coast of Lake Huron, commencing a few miles above the mouth of the St. Clair, and extending fully 20 miles inland. It may also be successful on nearly the whole of the south shore of Lake Erie, but in Canada shallow borings will be likely to give favorable results only, within the limits indicated in the preceding paragraph.

With respect to the supply which may be looked for in our Canadian rocks, if the Hamilton Shales do not yield it, it may be stated with a considerable degree of confidence that the quantity will be very small compared with the abundant store in the United States. It will probably be also intermittent, and springs which promise favourably for a time will soon be exhausted, and require a greater or less period for their restoration. This will appear at once from the limited area occupied by those rocks from which the petroleum proceeds. They are merely outlying patches of the great Pennsylvanian and Michigan fields which underlie, with their associated formations, the coal measures of those States. At the best, the western patch in Plympton, Warwick, Brooke, &c., is but a tongue of the Michigan field; and possessing but a limited area, it has also a very small thickness, probably not exceeding one hundred feet. Hence, it is not likely that Canadian rocks can contain a large supply of this important material. But while we would strongly caution "prospecters" against deep boring, yet there is no reason why numerous shallow wells should not yield a considerable supply for some time to come—quite sufficient to make a limited outlay of capital, cautiously expended, give remunerative results; but it does not appear probable that the supply will be found sufficient to create a lasting and increasing industry. The deposits of asphaltum or bitumen in the township of Enniskillen are perhaps the existing records of petroleum springs which have been oozing for ages, and the material, by long exposure to the atmosphere, has absorbed oxygen and become converted into the viscid or semi-solid mass which now occupies several shallow depressions in that township, and also in Zone. Wherever these deposits are found, it appears reasonable to suppose that boring would reveal a petroleum spring, and in such localities a search for the fluid would be most successful and the supply most abundant.

THE SOLID MATERIALS CONVEYED TO THE SEA BY THE OTTAWA AND ST. LAWRENCE.

Few but those who have given attention to the solvent powers of water, can form an adequate conception of the enormous quantities of mineral substances annually conveyed to the sea by our great rivers. The amount of lime, flint, glaubers' salt, magnesia, soda, &c., dissolved out of the rocks over which the Ottawa and its tributaries flow, reaches the astonishing quantity of five million one hundred and fourteen thousand tons annually, most, or all of which, is carried to the sea. The quantity dissolved and carried away by the St. Lawrence, is not only vastly greater, on account of the magnitude of the river, but also because the St. Lawrence holds a much larger quantity of mineral substances in solution than the Ottawa. In every 10,000 lbs. weight of the Ottawa water, there are $9\frac{78}{100}$ ounces *avoirdupois* of solid matter. In 10,000 of the St. Lawrence water, there are $1\frac{6}{10}$ lbs. *avoirdupois* of mineral substances. These differences in the volume of water and amount of mineral substances held in solution, cause the St. Lawrence to carry towards the sea, not less than one hundred and forty-three million tons of minerals per annum. These estimates are based on the suppositions that the volume of water in the Ottawa is represented by 85,000 cubic feet flowing past a given point (Grenville) in one second of time,* and that the mineral substances it holds in solution are 6116 lbs. in 100,000,000 lbs. (0.6116 in 10,000.)† The volume of water in the St. Lawrence is represented by 900,000 cubic feet‡ in a second of time flowing past a certain point, containing 16,055 lbs of mineral substances in 100,000,000 of water. (1.6055 in 10,000 parts.)‖

The following analyses by Mr. Hunt, show the relative quantities and kind of minerals in the respective waters of the two rivers, in 10,000 parts.

OTTAWA WATER.

Carbonate of Lime	0.2480
" Magnesia	.0696
Silica	.2060
Chloride of Potassium	.0160
Sulphate of Potash	.0122
" Soda	.0188
Carbonate of Soda	.0410
Alumina and oxide of Iron. (traces.)	
Manganese and Phosphorus "	
	0.6116

ST. LAWRENCE WATER.

Carbonate of Lime	0.8083
" Magnesia	.2537
Silica	.3700
Chloride of Potassium	.0220
" Sodium	.0225
Sulphate of Soda	.1229
Carbonate of Soda	.0061
Alumina, Phosphoric Acid. (traces).	
Oxides of Iron and Manganese "	
	1.6055

A cubic foot of water at the temperature of 60° Fah., weighs 998,217 oz., *avoirdupois*, or 62,3885 lbs.

* Thos. C. Clarke, C. E., Ottawa Survey.
† T. Sterry Hunt, F. G. S., Geological Reports, 1853.
‡ T. C. Clarke, C. E.
‖ T. Sterry Hunt, F. G. S., Geo. Reports, 1853.