

power furnished by the river with real estate on both sides of sixteen acres, situate one mile from Main Street of Lowell, a rich farming country surrounding an excellent location for paper mill, furniture factory, woolen mill and the many uses that require power. Also a splendid home and farm of 87½ acres with buildings, fruit, evergreens etc. For further information call at the premises of JAS. R. BUCHANAN, Lowell, Michigan.

The officials of the Geological Survey of the Dominion have made public their preliminary table of the mineral production of Canada in the year 1889. It is understood that the figures are subject to revision, for the returns are not in all cases complete; but as far as they go they exhibit a gratifying increase in many important directions, the aggregate value being some three millions of dollars in advance of 1888. There is no very great increase in coal production, the year 1888 having been in some respects exceptional under this head, but the increased yields of gold and copper are encouraging. The larger figures of iron, pig and rolled, may well attract attention. Pyrites shows an increase of sixty per cent.; and the manufacture of sulphuric acid, that "barometer of a people's progress," as it is called, shows a still greater ratio of increase. A decrease in production of petroleum is manifest, however. Structural materials, such as building stone, bricks, tiles, etc., show a marked advance in production. The estimated value of mineral products not returned, principally nickel, iron, mica and structural materials, was \$1,933,752, making a total of \$19,500,000 produced last year.

	VALUE, 1889.	VALUE, 1888.
Coal	\$ 5,570,742	\$ 5,259,832
Gold	1,116,145	1,058,610
Iron, rolled	2,210,062	1,442,974
" pig	499,859	226,443
" ore	151,640	139,493
Steel	171,822	470,819
Copper	855,424	667,543
Silver	343,848	368,396
Pyrites	396,211	232,938
Manganese ore	31,814	47,243
Phosphates	312,182	242,295
Salt	110,387	143,804
Mica		30,207
Lead (fine in ore)	5,893	27,742
Petroleum	672,978	716,067
Gypsum	193,658	179,393
Grindstones	30,153	42,159
Sulphuric acid	148,482	97,755
Mineral paints	15,280	11,750
Graphite	1,630	1,200
Asbestos	424,350	255,007
Antimony	1,100	6,894
Arsenic		1,200
Mineral water	37,360	11,456
Charcoal	83,573	15,703
Coke	155,043	134,181
Fertilizers	26,606	21,600
Limestone, for flux	21,909	14,742
Brick	1,252,667	1,033,721
Building stone	899,105	561,597
Lime	265,208	339,541
Tiles	130,871	114,057
Granite	78,625	63,846
Marble and serpentine	980	3,110
Slate	119,160	90,689
Sand and gravel	39,506	
Flagstone	1,400	
Cement	69,790	35,593
Miscellaneous clay products	239,385	350,370
Glass	150,000	150,000
Feldspar	5,100	
Fire clay	4,800	
Platinum	4,500	
Soapstone	1,020	
Add short returns of a dozen items	1,933,752	650,000
Total	\$19,283,990	\$15,259,190

It is claimed that wall paper can be made in such a way that the passage of a low tension electric current will heat it moderately warm to the touch, and diffuse throughout the room a moderate temperature.

THE Nova Scotia Steel and Iron Company, New Glasgow, N.S., operating under a new charter granted by the Legislature of Nova Scotia, have issued a prospectus relating to their business. The authorized capital is \$2,000,000. The Company are now employing about 450 men, and look to increasing the number as soon as they get to work building their blast furnace, etc., which will be immediately.

THERE are now in operation in the United States stationary electric motors aggregating between 5,000 and 10,000 horse power, besides 6,000 to 8,000 small motors, fan outfits, etc. The confidence of the public in the electric motor as the most reliable and economical power available is now an assured fact, which is becoming more evident every day by the demand for power in shops and factories using from twenty to 100-horse power, and even higher.

AN immense hydraulic riveting plant—the largest ever made—has just been built in London for an engineering company in Holland, and is to be employed on marine boilers. The riveter has a gap 12 feet deep, closes its jaws with a power of 200 tons, and is capable of closing rivets up to 3½ inches in diameter. A traveling crane, 50 feet high, is designed to raise and manipulate a boiler weighing anything up to 50 tons. The crane is operated by two engines, steam for which and the powerful pumps giving hydraulic power for the riveter's great accumulators, is supplied by two steel boilers, each capable of doing duty equal to about 130 indicated horse-power.

THIS transaction serves to illustrate how small is the actual amount of money needed to adjust balances: "The office boy owed one of the clerks three cents. The clerk owed the cashier two cents. The cashier owed the boy two cents. One day the boy having a cent in his pocket, was disposed to diminish his outstanding indebtedness, and paid the clerk to whom he was indebted three cents, one cent on account. The clerk, animated by so laudable an example, paid one cent to the cashier, to whom he was indebted one cent. The cashier, who owed the boy two cents, paid him one. And now, the boy having again his cent in hand, paid another third of his debt to the clerk. The clerk, with the said really 'current' cent, squared with the cashier. The cashier instantly paid the boy in full. And now the lad, with the cent again in his hand, paid off the third and last installment of his debt of three cents. Thus were the parties square all round, and their accounts adjusted.—*New England Grocer.*

GREAT interest is manifested here in the probable establishment of another electrical industry at West Lynn for the manufacture of welded shells. The works of the Thomson Electric Welding Co. are crowded to their utmost capacity in the manufacture of welding machines, which will be used largely in the new industry. As soon as the patents of Lieutenant Wood, U.S.N., for welding shells were brought to the attention of the Government, there was a prompt appreciation of their value, and an order was at once placed for 100,000 shells for Hotchkiss guns and Shrapnel shells as soon as facilities were ready for making them. The time of getting the patents, which usually takes six months, was reduced to thirty days. By the new process the shells, instead of being made of cast iron and boxed as formerly, are made by welding the chilled point and butt to a section of soft iron pipe. In the case of Shrapnel shells the labor and uncertainty of graduating the thickness of the shell with calipers after boring, and adjusting the nicely poised diaphragm between the powder at the butt and the bullets with which it is filled, is greatly lessened.—*Boston Advertiser.*

FROM carefully conducted tests recently made in England with a Thomson electric welding plant to ascertain the time required, the power consumed, and the probable cost per weld, it was found that ten welds of one inch round iron with rough ends could be made in thirteen minutes, and that a weld with most excellent finish could be made in considerably less than two minutes. In another test of a number of pieces of one and one-eighth inch round iron it was found that two and one-half minutes was ample time for each weld. Computing upon this basis, and taking the maximum horse power necessary, making allowance for the fact that the engine power was needed only about one-half the time, the engine running light the other half, it was found that the cost of the electric weld was somewhat less than that of the same work done at a fire in a blacksmith shop. The cost of the plant and its maintenance is not, however, considered in this. It is in this direction that a great saving is made by electric welding, as by the electrical process the number of