

the acid and impurities have subsided, the oil is drawn off into another tank and agitated with four per cent. of soda lye. This last operation is to remove any acid remaining with the oil, and also to extract the residue of the colouring matter. In fact it is sometimes employed alone and a very good oil obtained. The oil is now agitated with water to remove the soda lye, and is then ready for consumption. The colourless oil is by no means the most economical, but on the contrary more light is obtained from the yellow article.

The heavy oil is cooled down to 30° Fah. when the paraffine crystallizes out, and is separated from the oil by pressing. It is further purified by another pressing and by alternate agitation, in a melted state, with sulphuric acid and soda lye. It is then moulded into candles. It is a curious fact that the composition of paraffine and good coal gas is exactly the same.

In Egypt a substance derived from petroleum was used in embalming bodies; and in Persia and the neighbouring countries asphaltum is used to cover the roofs of the houses and to coat the boats. In France asphaltic pavements have been successful in several cities, and for the protection of stone no material is better adapted. Mixed with grease the Trinidad asphaltum is applied to the sides of vessels, to prevent the borings of the teredo, and with quicklime it affords an excellent disinfectant. Among the products of the distillation of petroleum are naphthaline and kerosolene. The former is the substance from which is obtained aniline, the base of the beautiful colours mauve, magenta, and solferino. The latter has been proposed as a substitute for chloroform and ether. Many other substances have been separated, but as yet none of them have been applied. As this is comparatively a new field many discoveries may be confidently expected in the course of a few years.—*Scientific American*.

### THE OIL WELLS IN ENNISKILLEN.

A correspondent of the *Toronto Globe*, under the signature "Sigma," describes the flowing spring of Petroleum in the township of Enniskillen, which has been reached by boring to the depth of 208 feet. He says:—

"On the 16th of this month, a Mr. Shaw, lately of Port Huron, Michigan, a dauguerrean artist, and formerly of Kingston, Canada West, struck oil, as it is termed, near the road running between the second and third concessions of this township, on the north part of the east half of lot 18, in the second concession. The well is sunk about 208 feet below the surface of the earth, and measures four feet by five at the top, but gradually narrows, I presume, towards the bottom. The first fifty feet was a clay soil, and the remaining 158 feet was drilled into the rock. You can form some idea of the enormous pressure with which this liquid was forced up from the bowels of the earth when I tell you, that within fifteen minutes of the last drill of the chisel, the oil was overflowing the surface of the earth, the well being entirely filled. The great mystery then was, how they should controul this spontaneous flow, and it is remarkable how easily it was accomplished. An iron two and a half inch

pipe was provided, and on the end which was to enter the cavity drilled into the rock, there was a leather bag twelve feet long, filled with flax seed wrapped around the pipe, and this was lowered to the bottom of the well, and by means of the seed swelling the cavity was tightly closed and oil was prevented from escape, except through the pipe. It rushed up this pipe after this had been accomplished, and spouted into the air twenty feet above the surface of the earth. Another pipe was provided only three quarters of an inch in diameter, and around one end was wrapped another seed bag, and this was inserted within the two and a half inch pipe, which reduced the flow by this means to the quantity that could pass through this three-quarter inch pipe. There are four large receiving tanks, capable of holding each 120 barrels or about 5,000 gallons each, placed at a distance of 30 feet from the well, and connected from the main upright pipe through which the oil flows, are four hose, one of which feeds each of the tanks, and from the tanks the oil is drawn off into barrels, containing 40 gallons each. I timed the filling of these barrels and found that in one minute and forty-five seconds each barrel was filled. From the time that the flow of oil was brought into partial subjection (which was on Friday evening) up to this time, upwards of 2,000 barrels have been taken away, and more than this quantity has been lost. The tanks are always overflowing, although they are constantly drawing it off into barrels, which proves that even although the yield is subdued to about one-fourth of its natural proportions by means of the three-fourth inch tube, that if additional tanks were provided the main pipe would feed them. You can easily estimate the quantity of oil that could be obtained from this well if the main feeder were three inches in the bore instead of being less than three quarters of an inch. The quantity is prodigious.

"The oil is sold here at two and a half cents a gallon, but in reality it is worth nearly ten cents in the crude state. Its colour is a beautiful dark bottle green. Its specific gravity is 42, and experienced men pronounced it a superior quality to the oil taken from the surrounding wells. Owing to the want of barrels and other conveniences respecting its removal, only some 670 barrels are taken from the well each day. They are preparing additional reservoirs for receiving it, and in a few days, it is to be hoped, this loss will be obviated.

"How long this spontaneous flow of oil will continue it is impossible to tell, but it shows no sign of diminution at present. There was no surface oil at any time in this well. That is to say, no indication of oil was manifest until the rock was drilled upwards of 100 feet.

"The next best well in this region is situated on lot 19 in the second concession, on the north end of the lot. It yields less than 30 barrels per day. There have been few, comparatively, who have drilled into the rock, and it is my opinion from the information I have received here, that all along this line rock oil will be found.

"Oil Springs is quite a village. There have been upwards of 100 houses erected here since last spring. Owing to the Southern rebellion, much less has been done here this last six months than would have been done had it not occurred. We