squatters, but proprietors in freehold of their well-cultivated lands, with excellent buildings and every comfort surrounding them." "There may be," the Lieut.-Governor proceeded, "some truth in the statement [mentioned in the address presented] that the 'educated sons and daughters of well-to-do farmers shun the profession of their parents and adopt other pursuits less arduous, better remunerated, and deemed more genteel,' but I do not know that it is owing to any incompleteness in our educational system that so many of our young people abandon the farmer's life. It rather appears to indicate a want of that industry, pluck, and perseverance which characterized our forefathers and enabled them to subdue the forest, clear the land, and raise the crops without the use of the labor-saving machines of the present time."

Lieutenant-Governor Macdonald also made the statement that many leading exhibitors in the other counties are in favor of one provincial exhibition on a grand scale in Prince county, with large prizes, and expressed the "hope that next year we will have a good provincial show, proper buildings, extensive grounds, a handsome prize list, and such other attractions as will ensure an exhibition as far in advance of the present one as that held in 1867 was beyond any that had preceded it."

MECHANICAL ENGINEERS.

The ninth annual meeting of the American Society of Engineers will be held in Scranton, Pennsylvania, beginning October 15 and ending October 19, when, among others, the following papers will be presented for discussion by the gentlemen whose names are appended:

By L. H. Rutherford: The strain in an Annular Lid Resisting Internal Pressure.

Cecil H. Peabody: Flow of Steam in a Tube, and A Simple Calorimeter.

Chas. T. Main: The use of the Compound Engine for Manufacturing Purposes.

R. H. Thurston: Distribution of the Internal Friction of the Steam Engine, and On Variable Load, Internal Friction, and Engine Speed.

Chas. E. Emery: The Cost of Power in Non-Condensing Engines.

Gaetano Lanza: Counter-balancing of Locomotives.

Jas. E. Denton: On the Friction of Piston Packing Rings in Steam Cylinders.

J. B. Webb: The Overhauling of a Mechanical Power, and The Mechanics of the Action of the Injector.

C. J. H. Woodbury: On Electric Welding.

Especial attention is asked to topical query No. 66—What experiences and phenomena can you describe as to the conduct of steels under the conditions in which you were using them?

—Stormy weather on the fishing grounds is alleged as a principal cause of the reduced catch of seals in the North Pacific this year as compared with 1887. The number of seal skins entered at the Victoria Custom house by the sealing schooners up to the end of September was 19,038, of which 13,633 were from the North Pacific ocean and 5,405 from the coast. The catch of two schooners not yet entered makes the total 21,338. The total catch of 1887 was 33,800, so that there will be a deficiency this year of 12,562 as compared with last year's catch. The value at present is $6 per skin, which makes the total catch worth $128,028. The value in 1887 was about $7 per skin.

—The business failures in Newfoundland for the nine months ended with September last are thus given by Messrs. Dun, Wiman & Co.: Seven failures, with aggregate liabilities of $42,171.

—The Government of Nova Scotia has taken steps for the establishment of an experimental farm for that province. We learn from the Truro *Guardian* that the Local Government has purchased the farm of Edward Blanchard, Bible Hill, with three adjoining properties, to be used and occupied as an experimental farm in connection with the provincial Agricultural College. The farm comprises about 100 acres of the best and most beautifully situated land in the province.

—If tavern-keepers or others will violate the Scott Act and get caught, they must pay for their lawlessness. The county treasurer of Middlesex furnishes the following statement of receipts and expenditures in connection with the administration of the Scott Act up to Saturday last, showing that the receipts in North, East, and West Middlesex were $13,893.52, and the expenditures (including $1,125 for P. M.'s salary and travelling expenses) were $9,145. The balance to the good is therefore $4,748.

—The number of coasting vessels arrived at Quebec this season up to the 3rd inst. was 92, and the coasting clearances numbered 102. The number of ocean vessels entered inwards and cleared at that port from the opening of navigation up to the 3rd October, in the years 1887 and 1888, was:

ARRIVED.

	Steam.	Sailing.	Total.
1887	136	276	412
1888	121	242	363

CLEARED.

