

BLYTHE MILLS.

Instead of grumbling about the price of wheat being always too high, and milling being a ruined business, Mr. George Hilliard, M. P., set himself to work to find out how it was that he could not buy and grind wheat and make something out of the operation, as well as some others were evidently doing, inasmuch as no man can or will long continue at a business in which the balance is always on the wrong side.

The investigations thus brought about were not long in convincing Mr. Hilliard that the old system of grinding could not compete with the new roller process, which has recently been introduced into Canada, either in the quantity or quality of flour producible from a bushel of wheat. He accordingly determined to have his mill refitted with the latest and most improved machinery for making flour by the roller or gradual reduction process, and to this end entered into a contract with the Consolidated Purifier Company, of Toronto, who have secured control of all the most recent improvements in the flour line, for the refitting of his mill, and this contract has just been completed, and the new system put into operation by that company.

As a result of this change three of the four run of stones recently contained in the Blythe mill (the fourth being retained for chopping purposes only) have been discarded, and in their stead there has been introduced six sets of brakes, three purifiers, a bran roll, and a germ roll, which gives a capacity of one hundred barrels per twenty-four hours. As most of our readers, no doubt, are aware the great difference which exists between the old and new processes is that while by the former the grinding is all done at one, or at most at two operations, by the latter it is accomplished only after from four to five separate grindings. While any attempt at a detailed description of all the operations involved and machinery required in this process, from the time the wheat leaves the bin until it is ready for market, would be tedious to the general reader, yet we think a brief description of how the best, or patent flour is obtained will at once be interesting and give the ordinary reader some idea of the new process. The wheat, after being cleaned as formerly, is passed through three successive brakes, or sets of chilled iron rollers, each crushing the grain finer than its predecessor. As the crushed grain or meal leaves each of these brakes it passes over perforated zinc which allows all that has been reduced to a certain stage of fineness to pass through and be conveyed to a real covered with fine bolting cloth. In this way there is gradually separated from the whole product of the wheat the best part of it, with the least possible quantity of bran, before it enters the real we have just mentioned, and in passing through which there is separated that portion which has been over-ground or killed. From this real the meal is passed through a purifier, from whence it passes through a brake with stone rollers and in which it receives its final grinding, and passes to the bolts, where it is bolted as in the old process, and the "Patent" flour is ready for the market. From this brief statement of the *modus operandi* any one in any measure familiar with flouring operations will at once see that the patent article can hardly fail to be the very best that the wheat can produce, owing to the system of "creaming" which has been adopted in its production. But were we to stop here many might be disposed to think that the improved quality had been obtained at a too great sacrifice of quantity. In this, however, they would be mistaken. Of course the bran, or rather meal, which has not fallen through the perforated zinc over which it has passed after leaving the first three brakes still contains a good deal of flour. This, however, is conveyed from the last brake to the "bran roll," which separates the pure bran (and those who buy it for feed will think it pure enough) from the rest which is then passed through a purifier, and a stone roller brake, then through a set of bolts which extract therefrom a second quality of flour, while that which still remains has the same process of purifying, grinding and bolting again repeated to extract from it a third quality of flour. And when all this has been judiciously done it is

needless to say that the "remainder" does not contain much which, by itself, will make four footed animals grow fat.

Besides the improvements directly required in connection with the manufacture of patent flour Mr. Hilliard has introduced two new packers which are easily adjusted to the packing of anything from a barrel down to a twenty-five pound paper sack.

As the more wheat ground at home the better for all of us, we trust Mr. Hilliard will not only have no reason to ever regret the large outlay which these improvements have necessarily involved, but that they will prove as profitable to himself as their success will undoubtedly prove beneficial to farmers marketing their wheat in Peterborough. — *Peterborough Review*.

THE MIDLAND R. R. WORKSHOPS.

From an article in the Port Hope Guide in reference to the Midland Workshops, we take some particulars. In the machine shops great alterations and additions have taken place. The moving of the Belleville and Lindsay shops to this place has also been accomplished, and though the appearance previously indicated that there was but little room for much more machinery, under the new arrangements there is ample room for all that has reached here from the two shops, and apparently room for more yet. In place of lathes, planers, drills, &c., being scattered about, they are now classified and placed in rotation according to size, quality and kind, thereby not only being more easily reached, but are so situated as to the very best advantage meet the demands of work. The shop has also been divided into departments, every one having a duty to perform; each of these having a leading man, and to him on the dissection of an engine is sent the work to be repaired to be done by his men. To illustrate: — When an engine comes into the repair shop the stripping gang immediately commences its duties. After uncoupling the engine, taking out wheels, &c., &c., the different parts are cleaned. They are then distributed to the respective departments where the requisite amount of repairs are made, which on completion, the pieces are returned to the erecting shops where fitters again take hold of it, and re-erect the engine. As a consequence of the bringing of the shops mentioned to Port Hope, there are now employed in the machine shops more men than heretofore. While the interests of the Company have been effectually looked after, the comfort and health of the employees has not been forgotten, and additional windows, a new floor, and a good drainage are things of recent date. The ventilation has also been made much better by the removal of the cumbersome partition which formerly existed. Its removal has increased the room likewise.

