

that Mr. John Moffat, of Komoka, Canada West, was at that time endeavouring to introduce an economical light into his Seminary in the Village of Komoka, and seeing the commercial value of Mr. Ensley's invention, immediately entered into arrangements whereby the discovery might be properly developed and brought into public notice. The result was, that an apparatus costing about \$500 was erected last May (1866), at the Seminary in Komoka, with a gasometer containing about 600 cubic feet of gas, more than sufficient to illuminate the entire building. The success of this first experiment is testified by the report of the committee appointed to investigate it by the Board of Trade, and also by the other gentlemen of the City of London, C. W., who visited the works on the 16th May, 1866. The apparatus is still in successful operation, and can be inspected by any one who chooses to visit the Seminary for that purpose. Komoka is a station on the Great Western Railway of Canada, situated ten miles West of London, and midway between the Suspension Bridge and Detroit.

A public trial of this wonderful discovery was made in the city of Detroit. Having disposed of the patent right for the State of Michigan, an apparatus on a larger scale, containing 2,400 cubic feet of gas, was erected in Detroit, and on the 27th July, 1866, and three following evenings, the Board of Trade Hall in that city was brilliantly illuminated, the light being declared by all present to be equal to that of coal gas.

The patentee and promoters of Ensley's patent economic gas, do not claim that extracting gas and other materials from wood and animal matter is altogether new; the merit of the invention lies in discovering a proper combination of vegetable and animal matter, to produce a good illuminating gas, and at the same time to develop all the valuable substances in the material used. The construction and combination of the apparatus, and the elements employed, are, however, *entirely new*, the inventor having obtained patents for them both in the United States and Canada. The small cost at which the apparatus can be constructed, will bring the luxury of gas-light within the reach of small towns and villages, and also of those living in detached dwellings. Hotels and manufactories, which at present have but imperfect means of illumination, can also, by means of this invention, be economically and brilliantly lighted. This invention is also worthy the attention of gas companies in cities and towns, as it may be used either separately or in connection with coal gas."

It is quite recently, within the last few weeks and since publication of the above, that the town of Cobourg has been lighted with this gas. The proprietors of the patent, as has often been the experience of proprietors of other good patents, found numerous objections and difficulties raised as to the practicability of using the gas for towns, where it would have to travel through miles of pipe, although they had established the fact of its being suitable for factories, where the gas had not far to travel from the works, as in the Komoka and Detroit experiments. In order to meet these

objections, negotiations were opened with the Cobourg Gas Company, an institution which had for years provided but a poor investment for its shareholders, and finally agreed to rent their works from them for the purpose of establishing, by actual demonstration, that the new gas possessed all the qualities claimed for it. The result has proved all and even more than was anticipated. Not only were the various residues produced as and in the quantities it had been asserted they would be, but the gas itself turned out to be superior to that formerly used, and there is probably *no town in America so well lighted at the present time as Cobourg*. The objections which had been raised as to the travelling properties of the gas were undeniably set at rest, as the lights at the extremity of the pipes, over a mile and a quarter in a direct line from the gasometer, but, owing to the circuitous course of the pipe, nearly *three miles* in reality, *burned as brilliantly as those at the works*. It is in this particular that most gases (excepting that from coal), which are otherwise good, have invariably failed to succeed.

At Cobourg, the gas is not only better than that which the consumers have been accustomed to, but already the manufacturers of it have been enabled to *reduce the price from \$3 50 to \$2 50*, with the prospect of a still greater reduction.

The accuracy of the following statement of proportions of the different residuums are vouched for by Mr. Moffat, the lessee of the Cobourg works:—

Memorandum of cost of manufacturing Gas from Ensley's Patent, as demonstrated by practical test at Cobourg, from one cord of pine wood and 1000 lbs. of bones.

|   |         |
|---|---------|
| 1 Cord pine wood .....                                    | 2 00    |
| $\frac{1}{2}$ Ton bones.....                              | 4 00    |
| $\frac{3}{4}$ Cord hard wood for fuel, at \$3 per cord... | 2 15    |
| Cost of labour .....                                      | 2 00    |
|   | \$10 15 |

Amount of gas produced 15,000 cubic feet, making the cost 67 $\frac{3}{4}$  cents per thousand feet, *without taking into account* the sale of the residuums—estimate of cost and proceeds of which are as follows:—

|   |         |
|---|---------|
| DR.                                       |         |
| Cost of wood, bones and labour, as above. | \$10 15 |
| CR.                                       |         |
| 40 bushels charcoal, at 5c..              | \$2 00  |
| 50 gals. tar, at 8c.....                  | 4 00    |
| 12 " oil of turpentine, at 20c. ....      | 2 40    |
| 770 lbs. bone black, \$1 per 100 lbs..... | 7 70    |
| $\frac{1}{2}$ brl. ammonia,.....          | 1 00    |
|   | \$17 10 |