

SCHEDULE SHOWING THE NUMBER OF SAW-MILLS IN THE PROVINCE OF MANITOBA AND DISTRICT OF KEKWATIN, OPERATING UNDER GOVERNMENT LICENSE DURING THE YEAR ENDING 31ST OCTOBER, 1882.

MANITOBA.

Name of Owner.	Where Situated.	Kind of Power.	H. P.	Capacity per 24 Hours.	Commenced operations in	Kind of Timber.	Logs Cut at	Quantity of Lumber manufactured during year ending 31st October, 1882.	Quantity of Lumber sold; on hand 31st October, 1881, and manufactured to 31st October, 1882.	Quantity of Shingles manufactured during year ending 31st October, 1882.	Quantity of Shingles sold; on hand 31st October, 1881, and manufactured to 31st October, 1882.	Quantity of Lath manufactured during year ending 31st October, 1882.	Quantity of Lath sold; on hand 31st October, 1881, and manufactured to 31st October, 1882.
								ft., D. M.	ft., D. M.	ft., D. M.	ft., D. M.	ft., D. M.	ft., D. M.
Adams & Schneider	Pine Falls, Winnipeg River	Water	62	10,000	1879	Spruce	Winnipeg River	2,182,862	2,087,357				
Armitage & McCulloch	Minnedosa	Steam	25	6,000	1880	do	Riding Mountains	647,604	410,113	664,832	664,832	300,300	117,650
Brouse, Geo. J.	Bad Throat River	Water	00	10,000	1879	do	Bad Throat River	199,910	199,910	765,000	765,000	105,000	105,000
Cameron, Alex.	Rolling River	do	25	6,000	1878	do and poplar	Riding Mountains	1,075,608	1,308,050				
Dick & Banning	Whole River	Steam	25	4,000	1879	do	Whole River	14,200	14,200	115,000	115,000		
Friesen, A.	Steinbach	do	20	4,000	1879	do	Township 7, Range 8, E.	53,509	50,785	3,500	3,500		
Fox, Thos. L.	Turtle Mountains	do	16	3,000	1881	Poplar	Turtle Mountains						
Jonasson, Frederickson, & Co.	Icelandic River	do	20	5,000	1881	Spruce	Icelandic River	752,784	468,917			243,000	219,500
Kent, James	Birtle	do	25	6,000	1880	do	Bird Tail Creek	1,292,035	1,075,140	499,750	475,750		
Leacock, E. P.	Bird Tail Creek	do	15	2,000	1880	do & tamarac	do	253,450	237,658				
Mitchell & Byers	Township 10, Range 10, W.	do	16	3,000	1880	do	Township 10, Range 10, W.	315,345	503,824	308,250	302,500		
McKay, James W.	Township 10, Range 16, W.	do	25	3,500	1880	do	do	48,400	48,400	185,100	200,500		
McFadyen, David	Odianah	do	30	6,000	1880	do	Riding Mountains	213,000	169,500				
McIntosh, Robt. (assigned to J. W. Douglas)	Rapid City	do	20	4,000	1879	do & tamarac	do	300,084	280,006				
Pratt, W. J. M.	Fotogan	do	40	10,000	1879	do	Fairford River, Lake Manitoba	502,826	502,826	627,250	627,250		
Itogers H. Z.	Millford	do	20	3,000	1880	do	Township 7, Ranges 15 and 10, W.	35,000	35,000	License cancelled.			
Ross, David	Whitemouth	do	33	6,000	1880	do & tamarac	Whitemouth River	1,628,439	1,628,439				
Smith, Samuel	Turtle Mountains	do	20	3,500	1881	Poplar	Turtle Mountains	58,491	70,484	202,000	201,250		
Sprague, D. E.	Winnipeg	do	45	20,000	1880	Pine	Rosseau River	1,004,234	1,504,234				
Shields, Haggart, McLaren & Co.	Brandon	do	25	12,000	1880	Spruce & tamarac	Shell River	1,043,582	602,072				
do	Shell River	do	15	5,000	1882	do	do	Returns not received.					
Shore, Edmund	Big Black Island	do	30	6,000	1878	do	Big Black Island, Lake Winnipeg	617,086	617,086			643,450	643,450
Williams & Harrison Bros.	Watoopa	do	20	5,000	1880	Poplar	Turtle Mountains	301,083	185,493	102,000	272,000		
Walkley & Burrows	Mouth of Winnipeg River	do	25	6,000	1878	Spruce	Catfish Creek	1,400,000	1,508,032	160,000	102,700	70,000	178,000
Whitmer & Kayil	Strathclair	do	25	6,000	1880	do and poplar	Riding Mountains	83,166	116,063	33,250	45,250		237,000
Watts, A.	Norquay	do											

KEKWATIN.

