THE CANADA LUMBERMAN

VOLUME XXIV. NUMBER 12. } TORONTO, MONTREAL, WINNIPEG, CANADA, DECEMBER, 1904 { TERMS, $1.00 PER YEAR Single Copies, 10 Cents

MR. W. K. GRAFFTEY.

We have the pleasure of presenting the portrait of Mr. W. K. Grafftey, Managing Director of the Montreal Lumber Company, Limited. Mr. Grafftey was born in Derbyshire, England, in the year 1849. His parents, coming out to Canada in the year 1856, settled in Owen Sound, where he obtained his early education and his subsequent business training, serving an apprenticeship of five years with Mr. William Kough, the famous hardware merchant of that town. Arriving in Montreal in 1869, he entered the employ of Benny, MacPherson & Company, wholesale hardware merchants, whom he served as traveller for several years.

Turning his attention to the lumber business, Mr. Grafftey took charge of the office of G. A. Grier, lumber merchant, with whom he remained in the closest business relationship for 20 years. The separation after these years of satisfactory experience was felt keenly, yet it opened the way for larger development. Others had noticed his business capacity and the formation of the Montreal Lumber Company, Limited, in 1897, was the result. Associated with him are men of the highest business integrity and influence, including Geo. I. Dewar, the Ottawa manager of the Export Lumber Company; John McKergow, of the firm of A. A. Ayer & Company, the largest shippers of cheese in Canada, and others, who form the company for which he acts as manager.

During the spring of 1900 the subject of our sketch visited England and laid the foundations for English trade, and while there the great fire of Hull and Ottawa occurred, marring the prospects for that year. Although handling all branches of the business, of which he has a thorough knowledge, the principal line to which he devotes attention is Ottawa white pine.

Success has attended the company since its formation and it is now recognized as a strong factor in the Ottawa district. They have handled large contracts for the city of Montreal and the Montreal Harbor Commissioners and are supplying the material for the extensive plant of the Singer Manufacturing Company at St. Johns, Que., which included in one order over a million feet of spruce.

Mr. Grafftey is a gentleman much respected in the community, careful in his operations, ready to take a fair risk, but always loyal to the obligations he makes, so that he commands confidence and respect from all who know him. He takes no active part in municipal or political matters, yet finds time when called on to do his part in any good work.

Our sincere good wishes accompany this short notice of a thorough lumberman and a worthy friend.

BRIQUETTING AND CARBONIZING SAW MILL REFUSE.

Dr. Rolof Juergenson, of Prussia, Austria, has lately been in the United States and Canada for the purpose of giving information regarding the Heidenstam patents for the transformation of sawdust and waste wood into charcoal without agglomeration and for the recovery of all secondary products. The process is the invention of a Swedish engineer, Gustave v. Heidenstam, of Stockholm. The

MR. W. K. GRAFFTEY,
Managing Director of the Montreal Lumber Company.

principal points of the process are the following:

Sawdust and waste wood are to be freed from moisture in a suitable way. The dry material is to be pressed in a continually working press, like the well known lignite coal press, into briquettes. Then it undergoes destructive distillation under mechanical pressure in suitable coaling apparatus.

The pyrolignous acid and tar vapors which are escaping during the coaling process are condensed in special coolers and the liquids derived therefrom stored in receptacles for further treatment into commercial chemical products, as acetic acid, methylated spirits, acetone, etc., the yield of which in treating hard wood waste has proved exactly the same as from best beech or oak wood.

The wood tar which is formed by cabonization contains about 50 per cent. of pitch. But what gives to this process its characteristic value is highly interesting. Only the tar oils of lower boiling point are "escaping" with the pyrolignous vapors, carrying on in solution a little part of pitch, while the main quantity being of high boiling point by action of the mechanical pressure, remains in the fibres of the carbonizing waste wood briquettes, cementing same, and is finally changed into carbon, forming an intimate dense charcoal briquette with the same.

The arrangement for a coaling apparatus under pressure for waste wood and sawdust briquettes in connection with a sawmill will take place in this way:

Sawdust and shavings containing 50 to 60 per cent. of moisture are to be reduced to 25 to 30 per cent. The wood refuse having been dried in a special apparatus by the waste heat leaving the coaling apparatus, enters into the briquette presses, producing briquettes in the form of cords, advancing mechanically to the charging apparatus of the coaling retorts.

The coaling retorts consist of vertical iron cylinders to be put into ovens of special construction and fireplace. The cylinders are fitted with outlet pipes on the bottom to give way to the by-product vapors. On the head they have cast iron covers on which the pressing cylinder is fixed, the piston of which works directly on the briquettes during the coaling operation of 14 hours' duration.

The charcoal discharged from the apparatus will be absolutely cooled in 12 to 14 hours.

This coal has been tested by calorimetrical analysis of the Stockholm Technological Government Institute to be of a caloric power of 7,800 calors and density of 0.6.

The further treatmen and rectification of the pyrolignous product is exactly the same as practiced in the well known and well paying wood distillation industry, and the output of chemical products by the Heidenstam process is proved to be equal, if not superior, to that of best beech or oak wood.

The acetate of lime produced is used to make acetic acid and acetone, both highly important products of the chemical industry.

Another product is the wood tar, which is exactly of the same quality as the well-known Finnish or Swedish tar-fluid and of light brown color, if produced from waste of soft wood, as pine, fir, etc.

The great economy of this simple process is said to consist in mechanically conveying the waste wood from its accumulation in the saw mill, dried and pressed, direct to the charging apparatus in the coaling oven.

Considering the great difficulties for most of the sawmills to get rid of their waste wood and sawdust, the lumber industry will, no doubt, highly appreciate the importance of the Heidenstam process.