

PETROLEUM—OIL WELLS OF SMITH'S FERRY—ALLEGHANY OIL BOATS.

Number I.

A new branch of national industry has sprung up within the past two years, which promises to become both great and profitable—we mean that of our native petroleum, or rock oil. The export trade in this substance has already attained to vast dimensions. From the first of January, last to the 23d of June, no less than 2,961,317 gallons were exported from New York; 1,095,826 from Philadelphia; 190,512 from Boston, and 36,530 from Baltimore, making a total of 4,284,185 gallons. These native oils were forwarded to almost every country on the face of the globe, but England is our best single customer, as about two million of gallons were sent to British ports. One merchant in Liverpool, who has imported largely, states that Great Britain alone can absorb one million barrels (42,000,000 gallons) per annum. When we reflect that this business is but in its infancy, the large quantity which has already been exported is perfectly surprising. It is believed that the United States and Canada possess natural supplies of petroleum to furnish the rest of the world for ages to come, with sufficient quantities of oil to yield all the artificial light required, and perhaps much of the fuel also—as it can, and will, undoubtedly, yet be much used for the latter purpose.

The petroleum region embraces a vast extent of our continent. It is known to extend from the southern extremity of the Ohio valley north to the Georgian Bay in Canada West, and from the Alleghanies east in Pennsylvania to the western limits of the bituminous coal fields. It has been found in Virginia, Maryland, Pennsylvania, New York, Ohio, Michigan, Kentucky, Tennessee, Kansas, Illinois, Texas, and in California. Oil wells, however, have been sunk in but a few localities as yet, and in some of these, the original wells have been abandoned on account of new and more copious supplies being obtained at less expense in other sections. In proceeding up the banks of the Ohio river, a derrick about twelve feet in height, and a small shanty beside it, with a rusty stove pipe stuck in its roof, is occasionally noticed. These are deserted pumping oil wells, and at Smith's Ferry, about forty-one miles below Pittsburgh, there is a whole cluster of such wells, all stopped but two. The pumping apparatus of each is very simple. It consists of a small horizontal engine connected by its pitman to a crank, which gives motion to a vibrating wooden beam, one end of which is attached to the vertical pump rod in the well, which thereby receives a reciprocating motion that operates the pump plunger and lifts the oil. A rude derrick, a rough shanty, a small steam engine, a pump, a few barrels and tubs, constitute the apparatus and utensils required for operating any of these oil wells. Such wells may be seen on both sides of the Ohio and Alleghany rivers, and occasionally on some of the little islands. They were mostly sunk before the flowing deep petroleum wells in the Oil Creek region, Pa., were discovered. Bore anywhere adjacent to the Ohio river for a few hundred feet, and earth oil is reached. We have noticed a coat of this oil covering the surface of the river for a distance of seventy miles. When the sunbeams shine upon the ripples it reflects the prismatic hues in beautiful green, crimson and orange. It no doubt assists to lubricate the bottoms of the quaint looking flat boats which run on the Alleghany, Monongahela and the Ohio rivers. The pumping wells are generally suspended at present because the oil cannot be raised from them by steam power so cheaply as it can be obtained from flowing wells. But the oil obtained from the pumping wells at Smith's Ferry is of no common quality. It is almost as clear as refined petroleum, and it can be burned in lamps exactly as it is raised from the well. We have seen a mixture of one half of this oil and an equal quantity of crude petroleum burn very well in a lamp. It resembled common whale oil. It is heavier than the refined petroleum, and is safe to carry and use. Only a few barrels per day, however, are obtained from single wells, or perhaps they might be operated with profit.

The petroleum wharf at Pittsburgh on the Alleghany river, is a greasy sight of an uncommon character. It is covered for half a mile with barrels of petroleum that have come down the river in boats

from the Oil Creek region. A large number of flat boats are also generally lying at the wharf, some of which are discharging their green oily cargoes. These vessels are queer looking structures, being simply large boxes made of plank, and divided into cells forming tanks, which are made as tight as practicable. They are filled at the oil wells, then closed, and about from twelve to twenty of them are formed into a fleet and floated down the Alleghany river. Some boats carry the petroleum in barrels, but a large number are simply floating oil boxes. This part of Pittsburgh is redolent with the exquisite odor of Pennsylvanian subterranean Eue de Cologne. Refined petroleum may be obtained in Pittsburgh in large quantities for sixteen cents and upward per gallon. This burning fluid affords the cheapest known artificial light, and its use has spread from Maine to California, and it is now almost exclusively burned away up in the Lake Superior regions. While it can be obtained at such low prices it will be used as an agent of artificial illumination to the exclusion of all the more expensive agents of light, with the exception of coal gas.

VALUABLE RECEIPTS.

BLACK JAPANING.—Black grounds for japans may be made by mixing ivory black with shellac varnish, or for coarse work, lamp black and the top coating of common seedlac varnish. A common black japan may be made by painting a piece of work with drying oil and putting said work into an oven not too hot, then gradually raising the heat and keeping it up for a long time, so as not to burn the oil and make it blister.

TORTOISE SHELL JAPAN.—This varnish is prepared by taking of good linseed oil one gallon and of umber half a pound, and boiling them together until the oil becomes very brown and thick, when they are strained through a cloth and boiled again until the composition is about the consistence of pitch, when it is fit for use. Having prepared this varnish, clean well the vessel that is to be varnished (japaned) and then lay vermilion mixed with shellac varnish, or with drying oil diluted with good turpentine, very thinly on the places intended to imitate the clear parts of the tortoise shell. When the vermilion is dry brush over the whole with the above umber varnish diluted to a due consistence with turpentine, and when it is set and firm, it must be put into an oven and undergo a strong heat for a long time. This is the ground for those beautiful tea boards which are so much admired. The work is all the better to be finished in an annealing oven.