The blacksmith shop presents a much more cleanly appearance from a new coat of white-wash and a general renovation. The number of hands here are about the same as when Mr. Patterson came.

Business is again lively in the carpenter shop. The twelve flat cars, the order for which was countermanded some time ago, has been again given; in fact some of them are completed and others are approaching completion. Fifteen to twenty hands are now employed here.

The round house is a bee-hive of industry, as the employees are required on an engine coming in to thoroughly wipe it, take out the fires, and wash them out once a week. Twenty-five engines now come in and out for use on the Midland division alone. Each engine receives a fresh supply of coal and water before coming into the round house, and is at once ready to be "fired up" when required for a new journey.

Mr. Patterson has made another revolution in the system of government, time-keeping, &c., and while the plan is very simple, it is one whereby the most complete accuracy can be obtained.

As we were coming away, an engine, the repairs on which had just been finished, was leaving the shop on her trial trip. As to the engines sent to Montreal, the repairs required were of such a nature as to demand larger machinery than is here to economically perform the work.

Mr. J. Storer, of Uxbridge, we understand, is to succeed Mr. Patterson as general foreman in

the Midland shops, and as the last named gentleman leaves for Montreal on Saturday, no doubt the new officer will arrive by that date.

TAMARAC AND JUNIPER.

The *Northwestern Lumberman* says:—The terms tamarack, hackmatack and juniper appear to be more or less confounded, being regarded by some persons as identical. Juniper differs considerably from tamarac, but the botanical classification groups tamarac, hackmatack, American larch and black larch under the head of *Larix Americana*. Juniper is of different classification, and manifestly of different character. *Juniperus Californica* is called a small shrub, or tree, sometimes 20 to 30 feet in height. A sub species (*Utahensis*) growing in central Nevada, and south to southern Utah is only 10 to 20 feet in height and up to two feet in diameter, frequenting elevations from 5,000 to 8,000 feet. Another species grows to a large size in Oregon, and is smaller in California, or often reduced to shrub. A sub-species growing in western Texas forms forests, and is an important timber tree, though not as large or so easily worked as the *Juniperus Virginiana*, or red cedar of the plains of eastern Texas. Tamarac, instead of habiting plains and eminences, is common to low, swampy ground, and moist uplands. As is well known, it has a commercial value principally for ship's knees, posts, ties, etc., while juniper has little commercial value except for fuel. In Labrador and Newfoundland the tamarac is a tree from 80 to 100 feet high, and from two to three feet in diameter, but in the limits of the United States it is smaller and less valuable, and always grows in cold, damp swamps.

FORESTRY CONGRESS.

The following letter appears in the Montreal Herald:

POINTE PLATON, P. Q., July 30, 1883.

MY DEAR SIR,—The American Forestry Congress meets at St. Paul, Minnesota, on the 8th August. A number of Canadian gentlemen, from every part of the Dominion, are members of that Association.

All those among us who take an interest in forestry have felt grateful to the American Forestry Congress for having chosen Montreal as their place of meeting last summer, and the results of that meeting have been most encouraging, both in awakening public interest and in stimulating private enterprise.

We, Canadians, owe it to our American friends to return their courteous visit; and we owe it our own country to join heartily in their efforts for the preservation and renovation of the forests of this continent in which we are so deeply interested. I know that some of our Provincial Governments intend to be represented at the Congress and hope the Dominion Government will not be behind them. There is so much work for the forester on our western prairies, which are now bare of timber. It has been established beyond a doubt that timber can be successfully grown there, and we shall see on our way to St. Paul what has already been done under similar circumstances by railway and private enterprise in the creation of new forests.

May I hope that you will exert your powerful influence in order to encourage a good attendance of Canadian members to the Congress, and that the other leading organs of public opinion in the Dominion will join you in that useful work.

All the American railways have been most liberal in affording travelling facilities to the members of the Congress on their way to St. Paul and back, and I feel confident that the Grand Trunk and Canadian Pacific railways will be equally liberal.

Believe me,

Yours truly,

H. G. JOLY.

Vice-Pres. American Forestry Congress.

New Patent Wood Pavement.

Mr. Edward Hughes, of Liverpool, England, has patented a method of laying wood pavement on concrete, the chief feature of which is that a rebate is cut in the bottom edges of each block, so that when they are placed side by side

the two rebates form a single dovetail. The dovetail thus formed becomes entirely filled with the material in which the blocks are laid, forming with the bedding material one compact hard mass, from which it is impossible for any block to loosen itself. It is claimed that by this method the joints may be made perfectly close, there being no necessity for any grouting. — *Timber Trades Journal*.

Do not attempt to remain over night without a bottle of Dr. Fowler's Extract of Wild Strawberry near at hand. This is the season for Bowel Complaints, Colic, Cholera Morbus, etc., and the remedy above named is the unfailing specific.

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