ON PRESERVING TIMBER FROM DECAY.

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The economic value of timber, and the immense outlay required for the constant restoration of works executed in the cheaper but least durable varieties of woods, have long directed the attention of practical men to the desirableness of discovering some process by which greater durability could be given to a material, in all other respects so admirably adapted to the objects in view, without affecting its original cost to such an extent as to render it no longer available for the numerous ordinary purposes to which it is now applied. To this subject, attention was anew directed in the last number of the *Canadian Journal*, in an article on the "Preservation of Timber;"* and it may not be out of place, by way of adding to the existing fund of information upon a subject of such general interest, to bring before the Institute, a well attested and valuable process invented and used by the eminent French chemist, Dr. Boucherie.

This process is the result of twenty years experimental labor and study, and is regarded in France and England as of the highest importance, being the only mode yet brought into practical and extensive application, by which the durability of woods, liable to decay, can be economically and effectually secured.

It accomplishes two objects: first, that of expelling the sap; and, secondly, filling the pores of the timber with a preservative solution.

The mode of impregnating trees hitherto adopted, has been by saturation only, assisted sometimes by great pressure, and by previously subjecting the timber in cylinders to a vacuum or to heat.

Dr. Boucherie's process differs entirely: inasmuch as he applies a moderate pressure, and to one end only of the sap tubes of the tree, the effect of which is to expel the sap by the preserving liquor which takes its place. By some of the processes hitherto used, the sap (the fermentation of which is admitted to be the cause of decay) is allowed to remain in the tree; in the process now under review, the sap is expelled, and the tubes are thoroughly cleansed from the fermenting matter, which is displaced by an injected solution of a preservative nature.

The tubular structure of trees has been long known, but it has not

* *Vide* Vol. I., p. 559. New Series.