1887	90	291	381
1888	100	245	345

—The following statement of the return from a prairie farm near Portage la Prairie, Manitoba, is thus given by the *Liberal*, of that town. It gives the experience of Mr. Michael Blake, who this autumn had a small field of fifty acres of wheat just north of the M. & N. W. Ry. station. After getting the grain off in good shape, and sold, he figured up his profit thus: Cost of seeding, threshing, hauling, etc., $356, or $7 per acre; he received for his wheat $1,450, or $29 per acre; profit, $1,100, or $22 per acre. This profit, the *Liberal* says, is realized with "every bit of the work done by hired help." "Good farms can be bought on the plains for from fifteen to thirty dollars per acre, and with average crops and average prices will very soon pay for themselves." It would be unsafe to conclude, however, that the experience of Mr. Michael Blake, supposing it to be stated correctly above, is a general one. $22 per acre, while a gratifying is certainly an unusual return for farm land even in Manitoba.

—Hon. Senator Abbott, who is mayor of Montreal, accompanied by Alderman Grenier and one of the city officials, left New York last week for London on an errand of financial importance to the city which he represents. He proposes to emit in London bonds of the city of Montreal to the amount of $4,250,000, or £850,000 sterling, bearing 3½ per cent. interest. Of this amount $1,000,000 is to provide for the existing floating debt, $290,000 to provide for the redemption of bonds, and $406,367 to repay bonds maturing in 1889. The remainder is to be used for purposes of civic improvements. He wishes also to reduce the interest on the remainder of the debt from 4 and 5 per cent. to 3½. He should be able to accomplish the reduction, if not to 3½, certainly to lower rates than the city is at present paying on some of its loans, assuming always that there are no obstacles in the way of this conversion.

MANUFACTURERS' NOTES.

The British Trades Union Congress failed to decide the eight-hour question, but remitted it for the Parliamentary Committee. It was reported that 622,000 men, employed on various railways in the United Kingdom, work twelve hours a day or more, and 25,000 work eighteen hours and upwards.

It appears that England is not the only country which complains of the German falsifications of trade marks and imitations of foreign manufactures. The Russians are finding out the evils of these very questionable practices. According to a paper read before the Panslavist Society for the Promotion of Industry and Trade, Germany is said to be filling the Russian markets with her home-made English, French, Belgian, and American manufactures. And these goods, notwithstanding their inferior quality, find ready purchasers. According to M. Pobudoff, the reader of the paper, real English ploughs and American sewing machines are all but unknown in Russia, the German imitations supplying their places. France has long made such complaints, in respect of its wines. Only ten bottles out of every 10,000 of French champagne consumed in Russia are the genuine article, the remainder being kindly supplied, in the same shaped bottles, bearing the same labels, by Germany. The German nation do not seem to bear a very honest reputation in trade affairs in any country in Europe.

The strength of round or flat ropes, and of iron and steel wire, have been experimentally investigated by Mr. A. Duboul, and the results of his experiments published in the Bulletin de la Societe d'Encouragement des Arts, Paris. The results of all the tests gave for the average tensile strengths of ropes the following:

	Lbs. per sq. inch.
White hemp	10,500 to 11,200
Tarred hemp	7,700 to 8,400
White manilla	9,800 to 10,600
White aloes	5,600 to 7,000
Flat, tarred hemp or manilla	7,800 to 8,400

A factor of safety of 4, or even 3 in some cases, is considered safe for ropes. Another writer on the same subject says that the tensile strength of a wet rope is only one-third that of the same rope when dry, and that a rope saturated with soap or grease is still weaker. A rope of unannealed wire has an ultimate tensile strength of about 55,000 pounds per square inch of section of metal; when annealed the ultimate strength is reduced to about 45,000 pounds, but the elongation is nearly doubled, being 12 to 15 per cent. in annealed wire.

For cleaning greasy machinery, says the *Milling Engineer*, nothing can be found that is more useful than steam. A steam-hose attached to the boiler can be made to do better work in a few minutes than any one is able to do in hours of close application. The principal advantages of steam are that it will penetrate where an instrument will not enter, and where anything else would be ineffectual to accomplish the desired result. Journal boxes with oil cellars will get filthy in time, and are difficult to clean in the ordinary way; but can be cleaned by a jet of steam.