Maculay, W. J. (assigned to Dick & Banning)	Rat Portage	Water	100	60,000	1881	Red & white pine	Lake of the Woods	3,506,704	2,436,568			74,850	74,850
Keewatin Lumbering and Manufacturing Co.	do	do	400	120,000	1880	do	do	7,147,204	7,447,390	2,622,250	1,621,500	845,000	1,078,200
Fowler, S. H. (Assigned to Rainy Lake Lumber Co)	do	Mills being erected.											
Totals								25,465,841	24,470,890	6,442,182	6,520,032	2,251,100	2,654,550

A GOOD FOREST LAW.

"I never remember a session in which we worked so hard and did so little," said Mr. Jolly. It would be well to give credit and do justice to two really valuable measures which were carried. We allude to two bills of Mr. Lynch's, one to guard against forest fires, and the other, far the more important, to divide the forest domain into settlements and timber lands. The idea, it is true, originated in the useful forestry congress held last year in Montreal, but none the less does the credit of having worked it out and put it into practical shape belong to the Commissioner of Crown Lands. Those who know anything of our Crown Lands can bear testimony to the fact, that the most dangerous man the lumberman has to deal with is the make-believe settler, who establishes himself in the midst of good timber lands, for the purpose of stripping his lot and the surrounding lots of any valuable timber that may be on them, and then, having ruined the property, abandons it. The fact has been stated over and over again, and never questioned, that we know of, that the great majority of the disastrous fires which have desolated miles on miles of choicest timber lands, are due to these people. Mr. Lynch's law promises to put a stop to this kind of settlement, in the future. Nor is there any danger to be fairly apprehended to the colonization interests of the country, from the measure, because it is well known that good pine and spruce land is the worst settlement land that can be found. When the bill was first introduced Mr. Lynch happened to be unavoidably absent, and Mr. Blanchet took charge of the measure. Mr. Flynn attacked it vehemently, in the interests, he said, of colonization. As a rule, Mr. Flynn can give a plausible reason for any side he may choose to take, however wrong he may be. In this case, as ex-Commissioner of Crown Lands, he laid down the law with some authority, resting himself on a number of facts more or less controvertible, and brought to his aid Mr. Picard and a few more country members, who never seem happy except when expatiating on the hardships and defending the interests of the "poor settler." The bill had to be allowed to stand over. Immediately on Mr. Lynch's return, he took the bill up and carried it triumphantly, almost without a dissenting voice. It is needless to say that the Commissioner, in his really eloquent defence of his measure, was vigorously backed up by Mr. Joly, who takes the greatest interest in all that per-

tains to our woods and forests. The act will prove a substantial benefit to the lumbermen, who will no longer be harassed by the petty pilfering of mock-settlers, and who, moreover, will be freed from the much greater risk of loss through their negligence in making fires under pretence of doing settlement duty and clearing land which every one knows they never intend bona fide to settle permanently upon. It will prove a no smaller, or more inconsiderable, boon to the real settler, since it will direct him to land upon which he can hope, by hard work and hard living, ultimately to establish a comfortable home and earn a respectable maintenance. While, if left to himself, he might do as others have done before, establish himself on some of our pine lands, in order to secure employment in winter in the adjoining shanties, and after years of work and hardship and suffering, succeed in clearing his land, only to find that, between the stones and the sand, it virtually is valueless, so much labor thrown away and hard toil lost. It is a pleasure to draw attention to these facts, because we think credit should be given to a really conscientious, hard working, clear-sighted public officer, and such, we know, is the character with both Conservatives and Liberals, Government supporters and Opposition free-lancers, are willing to concede to the Hon. Mr. Lynch.—Montreal Witness.

FATE OF A RIVER IN SPAIN.

