

whilst during its passage through the sandy soil, it becomes purer in lime.

3. That the calcareous soil absorbed much more potash than the sandy soil.

4. That the chloride of sodium, in conformity with the results of other observers, was not absorbed to any extent by either soil.

5. That both soils removed from the liquid most of the phosphoric acid.

6. That the liquid, in passing through the calcareous soil, becomes poorer; and, on the other hand, in passing through the sandy soil, becomes richer in soluble silica.

#### Petroleum.

Up to the 13th of last April no less than 7,402,339 gallons of petroleum had been shipped from New York to foreign ports. London and Liverpool are the two great receiving ports of American petroleum, over 1,000,000 gallons having been sent to each of these places at the date stated. In addition to the above, 3,353,608 gallons have been shipped from Portland, Boston, Philadelphia, and Baltimore, making a total of 10,755,947 gallons. The petroleum trade with foreign nations has already attained to gigantic proportions.

#### Petroleum Exports.

Since the first of January last, up to the 1st inst., no less than 10,110,810 gallons of petroleum have been exported from New York to foreign ports, against 2,920,089 in 1862. In addition to the above, 5,180,762 were expected from Baltimore, Philadelphia, Boston and Portland, making a grand total of 15,291,572 gallons. Our petroleum trade is one of the wonders of modern commerce—fifteen and a quarter millions of gallons sent abroad in five months, and in all likelihood as great a quantity has been consumed at home! The growth of the foreign demand has been unprecedented in rapidity, as only one million of gallons were exported in 1861. At present the stock of petroleum in the oil region is much less than it was at this period last year, and the yield of the wells is said to be less. The amount is about 5,000 barrels—200,000 gallons—per day. At 25 cents per gallon for crude oil, the value of the above quantity, exported this year, amounts to \$3,822,893. —*American Paper.*

#### English Soil.

Conclusive proofs can be given, showing that so far from being in a progressive state of exhaustion, the productiveness of the soils of England has wonderfully increased during the last fifty years; and that the deplorable but hitherto unavoidable loss which the sanitary laws of a civilized country necessitate, is perfectly insignificant in comparison with the immense amount of mineral riches in the great majority of soils, and with the abundant restoration of fertilizing matters to naturally poor land.

#### Silkworms Fed upon Oak-leaves.

An interesting communication from M. Guerin-Menneville, on "Silk Culture," was read at the last meeting of the French Academy. This

gentleman has succeeded in habituating silkworms, hatched from Japanese eggs (*B. yama-mai*), to feed on oak-leaves, and his paper was accompanied by some cocoons produced by worms so fed. He expressed hopes that the discovery might lead to the extension of silk culture in France, and we may add that it affords some hope that it might be profitably carried on in England.

#### Discovery of an Ancient Town in France.

The French papers contain a curious account of a town, the remains of which have lately been discovered, imbedded in the sand at the mouth of the Garonne. A church, supposed to be of the date of the decadence of the Roman Empire, has already been laid bare, and numerous capitals and ecclesiastical architectural ornaments have been brought to light. The district, like our Perranzaduloe, or *Perran in Sabulo*, on the Cornish coast, is desolated by sand which has accumulated, in some localities, in vast heaps.

#### Petroleum in Bulk.

We learn that Mr. D. L. Miller, jr., of Philadelphia, is loading a cargo of crude petroleum, in bulk, for Liverpool, which is the first ever carried in that way. The vessel is fitted up with an exclusive view to carrying oil in bulk (of which it is expected she will take 50,000 gallons), and provided with twelve immense iron tanks, most of which are divided into two compartments, the lower of which may be filled and secured first. The barrels of oil are emptied directly in the tanks, and when unloaded it is pumped out. Of course the peculiar construction of the vessel unfits her for any other than the petroleum trade, and necessitates her returning from Liverpool in ballast, for which the tanks are partly filled with water. We understand that in case this experiment proves successful, it is the intention to build other and larger vessels, on the same plan; but the fact that they cannot carry return freight will, in our judgment, render them unprofitable.—*Scientific American.*

#### Petroleum for preserving Wood.

The oil wells near Prome, in Burmah, have been in use from time immemorial. Wood both for ship-building and house-building, is invariably saturated or coated with the product of those wells. The result is entire immunity from decay, and the ravages of the white ants that in that country are generally destructive. M. Crepin, a Belgian Government engineer, who has tried experiments upon the relative advantages of creosote and sulphate of copper for the preservation of timber in marine constructions from the attacks of worms, &c., says that creosoting is the only process he has found to succeed for this purpose. He states that sulphate of copper affords no protection whatever against the action of salt water and marine insects. The Belgian Government now require that all wood sleepers used in the State railways should be creosoted; and the Government of Holland have also made the same resolution; and upwards of 300,000 sleepers per annum are now being creosoted by the Dutch Government, and more by the Belgian Government.