THE SHIPPERS FROM THE PORT OF MIRAMICHI, IN THE SEASON OF 1893.

Shippers.	No. Vessels.	Tons.	Sup. ft. deals, scantling, ends and boards.	Palings. Pcs.
J. B. Snowball	36	25,169	22,081,347	2,421,206
D. & J. Ritchie & Co	20	10,964	10,660,238	83,800
F. E. Neale	11	12,847	13,519,604	
E. Hutchison	10	7,974	7,109,925	
Geo. Burchill & Sons	4	3,631	4,601,000	
W. M. McKay	21	18,621	18,084,380	32,000
Wm. Richards	8	7,509	6,607,000	29,972
Clark, Skilling & Co	2	1,069		
J. W. Bennett	1	739		
Total	113	88,523	82,663,494	2,566,978

DISTRIBUTION OF MIRAMICHI SHIPMENTS.

Country.	No. Vessels.	Tons.	Sup. ft. deals, scantling. ends and boards.	Palings. Pcs.
Great Britain	49	42,791	39,333,633	2,407,625
Ireland	44	32,356	30,850,877	159,353
France	7	5,066	4,964,239	
Africa	2	1,421	1,330,254	
Spain	11	6,889	6,184,491	
Totals	113	88,523	82,663,494	2,566,978

ST. JOHN SHIPMENTS, 1ST DEC., 1892, TO 1ST DEC., 1893.

Shippers.	No. Vessels.	Tons.	Sup. ft. deals, scantling, ends, and boards.	Tons Timber.
Alexander Gibson	55	72,351	67,505,580	850
W. Malcolm Mackay	77	77,878	65,282,983	4,444
George McKean	33	29,917	23,021,530	
J. & L. B. Knight	1	953	843,241	
Totals	166	181,099	156,653,334	5,294

DISTRIBUTION BY PORTS OF ST. JOHN SHIPMENTS, 1893.

Countries and Ports.	No. Vessels.	Tons.	Supt. ft. deals, scantling, ends and boards.	Tons Timber.
Bristol	3	3,728	3,472,852	
Barrow	1	1,843	2,422,400	
Continent	6	3,734	3,573,604	
Fleetwood	11	14,477	14,462,277	
Garston	6	6,953	7,004,811	
Ireland	54	40,490	38,968,156	70
Liverpool	33	47,055	42,788,326	5,224
London	12	16,269	2,845,616	
Penarth, f. o.	13	14,879	13,082,537	
Scotland	7	6,621	5,746,545	
Sharpness	6	9,066	8,426,545	
Wales	14	15,984	13,859,665	
Totals	166	181,099	156,653,334	5,294

SHIPMENTS FROM ST. JOHN TO TRANS-ATLANTIC PORTS FOR THE PAST 16 YEARS.

	Total sup. ft. deals, etc.	Timber (tons) Birch.	Pine.
1878	188,168,610	7,989	2,493
1879	153,279,357	11,548	3,237
1880	215,485,000	16,035	2,441
1881	210,281,730	5,134	1,734
1882	201,413,717	7,576	3,332
1883	181,517,932	11,778	3,883
1884	164,829,825	14,006	3,836
1885	152,543,026	13,769	3,686
1886	138,934,392	7,354	4,313
1887	118,450,590	5,197	1,587
1888	153,184,187	4,721	457
1889	180,167,488	7,221	487
1890	132,608,516	1,311	4,317
1891	122,242,682	5,004	
1892	146,529,309	10,200	
1893	156,653,334	5,294	

TOTAL TRANS-ATLANTIC SHIPMENTS OF NEW BRUNSWICK 1892, COMPARED WITH 1893.