A correspondent of the *Lumber Trade Journal* says:—A gentleman who appreciated the efforts of Congressman Cox, of New York, to mitigate the inordinate slaughter of our forests, wrote him a letter from which these extracts were taken:—
As I frequently have gone to Spain for some years past, I have had opportunity to observe there the result of devastation of the forests which has continued during the last few hundred years. Let me tell you the condition of a once noble and important river, the Almeria. About six miles northeast from the city of Almeria is Pochina, once an important town where shipping was carried on. There may yet be seen the wharves and stone buildings that served the purposes of commerce a few hundred years ago. Now the former river is dry land for six miles, even to the edge of the Mediterranean. What was once a noble, navigable river is now a level sand waste. In the course of time, as the forest have been

cut off and the natural means of retaining the moisture in the mould and alluvial covering of the mountains and hills has been destroyed by the washing down into the river-bed, the mountains have become bare and desolate. The infrequency of rains there has become a matter well known. When they do come, the river bed is a roaring flood, and "straight is dry again." By this the shoal at the mouth of the (onco) river is constantly extending into the sea, so that immediately after one of these floods it has been known to have extended half a mile.

Whether this is a part of a divine plan, and so ordered to be, or whether it is a retribution of the Divine Providence upon a country and a people for not husbanding the resources so abundantly provided, may engage the attention of some for the sake of an argument; but to me it is a lesson that we should profit by. What will our vast country become if the forests, furnishing the supply of our rivers, and so graciously withholding and distributing it through the seasons, are to be devastated; And what country in the world was ever so prodigal of its wood as this? Ties for the supply of 100,000 and odd miles of railway alone is a tax upon the forests of even this great country formidable to think of.

Thus devastated, and the alluvial covering of the hills and mountains of river sources washed down as they are in Spain, we may picture the Hudson, Delaware, Susquehanna, James, Ohio, Missouri, and even the Mississippi mere sand beds; and in future time history may record the navigation of those (onco) streams, and be illustrated with pictures of steamers that plied upon their waters in busy commerce "of old."
W. D. M.

DRIVING BELTS.

BY ROBT. GRIMSHAW.

The weight of a horizontal or of a slightly inclined belt connecting horizontal shafts should be sufficient to cause it to sag or belly well down, increasing the arc of contact; but it should not be sufficient to cause excessive pressure on the bearings.

When the horizontal shafts are one above the other, or nearly so, and the belt vertical, or nearly so, the lighter the belt the less it is dropped down from the pulley, and the less the loss of driving power by imperfect contact on the lower pulley. The smaller the lower pulley, and the greater the distance between shaft cen-

ters, and the thicker and stiffer the belt is, the more these remarks apply.

Where a belt connects vertical shafts, lightness is very desirable, as a heavy belt in such a position tends to come off both pulleys, unless they are either very crowning or are flanged on their lower edges; in which latter case the lower edges are apt to become frayed or stretched, according to the material.

Horizontal belts between vertical shafts drive better than inclined over do, and still better than vertical. The reason of this is evident; the weight of a horizontal belt tends to increase not only the arc of contact in both pulleys, but the tension; and the further from the horizontal, the less the driving power.

In this connection it must be borne in mind that where a horizontal belt connects horizontal shafts, the lower fold should be the driver, so as to make the "sag" or "belly" as little of a disadvantage as possible.

New unprepared canvas belts had better be rubbed with hard bar soap before putting them on the pulley. This gives them a smooth, finished surface, improving the grip and pliability. —Woodworker.

Barking Hemlock.

The *Courier and Journal* of Potsdam, N. Y., calls attention to the fact that the bark-peelers are making havoc with the hemlock of that part of the State the value of which, for timber and lumber purposes, is becoming more apparent since the spruce is being so heavily drawn upon for supplies. The paper referred to says: "Few people realize how rapidly the hemlock is disappearing from our forests. It is destroyed not only for timber or fuel but almost solely for the sake of its bark. Lumbermen have proposed to attack the hemlock when the spruce shell have been used up, but against the unscrupulous rapacity of the bark peelers and tanneries, hemlock has no show for existence. All through the Adirondacks these trees are fast falling, and their stripped trunks show that the insatiable appetite of the bark mill has been felt even there."

The correspondent of the *Northwestern Lumberman* at East Saginaw, Michigan, says:—McArthur Bros., a Canadian firm who are operating in this latitude, inform me they have put in 300,000 feet of board pine, 100,000 feet of oak timber, 50,000 pipe staves, and 3,000,000 feet of long and short pine logs.