

October, had carried 752,319 tons of coal and coke, as against 828,244 tons last year; the decrease being mainly on gas coal.

## FIRE RECORD.

ONTARIO.—Markham, Nov. 19. Milney's saw-mill, near Cherrywood, was totally destroyed by fire. Loss about \$6,000; insurance not known.  
—Hamilton, Nov. 27th.—A small fire occurred in J. B. Young's residence. Loss \$100; fully insured.—Woodstock, Nov. 26.—A fire broke out in the cellar of Dickinson & Cranston's stationery store, completely gutting the building from top to bottom. The contents are almost a total loss; insured for \$6,500. The building is owned by F. Nesbit, of Kingston, who is insured for \$2,000. The stock of John Head, in the adjoining store, is damaged to a considerable extent by smoke and water; covered by insurance.—Vienna.—Mr. M. Pulman's house and an old barn near it burned; not insured.  
—Markham.—J. Nichol's sawmill burned.

OTHER PROVINCES.—Sunbury, N. B.—English's blacksmith shop burned.—Summerside, P. E. I., Cap. Ira Hurst's house damaged by fire.—Yarmouth, N. S.—The postal car of the Windsor and Annapolis railway train from Halifax, and three bags of mail matter for Yarmouth were partially destroyed.—New Glasgow, Nov. 26.—The Royal hotel, occupied by Graham & Westcott, was destroyed by fire. The building was valued at \$7,000, and insured for \$4,000. The furniture was insured for \$3,000, less than the value.—Montreal, 27th.—The drying house of P. Donnelly & Co's. lumber mills burned, loss \$1,000, insured.

## BUSINESS ETHICS.

"Adulteration," says *The Metal Worker*, "is an evil practice, which, we are grieved to acknowledge, is not confined to commodities in which it will do slight harm, but extends to articles of food or receptacles for food, endangering human health, and is found in structural material of various kinds, imperilling human life. Buyers have, in this respect, a just complaint against sellers, which should lead them to be cautious in their purchases, and rigid in inspection, or the exaction of guarantees of quality.

But grievances are not wholly on the part of the buyer. The seller often needs to be on the watch against misrepresentations by those who are seeking to purchase at lowest prices. It is a mark of a shrewd man of business to be able to buy closely, and to obtain all the advantages possible. A seller cannot justly complain of a customer who thoroughly canvasses the market in order to ascertain where he can buy cheapest. But there are practices which have been made use of to beat down prices unreasonably, and they call for severe condemnation. For instance, a very common occurrence, but one that is now thoroughly understood, is for a buyer to write on telegraph to a dealer that he has an offer of goods at a certain figure, of course below the market price, and asking whether that rate will be met.

Recently, a much more ingenious plan was attempted. A buyer, whose name, if published, would be recognized as that of a merchant of good standing and wide business acquaintance, came to this city, and, entering A's office, inquired the price of certain goods. He was told, we will say, \$4. 'I am sure I can find them for \$3.90,' he remarked. But A's price was firmly held, and the purchaser went out, promising to return if he found he could do no better. In a few minutes he turned up in B's place of business, and asked the lowest price there. 'Four dollars,' said B. 'I am offered them at \$3.90,' said the buyer, taking A's business card from his pocket and twirling it in his fingers so that B. could see it. 'Well,' remarked B, 'I am sorry A is cutting prices, but we think our goods are better than his, at any rate, and we hold firmly to the figure named you.' Finding the scheme did not work, the buyer asked if the \$4 rate would be kept open the next day. B was willing, the buyer departed, and the next day he sent his order in to B by mail. The remarkable fact about this transaction is that the effort to put prices down did not succeed."

## DOES VIBRATION AFFECT THE BALANCE OF MACHINES.

A machine is said to be in balance when it moves harmoniously and without visible vibration, but this occurs only at certain speeds. That is to say a machine balanced for one velocity will be out of balance at others. The cause of this is obscure, aside from centrifugal disturbance, and many good observers confess their inability to discover it.

The relative velocities of moving parts of a machine remain the same at all speeds, but the relative vibrations do not. At certain velocities the connecting rod of a steam engine transmits the power without vibration or jar, but urged faster it trembles visibly.

These vibrations do not occur in equal times, but are greater or less according as the rod is approaching or leaving the centre, and when it is pushing the load or pulling it. Circumstances also affect the vibration. This want of synchronism affects the balance, in that it transfers the jar of the vibration to the moving parts in unequal times. Vibration is not a force, but it is an action caused by it, and is undoubtedly a disturbance to harmonious action.

Again: it is an oft-stated point that a reciprocating mass cannot be balanced by a rotating mass. If this is true what becomes of the notorious fact that engines of all kinds move in equal times as far as we can see? They do not show any want of balance, though cast loose from fastenings and held down only by their weight. An engine out of balance should give evidence of it by horizontal motion (supposing it to be a horizontal engine) of the bed-plate on its supports. Engines, when run at certain velocities, under such circumstances sway the bed-plates to and fro, but at higher speeds remain stationary. What has counteracted this tendency when they remain motionless? Has not vibration entered into the question, and by its infinitesimal swayings of masses—like the beats of a pendulum—acted as a balance?

Our argument is for and against; we do not know what causes the disturbances and erratic action mentioned, but it would seem that the vibration of masses of metal at certain velocities may affect the balance of machines in a marked degree. We do not allude to mere tremor, but to visible movements. Even the former may have its influence when large masses are disturbed.—*Mechanical News*.

## STOCKS IN MONTREAL.

MONTREAL, Dec. 3, 1884.

