

# IRON STEEL AND HEAVY METALS.

## Iron and Steel.

**Montreal, March 24th, 1891.**—Notwithstanding the strong statistical position of the British pig iron market, the apparent firmness which displayed itself about the close of last month has given way to a general depression, and we have to report lower prices than have been current for some time past. Advices from Glasgow state that disgusted holders are selling out their warrants for pig iron, and rumors of financial troubles in London and discouraging reports about the general condition of the trade are for the moment preventing any fresh buyers coming on. Scotch warrants, which were selling about 46s. at the beginning of the month, have touched as low as 43s. 4d., which is their present figure. It is evident, however, that any signs of even a partial revival of trade would bring about an immediate re-action, as stocks in Scotland are still being decreased at the rate of 4,000 to 5,000 tons per week, which must sooner or later have a very steadying effect on the market.

The arrangement by which a few of the furnaces in Scotland were to be blown in has gone into effect, and about one-third of the total number are now in operation with non-union men. All the shipping brands, such as "Coltness," "Summerlee," "Caldar," "Langloan," "Gartsherrie," "Carnbrae," "Govan," etc., are now to be had, and the fears of a scarcity of these irons for spring trade are now happily dispelled.

Prices for stock iron continue about the same, and a fair quantity of "Summerlee" has moved out during the month at prices ranging from \$23 to \$23.50 ex-store Montreal, while a good business has been done in some of the lower grades such as "Carnbrae" and "Eglinton," at about \$1.50 to \$2 less. Stocks in Montreal are not excessive, and it is fully anticipated that they will all be required before the opening of navigation, as buyers did not lay in any considerable quantity in the fall, and are now beginning to run short. For the spring trade it is expected that prices will be low enough to compete favorably with American irons, not only in Montreal but also in the West. It is anticipated, however, that the demand will not be very large in the early part of the season, owing to the rather unsatisfactory condition of the agricultural implement trade. Manufacturers of these machines are proceeding very cautiously, and do not care to manufacture largely until they are assured of a more satisfactory state of affairs than last season. This business, however, is in very strong hands, as the smaller manufacturers have been gradually absorbed by the larger ones, and these are well able to bear any temporary strain.

In connection with the introduction of American pig iron into Western Canada, it is worthy of notice that it has caused iron foundries to pay more attention to their mixtures, and to the analysis of the irons they use, than they have done before. In the United States almost all pig iron is sold according to analysis, while the various Scotch brands which have been used in Canada vary so little that they have been used from year to year without any enquiry as to their analysis. It is well to note, however, that the Scotch furnaces are quite as far ahead as the American, and their manufacture is conducted with as much attention to this point as in any blast furnace on this side of the Atlantic.

Finished irons are also slightly easier than they were a month ago, and we understand that Canadian iron is now being sold at \$2.10 to \$2.15 per 100 lbs. in Montreal, while English bars are quoted \$2.25 to \$2.30. It is only, however, for special work that the latter are brought in, and only the finer brands are wanted for this.

The demand for tin plates continues, although the works in South Wales are now fully loaded up with orders for shipment before the new American tariff comes into operation. Consumers in Canada are buying only what they actually require for their immediate wants, as there is no doubt that they will be able to do better for shipment after the month of June than can be done at present. Coke tin plates are quoted at \$4.50 to \$4.75 in Montreal, while charcoal ranges from \$4.75 up to \$5.50 according to quality.

Makers have not begun to make any Canada plates yet, but they will start at this work immediately after the demand for tin plates is satisfied, as both these articles are made by the same people.

No change of any importance has taken place in the other departments of this trade, and copper, tin, zinc, etc., remain unchanged.

**London, March 15, 1891.**—The general position is very quiet, and all the current indications seem to point to a more irregular demand, a gradual lowering of selling prices, and the inevitable reduction of wages and fuel. All these forces are already in operation, not only in Great Britain but also in every iron making country of the world: hence they must be recognized as being the natural sequence of the recent period of abnormal activity. Labour has received several severe checks in regard to the

