

the American, as might be expected from its greater specific gravity. An idea of the comparative value of the Enniskillen petroleum may be obtained by comparing it with Young's patent paraffine oil, of which not less than 8,000,000 gallons are yearly manufactured, chiefly from the distillation of the Boghead coal. Canadian petroleum is twenty-five per cent. (25 p. c.) better adapted for illuminating purposes than the crude oil from the Boghead coal. The royalty on each gallon of Boghead coal oil is 3d.; the price at which one gallon of the Enniskillen petroleum can be furnished is 2½c., or about equal to the royalty on the Boghead coal oil paid to Mr. Young for his patent, without the addition of the price of the coal, and all the expenses of the distillation of the oil. Under the disguised name of Belmontine oil, a vast quantity of petroleum illuminating oil is made in England from crude Burmese petroleum. It pays the enterprising proprietors of the Belmontine works to fetch from the far distant coast of Burmah the crude petroleum of that country. Will it not richly pay them to fetch the crude petroleum of Enniskillen? No doubt if they knew of the supply, and believed in its constancy, they would gladly seize the opportunities presented to them.

Its Use as a Burning Fluid,

The extraordinary cheapness of petroleum as an illuminator is too well known in Canada to require any special notice. Notwithstanding the comparative dearness in this country and the United States of the chemicals (sulphuric acid and alkalies) which are required to purify, deodorize, and fit it for burning in lamps, yet it is, at 45c. a gallon, incomparably the cheapest illuminator which has yet been manufactured; and it threatens, for domestic purposes, to drive all other means of illumination out of the field. But in Britain, France and Germany, where acid and alkalies are abundant and cheap, and where all the by-products—such as benzole, tar, &c.—can be utilized with profit, the preparation of purified petroleum can be effected at so much cheaper a rate than on this continent as to nearly make up the difference in the cost of the raw material which freight and insurance would add to it. We may then confidently look for the gradual introduction of petroleum as an illuminator throughout Britain and a large part of the continent of Europe, in rural districts where gas is not accessible.

The distillation of bituminous shales for burning purposes has long been practiced in France on a very extensive scale; as also the distillation of coal for the same object in the United States. Petroleum has arrested the production of coal oil or kerosene on this continent; it will soon arrest,

if proper steps are taken, the production of shale oil in France and Germany. One ton of cannel coal produces from 50 to 100 gallons of crude coal oil;—the flowing wells in Enniskillen could yield, if they were allowed to pour forth their contents *ad libitum*, as much oil in 24 hours, at a nominal cost, as the distillation of 1,000 tons of cannel coal could be made to produce. The production of the valley of Bear Creek, in the Township of Enniskillen, is equal to 10,000 barrels a day if means of storage were in existence. In Northern Germany coal oils are very largely used for street illumination, on the railroads and most exposed localities. They are largely manufactured in Hamburg; but if crude petroleum were laid down in that city, at the cost at which it can be supplied from the Canada wells, freight, insurance and profit added, the manufacture of coal oils would cease. In Saxony and in Prussia the same results would follow; in order to obtain a cheap illuminator the bituminous shale oil works so common in those countries would be soon abandoned; for it must be borne in mind that such manufactures in Europe yield but small profits, even with all the skill and science of the German and French practical chemists.—The poor shales are cheap, the coals dear, and it is of the utmost importance to notice that, if crude petroleum were imported it would not occasion any material change in machinery, for the by-products are the chief sources of profit in Europe, all of which, in common with coal, petroleum is capable of producing. These products are—1st. Naphtha; used as a solvent for Caoutchouc, and different resins and gums. 2. Benzole; a valuable substitute for alcohol, ether and turpentine, it dissolves fats, and is largely used in woollen, cotton and silk manufactures; it restores faded colors; removes tar, paint, oils, grease and resin, and is the source of numerous dyes. 3. Illuminating oil; respecting which nothing further need be said. 4. Heavy lubricating oils; which, when mixed with a certain proportion of other fatty materials, are much used in Europe. 5. Naphthaline. 6. Tar, which, when mixed with a certain proportion of crude oil, is used for the manufacture of gas, or when mixed with saw-dust, as stated hereafter, for fuel. 7. Refuse carbon; suitable for fuel, as shewn in the following paragraphs.

Its Use in the Manufacture of Gas.

Where coal is abundant and cheap it is not probable that in towns or cities gas manufactured from petroleum will be a successful competitor for public favour, notwithstanding its superior illuminating power and the agreeable softness of the light which it produces. The manufacture of gas from coal has attained such excellence that where the material can be procured at 6 shillings sterling