Ports.	No. Vessels.	Tons.	Sup. ft. deals, etc.	Tons Timber
—1892—				
Miramichi	134	103,565	94,907,523	228
St. John	164	165,207	146,529,309	10,250
Bathurst	17	10,746	9,866,015	24
Dalhousie (including Campbellton)	48	25,615	22,568,604	805
Richibucto (including Buctouche)	29	13,887	13,002,512	
Shediac	23	11,278	10,156,333	
Sackville (including Baie Verte)	24	13,775	14,576,566	
Outports of Moncton (Hillsboro, Harvey, Cocagne)	16	13,712	13,542,949	
Totals	455	357,775	325,149,811	11,307
—1893—				
Miramichi	113	88,523	85,230,472	
St. John	166	181,099	156,653,334	5,294
Bathurst	18	11,810	10,176,000	102
Dalhousie (including Campbellton)	32	21,054	17,610,241	341
Richibucto (including Buctouche)	22	11,188	10,557,663	
Shediac	25	13,099	11,763,215	
Sackville (including Baie Verte)	21	14,395	13,382,475	
Outports of Moncton (Hillsboro, Harvey, Cocagne)	8	7,040	6,870,085	
Totals	405	348,208	312,243,485	5,737

The Trans-Atlantic Shipments from the Province of New Brunswick for the past ten years were :

1884—333 millions s. ft.		1889—369 millions s. ft.	
1885—292	"	1890—293	"
1886—276	"	1891—253	"
1887—250	"	1892—325	"
1888—277	"	1893—312	"

SHIPMENTS FROM NOVA SCOTIA, 1893.

Ports.	No. Vessels.	Tons.	Sup. ft. deals, etc.	Tons Birch Timber.
Outports of Amherst (Pugwash)	10	6,467	17,300,000	
Outports of Amherst (Northport)	6	6,860		
Outports of Amherst (Tidnish)	9	9,281		
Halifax	64	39,456	34,352,656	990
Jordan River	1	524	415,108	
Parrsboro	39	44,426	40,792,496	
Pictou	20	12,990	6,888,000	4,616
Saint Mary's River and Liscomb	7	4,823	4,315,680	
St. Margaret's Bay	5	2,935	2,593,698	
Sheer Harbor	2	1,403	1,316,092	
Ship Harbor	3	1,460	1,279,200	
Totals	166	130,625	109,252,930	5,606

The shipment of deals from Nova Scotia to Trans-Atlantic ports were :

1883	77,918,000	1889	92,605,488
1884	69,159,000	1890	99,512,924
1885	79,647,765	1891	78,603,742
1886	87,280,125	1892	87,861,398
1887	82,959,589	1893	109,252,930
1888	85,070,005		

INCREASING THE TEMPERATURE OF STEAM.

SOME short time ago, says the Scientific American, it was suggested by Lord Rayleigh that the efficiency of the steam engine might conceivably be increased by adding some salt to the water in the boiler, which should have the effect of raising the boiling point of the solution. The idea sought to be conveyed was that the initial temperature of the working fluid might be thereby increased, thus providing for a larger range and a greater fall of temperature between the boiler and the condenser.

Certain critics objected to this proposition that to raise the boiling point of an aqueous solution does not necessarily imply a corresponding elevation of the temperature of the evolved vapor, which is simply that of water, and must accordingly possess only the temperature corresponding to the pressure. A number of experiments to determine the temperature of the steam arising from a boiling salt solution have been made from time to time ; but the results have been of a conflicting character. The difficulty of arriving at trustworthy results in this class of experiments consists in the circumstance that, while the walls of the steam chamber must be at a temperature higher than that of boiling water, and yet below the temperature of the solution, a sufficient quantity of steam must be evolved to insure that these walls shall not exercise any appreciable cooling effect upon it. These desiderata are claimed to be all satisfied by an arrangement devised by Professor Sokurai, of the College of Sciences of the Imperial Japanese University, by the aid of which it has been determined that the temperature of steam escaping from boiling aqueous solutions of such salts as calcium chloride, sodium nitrate, potassium nitrate, is exactly the same as the solution itself. This is a corroboration of Lord Rayleigh, but whether of any material service to mechanical engineers remains to be seen.

THE WAY IT LOOKS.

A WRITER on the care of engines says it looks like pure laziness for a man to plant certain pieces of bright work on an engine because a little extra work is required to keep them bright. It does look that way Moreover, a man who will shirk work in that way will probably shirk in every other way he can get a chance.