more arrogant pretensions of the trade-union leaders, and it is destined to retreat many points before circumstances again place it in a position to dictate to Capital. The blast-furnacemen in Scotland, for instance, have been completely defeated, and have not only failed to secure extra pay, but are resuming work at a 20 per cent. reduction. There are now twenty furnaces at work in Scotland, and more will be restarted almost immediately, so that the output of Scotch pig will be enlarged, and a check put upon the importations into Scotland from Middlesbrough. Warrants are declining in value somewhat considerably, and the odds are that they will go several shillings lower before a state of equilibrium is reached—particularly if the reserve stocks should be increased. At present Connal's Glasgow stores contain 542,000 tons, as against \$57,254 a year ago and 1,032,922 tons in 1889. All warrants are neglected, and the general demand for pig iron is dull. Buyers are holding back for rather lower prices, as they are enabled to do, owing to the quietude of the demand for their own productions. The call for many kinds of machinery, implements, and ironwork is still good, nevertheless; but merchant iron is slow, and the outlook is not brilliant. There is a softening of fuel prices, but there is yet room for a much more marked fall.

**Liverpool, March 15, 1891.**—There is a slight improvement in the tin-plate market here, there being a better demand and greater disposition on the part of both buyers and sellers to come to business. Bessemer steel cokes are again saleable at 17s. 6d. (Wales), and there are numerous buyers offering 17s. 3d. and 17s. 4½d., but no sellers at these figures at present. The improved demand has been chiefly for Bessemer and Siemens steel coke tins, and to a limited extent also for charcoal tin-plates, but there is still nothing doing in terne plates, and what has become of the orders for these? is a question that is exercising a great many peoples' minds just now. Bessemer tins now range in price from 17s. 6d. to 18s. 1 C Wales; Siemens-Martin steel cokes, 18s. to 19s. 1 C; charcoal tin-plates, 19s. to 21s. 6d.; best charcoal tin-plates, 22s. to 24s. 1 C; terne plates, 31s. 6d. to 36s. The exports last month were 32,895 tons, as compared with 24,566 tons during the corresponding month of last year, and 35,971 tons during the same month of the previous year. For the first two months of this year the quantity exported was 72,322 tons, as compared with 56,734 tons during the corresponding period of last year, and 71,649 tons during a similar period of the previous year. The stocks in this country on the 1st inst. were 483,476 boxes, as compared with 498,164 boxes on the 1st ult., or a decrease of 14,688 boxes. Tin £90 5s. to £90 10s. Scotch pigs 45s. 4d. to 45s. 6d. The shipments last week were 2,835 tons, as compared with 6,666 tons during the corresponding week of last year. Middlesbrough, 40s. 7d. to 40s. 9d.; hematites, 49s. 6d. to 49s. 9d.

**Scotch Pig Iron Warrant Market.**—Below is given our usual table of the position of the warrant market:—

	1891.	1890.	1889.	1888.	1887.
Price of Scotch warrants, Mar. 10	45 1/2	50 1/2	43 1/2	38 1/2	43 1/2
Furnaces in blast in Scotland, Mar. 10	20	89	81	85	71
Quantity of iron in public stores	542222	237254	1032942	956811	850201
Shipments of Scotch pig iron for week ending Mar. 7	2880	6822	6138	6769	10690
Do. since beginning of year	35093	69783	75622	66790	80102
Middlesbrough iron imported at Grange-mouth, week ending Mar. 7	10620	2650	7361	6785	4315
Do. since beginning of year	66090	27034	72828	68315	62798

	1891.	1890.	1889.	1888.	1887.
Price of Middleshro' No. 3 warrants on Mar. 10	40 1/2	50 1/2	37 1/2	31 1/2	35 1/2
Furnaces in blast in Middleshro' district	97	106	99	96	90
Quantity of iron in public stores	125088	172521	255312	334407	321532
Shipments of pig iron from Middleshro' for week ending Mar. 7	16700	11383	19651	16730	16521
Do. since beginning of year	135098	99523	156841	155135	128152

	1891.	1890.	1889.	1888.	1887.
Price of hematite M/No. warrants on Mar. 10	49 1/2	63 1/2	47 1/2	41 1/2	45 1/2
Furnaces in blast in W. Cumberland and N. Lancashire	40	55	45	48	52
Quantity of iron in public stores	197876	373445	437687	428470	300765
Shipments of hematite iron for week ending Mar. 7	12010	8035	9397	7643	14594
Do. since beginning of year	82324	104919	93936	92480	98816

\* Connal's & N. E. Rly. Co's.  
† Workington, Maryport, and Barrow.

