

developed to enable any one to form a reliable judgment of their productiveness. If the purchasers of the land apparently got the best of the bargain, the fact is due to the circumstance that there had been too much selling and too little development in the past; and that now people have come to understand that there is no value in a mine but that which can be got out of it, over and above the cost of the labor employed.

The operations of this company, which are likely to be carried on with vigor, will be carefully watched by Canadians. The enterprise is in the hands of Englishmen, some of whom, F. W. Fraser Rae, Esq., and Col. Jackson, have visited the company's property and convinced themselves, on the spot, of the promising nature of the property. The mineral lands which the company has acquired are on Cape Mamainse, the mineral value of which was pointed out by Sir William Logan, when he visited that region, several years ago.

From the mines on the south shore of Lake Superior a large proportion of the world's supply of copper is obtained; while on the north or Canadian side very little has been done. The success of the Lake Superior Native Copper Company would stimulate exertions in the same line, on other parts of these extensive coasts, known to be rich in copper and by no means barren of silver. In time, the north shore may, in point of production, come to rival the south. What we want now is careful experimenting, such as this company is engaged in; and the result of its labors cannot fail to have a beneficial effect on this nascent branch of Canadian industry.

THE ELECTRIC LIGHT.

The illumination of factories, docks, steamships and manufacturing villages by means of the electric light, has passed beyond the experimental stages. Part of the general post office in London, England, is lighted by Mr. Edison's system, a current of electricity being conveyed thence from the Holborn Viaduct electric station. And we are told that buildings like the theatre of La Scala at Milan, and Le Gare, at Strasbourg, are lit by the Edison's soft white light. The Brush light and others help to illumine various Western cities, notably Detroit. What has become, we wonder, of the dynamo-electric machines which the Ball Electric Co. were making in London not long ago? The modification or sub-division of the light to make it adaptable for domestic use is now the subject of study and experiment.

It is, we believe, placed beyond doubt that the electric current generated to supply these illuminations is divisible. There may be on the same "circuit" a dozen or more of the Edison Incandescent Lamps. Each is turned on or off by a key, and is perfectly independent of the others, so that lights may be controlled singly, in pairs, or in groups of any desired number.

Many were the doubts whether Edison would be able to do what he claims to have done. Now that his success is demonstrated, he is about to illuminate a portion of New York city. He will light the streets and houses in about a square mile of the city—

that part bounded by Wall, Spruce, and Nassau streets, and the East River. Not only this, but the bold inventor proposes to supplant other motor powers by electric motor power, for such matters as warehouse hoists, steam or water elevators and sewing machines. This, he thinks, can be done from the same current as supplies the light. We may note just here, that a dozen or twenty years ago, an Italian named Bonelli invented an electric apparatus to work the celebrated Jacquard silk loom.

It may repay some trouble to describe the means by which it is proposed to achieve the result of supplying light and power to so large an area of a populous city. Because, if this contemplated method be successfully introduced into New York, and be found to serve the purpose more cheaply and more safely than gas, all the efforts of the hundreds of millions of capital (\$380,000,000) invested in gas-company stock in the United States will be unable to prevent the spread to other cities of the new mode of lighting.

On Pearl street, we are told, a building is fitted with four steam boilers of 250 horsepower each, to drive six engines of 200 horsepower each. These engines will run the dynamo-electric machines which generate the electric current. The "dynamoes," as the Edison people call them, are huge affairs, weighing thirty tons. They consist mainly of powerful electro magnets, between the poles of which an armature or inducing coil is revolved by a steam engine. From the armature the electric current flows through the conductors in the pipe laid in the street, as water flows through a main, and in like manner flows from whatever point the pipes are tapped into the houses. The strength of the current can be regulated according to the amount required of it, so that there will be no waste of power or material. An electro-motive force indicator shows at once any variation of the current produced by the turning on or extinguishing of any number of lights in the circuit. The pipes in which the conducting wires are laid are ordinary iron pipes which incase thick copper wire, separated from the iron by an insulating substance. Five kinds of boxes not differing much in size are used. They are about a foot long, six inches wide, and made of iron. In these boxes careful junctions are made of wires at corners of streets, &c.

Now a word as to how the lamps which are to be used to display the light generated by the dynamos and transmitted by this network of wires. The lamps in which the wires terminate are called, as we have said, Incandescent Lamps, which are thus described: "Each consists of a pear-shaped globe about four and a half inches in height exhausted of air, into which is sealed a filament of carbonized bamboo, slightly thicker than a horse-hair. This filament becomes incandescent when the electricity passes through it and emits a soft light of an average brilliancy equal to sixteen wax candles. The lamp is screwed into a socket which is affixed to a chandelier or bracket, of a shape or size to suit individual fancies. The lamp, once screwed into the socket needs no further attention or care until the carbon breaks. Then in a few seconds it is unscrewed and replaced by a new lamp."

When a lamp breaks, the inventor declares that the inrush of air at once extinguishes the carbon filament, so that even if the lamp were wrapped in paper this would not be ignited. Mr. Edison, it seems, knows "no such word as fail", for he calculates that there are 800,000 gas jets in New York, and all these he hopes to supplant by his—or somebody else's—electric lamps. He is a sanguine man, as most inventors are said to be, and he aims high. He has already ascertained by experiments begun over a year ago that the average life of one of his lamps is 1425 hours which is equal to almost sixty days and nights. Before he thought of bamboo, however, he could not get his lamps to last over twenty five days, where other material was used for carbons."

It may be added that the electric motor is capable of division (according to Mr. Edison) down to one hundredth of a horse power and that to run a sewing machine takes the same amount of electricity as is required to run a lamp of sixteen-candle power. It is scarcely to be supposed that a revolution in lighting of this sweeping kind is to be instantaneous. There must in the nature of things, be difficulties and delays in the general introduction of the light, and the gas-light companies are not going to allow themselves to be superseded without a struggle. But the preparations go on in the streets of New York, and it will not be long before electric lighting of houses and probably electric driving of sewing machines and such like will be fully tested in that city.

BUTCHERS' MEAT.

The very large increase in the cost of provisions of every kind since the revival of trade, and more especially within the past twelve months, has caused many an anxious housekeeper serious thought. How to spend ten dollars a week, or one hundred dollars per month, are problems of difficulty to wives who had the same allowance two years ago as now; and even to those whose incomes have increased, it is sufficiently inconvenient to induce more economical living. The question which suggests itself to many householders now-a-days is: How can their incomes be made to cover all the requirements of the home in the face of enhanced values? If the question be changed a little, and we ask how can we make the best use of what is in the market, incomes may be so managed as to more than cover the increased cost of many of the articles we now use so extravagantly. It is notorious that all the English-speaking people of the world have yet to learn thrift as applied to the management of the household.

To take butchers' meat as an example, and compare the modes of cooking it which prevail among English-speaking countries with those of France and Germany, we shall see at once where our own short-comings lie in the treatment of this most important article of diet. In the first place, we have to understand that butchers' meat is by no means a necessary of life; and it is because the two continental peoples referred to understand this, that they cook it differently from us. It is nourishing, to be sure, but it is neither the highest form nor the best kind