented by Sir Wm. Burnett, for the preservation of timber, cordage, sail-cloth, and every article in hemp, flax, cotton, woolen, &c.; and we find that the experiments which have been continually carried on, not only establish the successful effects of its use on all materials to which it was first applied, but various other important uses for its agency have been discovered. Its effects on timber are remarkable, hardening and improving the texture, entering into perfect chemical combination with the ligneous fibre, and it never afterwards exudes through the pores, and no amount of washing or boiling can remove the chemical compound. Canvas, cordage, &c., is effectually preserved from mildew, rot, &c., without being in the least discolored, while they are rendered still more pliable. On every description of

manufacture, composed of flax, silk, cotton, or wool, it has a similar effect—preventing every attack of decay, and rendering them fire-proof, when the solution is used of sufficient strength. In addition to these valuable properties, it is now employed in the dissecting room, to prevent nauseous effluvia from the decomposition of the muscles during the continuance of a lecture, which sometimes lasts a fortnight or more; its action on putrid flesh is almost magical; from a certificate of W. V. Pettigrew, Esq., we find that, in February, while lecturing on the superior extremity, an arm was employed, which was quite green and highly offensive; but, by injecting the veins with the chloride of zinc, it was restored to its fresh condition, and lasted throughout the lecture, from the 3d to the 28th February; green hides are most economically treated in this way, and their offensive smell removed. Its effect on some substances held in solution in water is most powerful; and hence it has been discovered, that it most effectually removes the unpleasantness and danger of putrid bilge water on board ship. No better test can be given, as a proof of its action in this respect, than on a decoction of logwood, which it is well known, may stand for months without any precipitate taking place, but, on adding a few drops of the solution of chloride of zinc, the whole of the coloring matter is immediately precipitated, leaving the liquor clear. When the chloride of zinc has been injected into any of the substances, such as timber, canvas, &c., it becomes so chemically united, that even the saw-dust of a piece of prepared timber, when operated on by an eminent chemist, gave out only 23 per cent. of the quantity of the chloride contained. The Government authorities are so thoroughly satisfied of the importance of the process, that in addition to the tanks already in use in the various dockyards, which are 50 feet long by 6 feet diameter, four gigantic cylinders are now being constructed for exhausting purposes—they are to be 86 feet long and 6 feet in diameter, and are intended for Woolwich, Portsmouth, Pembroke, and Plymouth. The progress of railway construction in Belgium is expected to bring a considerable increase of business to the company; they have already two contracts for preparing a large number of sleepers, which will be transported hither, prepared in the works at the Isle of Dogs, and re-shipped for Belgium, free of duty—arrangements having been made with the authorities for that purpose. It has occurred to us very forcibly, that one very important use, to which this principle might be applied, has been omitted—viz: to the preservation of paper for manuscripts and printed works; it, of course, requires consideration as to the best stage of the paper manufacture for its application, but that could soon be determined by experience. It strikes us that the most effective, as well as most economical moment, would be the application of the solution to the pulp, just before passing the drying cylinders; or, for the preservation of printed works, the paper might be damped down with the solution, instead of common water. We merely throw out the suggestion.

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