**New York, March 24, 1891.**—There has been nothing of particular moment to note in the general position of prices, or in the volume of business doing, for some little

time. The buying is of a very hand-to-mouth character, buyers being contented to fill their immediate wants only. Perhaps on the whole, there has been a better feeling evinced of late, but the market is decidedly dull. Prices continue firm, and there are no reports of any concessions being made. This feeling is of course due to the less pressure to sell, since the reduction in stocks of iron has become pronounced; and the market is in a measure relieved of that incubus hanging over it. The coke strike still continues, although late dispatches from the Connells-ville region indicate that it is weakening, and that an early settlement may be effected. That this has had no more influence is an evidence of the overstocked condition in which the iron market has been. Dealers report somewhat more inquiry for American pig iron, but no increase in orders, and the market is inactive. Prices are held firmly, and no shading on any brands is reported. The scarcity of No. 1 Southern iron is still pronounced, and dealers are unable to fill orders. No. 2 Southern iron is offering rather more freely. We quote Northern No. 1 X, \$17.50@18; Northern No. 2 X, \$16.50@17; Southern No. 1 X, \$17.50@18; Southern No. 2 X, \$16.50@17. There has been very little doing in spiegeleisen and ferro-manganese, and the transactions have been limited. Prices of ferro-manganese, however, are a little firmer on account of the rise abroad. We quote, nominally: 20% spiegeleisen, \$28.50@29; 80% ferro-manganese, \$63.50@64.50.

**Cleveland, O., March 23, 1891.**—The market has been dull for some weeks past, with very little movement. The price of pig iron still keeps down, although there is an actual scarcity of raw material. The reason for this state is found, to a large extent, in the falling-off, among the consumers, of orders, which, it was thought, would be forthcoming early in the spring, but which are still being withheld. Bessemer iron and a high-grade, all-ore foundry (No. 1) sell at about \$17 at the furnace, where, indeed, there is any for sale. In the lines of manufactured iron there is very little that is encouraging. Bar iron is selling at \$1.65 in large lots, and even that is an improvement, as but a short time ago a lot was sold at \$1.57½. Sheets are also a trifle weak, but no more so than is usually the case at this time of the year. No. 24 is held at, say, \$2.75, and No. 27 is worth fifteen cents more. In all the other lines there is but little activity, save in the combination makes, which are held up pretty stiffly to the full price.

**Copper.**—At length there has been a stiffening in copper in the American copper market on all grades. The second-hand offers of Lake copper have almost entirely disappeared, and it is questionable if anything can be obtained below 14c., at which price the Lake companies remain sellers. Arizona copper is exceedingly scarce. Pig copper is almost unobtainable for spot or near delivery, as large quantities have lately been shipped for export. Arizona ingot copper is held for 12½c@13c. Casting copper is also firmer. Small consumers have lately been able to purchase at about 11½c in New York, but later on at this price pretty heavy transactions took place in the different brands, and now a firmer tendency prevails and we hardly think that anything is obtainable now below 11½c@11¾c. The deliveries have been heavier in the last few days than for some months.

**Lead.**—Lead has been strong in the States, and a good business has been done at firm prices. Stocks appear to be small everywhere, and, with the demand at this time of the season becoming larger, it may reasonably be expected that prices will harden. New York quotations are: 4½c@4 40c. for near deliveries, but future deliveries are rather firmer and not obtainable below 4.45@4.50c.

The London market has been steady at £12 12s. 6d. for Spanish and £12 15s. for English.

At St. Louis, lead is firmer and a shade high; 4.12½c. has been paid for a few special lots. Offerings are moderate, and the demand is slightly improving.

**The Influence of Low Temperatures on Steel.**—The results of certain experiments in relation to the effects produced on steel by very low temperatures have been recently published by order of the French Minister of War. The experiments were undertaken to determine (1) the value of the co-efficients of dilatation of steel hardened and unhardened at low temperatures, and (2) the effect produced by very low temperatures on the strength of steel. It was observed that the difference of dilatation decreased very rapidly when the temperature fell below —30° Centigrade, tended towards zero between —100° and —150° Centigrade, and were scarcely appreciable beyond —150°. As to the effect of great cold upon the tensile strength of steel, it was concluded that the elastic limit and the charge of rupture both increase with the low temperature, for tempered as well as for untempered steel, that the elongation decreases with the temperature, and that the striction also diminishes with the