PAINTING JAPAN WORK.—The colors to be painted are tempered generally in oil, which should have at least one fourth of its weight of gumsanderac or mastic dissolved in it, and it should be well diluted with turpentine, that the colors may be laid on thin and evenly. In some instances it does well to put on water colors or grounds of gold, which a skillful hand can do and manage so as to make the work appear as if it were embossed. These water colors are best prepared by means of isinglass size mixed with honey or sugar candy. These colors when laid on must receive a number of upper coats of the varnish above described.

CEMENT FOR JOINTS OF PETROLEUM STILLS.—Take 6 lbs. graphite (black lead), 3 lbs. of dry slacked lime, 8 lbs. of the sulphate of barytes and 3 lbs. of boiled linseed oil, and mix them thoroughly together. The solid materials must be reduced to fine powder before being stirred among the linseed oil. If the above quantity of oil is not sufficient for making the cement sufficiently thin add more until the proper consistency is obtained.

Linseed meal cake reduced to powder and mixed with water so as to make it into a paste makes a good lute for stills which are not subjected to a temperature above 260° Fah.

TO CURE WHITE SHEEP SKINS WITH THE WOOL ON.—First soak sheep skins in cold water to soften them, then place them on an inclined board, scrape all the fleshy parts from the inside and trim the edges with a knife. After this rinse them in cold water, then wash them in strong soap suds and rinse them again in water. While still wet they are to be steeped for about six hours in a strong solution of alum, then dripped and stretched on frames, and dried in the

open air, but not exposed to the sun. Some persons sprinkle alum in powder over the fleshy side of the skins instead of soaking them in the alum liquor.

CEMENT FOR LEAKY HOUSE ROOFS.—Take four pounds of rosin, one pint of linseed oil, two ounces of red lead, and stir in pulverized sand until the proper consistency is secured, and apply it warm. This cement becomes hard and yet possesses considerable elasticity and it is durable and water proof.

CLEAR GUTTA PERCHA SOLUTION.—Cut gutta percha into thin strips and put it in a glass bottle, and add as much chloroform as makes a thick paste. This paste is then placed in very hot water, and kneaded with the fingers. After considerable manipulation the gutta percha loses much of its color, and if this process is repeated, becomes very nearly colorless, having only a pale straw tint. A chloroform solution may then be made of any strength, which is useful for many purposes—when thin, as a substitute for court plaster, and when thick, as a stopping for decayed teeth.

TO REMOVE RESIN SPOTS FROM SILK.—Many silk dresses receive stains from turpentine being spilled upon them. These stains are due to the resin which is held in solution by the turpentine, and which remains in the silk after the volatile or spirituous portion has evaporated. Alcohol applied to the stains with a clean sponge will remove the spots, because alcohol dissolves the resin. The silk stains should be moistened with the alcohol first, and allowed to remain soaked for a few minutes. Fresh alcohol is then applied with the sponge, and with a slight rubbing motion. It is then wiped as dry as possible and afterward permitted to dry perfectly in the open air. Alcohol also removes grease and oil spots from silk and woolen dresses, but oil generally leaves a yellow stain behind. A mixture of alcohol and the refined light petroleum, called benzene, is excellent for cleaning light kid gloves, ribbons and silks. It is applied with a clean sponge. Persons who apply these liquids and mixtures to cleaning silks, gloves, &c., must be careful to do so in an apartment where there is neither fire nor lamp burning, under the penalty of an explosion.

Packing Fruits for Long Distances.

A correspondent of the *Cottage Gardner* describes the following method for packing fresh fruits of various kinds. This system he has practiced with success for twenty years, and he has sent fruit from distances varying from fifty to five hundred miles:—

Take a box, soft paper and sweet bran. A box is chosen in size according to the quantity to be sent. A layer of bran is put on the bottom, then each bunch of grapes is held by the hand over a sheet of paper; the four corners of the paper are brought up to the stalk and nicely secured; then laid on its side in the box, and so on until the first layer is finished. Then, fill the whole over with bran, and give the box a gentle shake as you proceed. Begin the second layer as the first, and so on until the box is completed. Thus with neat hands the bloom is preserved, and may be sent to any distance; but with clumsy hands, quite the contrary, and often an entire failure, as the putting and taking out of the box are the most important points to be observed. I have invariably packed sixty or eighty bunches of grapes, and fifty or sixty dozens of peaches or apricots in one box, and received letters from persons who said they had arrived as safe as if they had been taken from the trees that morning.

A Railroad Car Built in one Day.

An English paper states that a railway car was built complete, filled with goods for the great Exhibition, and conveyed from Manchester to London in twenty-four hours. This feat was performed at the works of Mr. Ashbury, Manchester, and several distinguished persons were present to witness the operations. At 7 o'clock, A. M., the iron to be used was in the pig and the timber in logs. In 43 minutes the latter was cut. The planing, mortising, &c., was finished a few minutes after 10 o'clock, when the smiths began. Their work ended at 2.45 P. M. At one o'clock the wrought-iron work, such as axles, tires, &c., was done, and at 6.16 P. M., this had left the planing shop finished. The car was completed at 6.35 P. M., and half an hour subsequently it started for the great metropolis with a load of articles for the Exhibition.