A THREE CENT STAMP DOES IT.

ON receipt of a three cent stamp we will mail free to any address a copy of our little hand-book entitled "Rules and Regulations for the inspection of pine and hardwood lumber." as adopted by the lumber section and sanctioned by the Council of the Board of Trade, of Toronto, June 16, 1890. Address, CANADA LUMBERMAN, Toronto, Ont.

SOLID EMERY WHEELS.

THE distinctive feature of the various makes of solid emery wheels, says J. Wendell Cole, in Cassier's Magazine, is in the kind and quality of the cement used. They may be divided into, first wheels in which are used gums like rubber and shellac ; second, those cemented under hydraulic pressure and dried and seasoned, like the Northampton and Tanite wheels ; third, wheels made by pressure and moulding, and cured by heat like the Hart or Detroit wheels ; and fourth, the several vertified makes, in which a flux is melted into cement.

No one kind of wheel is the best for every kind of work. The rubber cement has to be softened and melted by friction heat before the emery will cut without glazing, and this takes much extra power. Other cements are not good conductors of heat, and cause the wheel, if used dry, to flake out or "spall" off. Virtified wheels have to be watched carefully as they are of a brittle, glassy nature, easily cracked by a blow. In fact, emery wheels are like steam boilers—very useful, but they must be in good condition to stand the strain, and should have intelligent care with frequent inspection. They should also be kept round, as, if out of round, they cut only on the high side and thus waste the time of the workman, and also are worn into cams and strike a dangerous blow, whereas, the round wheel gives a continuous cut the whole circle. A careless workman, bringing his castings against the wheel with a blow as he starts grinding, causes many wheels to get out of the round, while a careful grinder seldom gets a wheel much out of round.

The best cement is one that binds the emery together with sufficient strength to resist the centrifugal strain due to the high speed at which emery wheels cut best, about 5,000 feet surface speed per minute. It must not soften by frictional heat, nor glaze, nor burst, nor become brittle and break with cold. It must not hold the cutting grains until they are too dull to cut ; nor release them so readily as to waste away the wheel too fast. It must be capable of being mixed evenly with the grain emery, so that the wheel may not have hard or soft spots and be out of balance, and it must also be capable of being tempered to suit different kinds of metal or work. As great care and skill is required to select and use only pure and strong chemicals in these cements, and as careful, skilled workmen are necessary to manipulate and use them aright, one runs great risks in buying wheels to try from any but well-known, experienced and thoroughly responsible makers.

THE ELM.

THE elm (Ulnus Campestois) is an old and long familiar tree, the wood of which, however, according to Timber, of London, Eng., is of no great importance, and is used for a variety of purposes, while knobs or monstrosities found on the tree are cut into thin slices and polished, and employed by carpenters in the process of veneering. The wood is very durable and the keels of troughs and waterpipes in the neighborhood of salt springs are always constructed of elm timber. The elm tree lives to a great age, and some trees in Oxfordshire were famous even in the time of Queen Elizabeth. The "Long Walk" at Windsor was planted at the beginning of the last century, and is well known and greatly admired though some of the trees have passed their prime. There is a great elm tree in the south of England that measures sixty-one feet in circumference. Its trunk is hollow and has a door fitted into it and fastened by a lock and key. Another great elm, near London, has a winding staircase cut within it, and a turrent at the top where at least twenty persons can stand. But perhaps the largest and finest elm tree in the world was (for it unfortunately is not) in the county of Kildare, in Ireland. Two of the huge branches fell down of their own weight, and that on a still, calm day, when their was not a breath of wind. The timber of the branches was conveyed away and sold for guineas. The noble tree did not long survive the loss of the branches. It was already tottering to its fall, and a violent storm tore it up by the roots, a great mass of earth rocks being torn up with them. The elm is taller than most of our forest trees, and the masses of light shade, formed by its abundant yet rather loose foliage, impart much beauty to a woodland scene.