STOCKS.	Lowest Point in Week.	Highest Point in Week.	Total Transactions in Week.	Buyers.	Sellers.	Average Price like Date, 1883.
Montreal x.d.	186	188½	593	187½	188½	174
Ontario x.d.	107½	108	12	1004	1004	1004
People's x.d.	42½	43	6	44	44	44
Molson's x.d.	109½	110	94	108	110	109
Toronto x.d.	172½	174½	139	174½	174½	162½
Jac. Cartier x.d.	106½	109½	875	109	109½	106
Merchants x.d.	119	121½	825	120½	121½	119½
Commerce	119	121½	825	120½	121½	119½
Eastern Tps	113	113½	83	113½	114	118
Union	113	113½	83	113½	114	118
Hamilton	113	113½	83	113½	114	118
Exchange	113	113½	83	113½	114	118
Mon. Tel.	113	113½	83	113½	114	118
Dom. Tel.	113	113½	83	113½	114	118
Rich. & O.	56½	57	355	57½	58	54½
City Pass.	118	122	1360	121	121½	108
Gas.	178½	182½	9750	181	181½	165
" x.d.	178½	182½	9750	181	181½	165
R. C. Ins. Co.	178½	182½	9750	181	181½	165

—Six gas companies in the city of New York have consolidated, the agreement going into effect on the 10th inst. Each of these, it seems, has been a member of a pool, and to any one of them the consumer has been compelled to pay \$2.25 per thousand feet for gas. They formally unite now, says the *N. Y. Times*, because they must crush or absorb a new rival that cannot enter a \$2.25 pool, for the good reason that it is forbidden by its charter to charge more than \$1.75. The Mutual Gaslight Company is the only one of the old companies which refuses to enter the pool. The Mutual can enter the pool at any time, however. The stock of the new company is divided as follows:—

New York Gaslight Company.....	\$ 7,821,000
Manhattan Gaslight Company....	12,352,000
Metropolitan Gaslight Company..	7,422,000
Municipal Gaslight Company....	5,276,000
Knickerbocker Gaslight Company..	3,104,000
Harlem Gaslight Company.....	3,108,000

Total.....\$39,078,000

How far this is an arbitrary valuation does not appear; but quite recently the par value of the stock of these six companies was announced at \$15,500,000. By consolidation the old companies may reduce the cost of direction and of manufacture and supply, and in this way be placed in better condition for a reduction of their price to \$1.75.

## Commercial.

## ENGLISH MARKETS.

Messrs. Henderson & Glass, of Liverpool and Birmingham, report as follows in their circular of 20th November: *Iron*—There is no improvement to be reported, nor can any be expected now that we have fully entered upon the usual dull season. Prices remain steady, but makers complain bitterly about the unremunerative rates current. There is no sign of any relief this year, and we must hope that the beginning of next year will promise a brighter prospect, both for manufacturer and merchant.

*Tinplates* are being somewhat over produced, this, together with an exceptionally small demand from the United States, is affecting prices unfavorably; but the prevailing opinion is that the lowest values are reached.

*Tin*—Steady. *Copper*—is firm but quiet. *Pig Lead*—A flat market, all the previous advance being lost. *Linseed Oil*—Quiet at rather easier prices. *Freights*—From Liverpool to Montreal by the regular steamers. On finished iron and tinplates 20/- and 10 p. c. per ton; on linseed oil 22/6 and 10 p. c. per ton gross. To Toronto, Hamilton, Guelph, and London (Ontario), 22/6 and 10 p. c. for usual weight. To Halifax, N. S.—On ordinary weight, 15/- and 10 p. c. per ton. To St. John, N. B., ditto, via Halifax, 17/6 to 20/- and 10 p. c. per ton. To St. John, N. B., ditto, via Boston, 17/6 and 10 p. c. per ton. To New York, ditto, 5/- and 10 p. c. per ton.

The tea letter of Messrs. J. Lewenz & Co., dated London, 21st Nov. says:—

The general tone of the market shows a slight improvement this week, and China Congous have gone rather better at auction, the common grades showing a rise of a ½d. per lb. on the last week's rates, while Greens have been very steady and only scented teas continue much depressed. Indian teas show little or no change and on the whole have sold fairly well.

Lowest quotations this week for new season's low common China Congou, black and red leaf, 5½d. Sales of Indian tea have been, in four weeks, 55,000 packages, at from 10d. to 2/- and 13.300 at under 10d. The latest telegrams from China reporting very little business doing at the ports, an early closing of the season is now more generally expected.

## MONTREAL MARKETS.

MONTREAL, Dec. 3rd, 1884.

General quietness prevails in most lines of business just now, as is only natural at the season; no briskness is looked for in wholesale circles until after the holidays, and the taking of stock and balancing of books occupies the principal attention of a good many at the moment. Remittances continue rather slow, and there is as yet no general movement of produce apparent in the country. Stocks are stronger, with considerably more doing. Gas and City Passenger stocks have been particularly active at advanced figures, the former selling at 180½ to 181½, and the latter at 120. Bank shares have also sold higher the last few days, and the bulls have the best of the situation. Last sales of Montreal were 187 to 187½; Molsons, 110; Merchants, 109½; Commerce, 120 to 120½; Toronto, 174. Money is plenty at the easy rates prevailing of late.

*ASHES*.—Receipts of pots since Jan. 1st. have been 5,983 brls. against 7,617 for same period of 1883; pearls, 798 brls. for 1884, against 570 for 1883. Stocks in store Dec. 1st, 1,842 brls. pots, 578 pearls. Trading at the moment is very slack, and the market dull. No. 1 pots sell at \$3.70 to \$3.80 as to tars, \$3.20 for seconds, pearls nominally \$5.00.

*DRUGS AND CHEMICALS*.—Nothing new can be stated as to these lines. Mercurials and iodides