

MINERAL OILS.

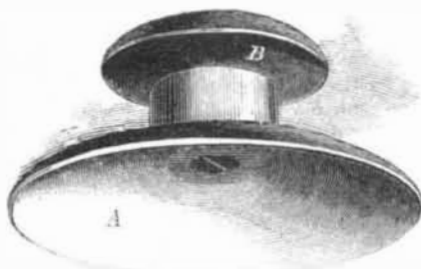
The manufactures of coal-oils have increased with such rapidity that their development appears to be something like a phenomenon. About ten years ago, nearly all the oils that were employed in artificial illumination, were obtained from monsters of "the great deep;" and our hardy whalers had made the distant Pacific ocean and the Frozen seas of the North their aquatic hunting grounds. But with every recurring year their dangers seemed to increase, while their products as manifestly decreased, and the supply was becoming so limited that general apprehensions were excited as to obtaining a sufficient quantity from any other source. It is true that oils from oleaginous seeds, resin and the fat of domestic animals were well known and to a limited extent used; and although it was thought by some persons that they might be increased to a boundless extent, the feeling was predominant that unless some new discovery was made, a deficiency of oil would certainly be felt. It was at this juncture that a discovery was announced which met the public requirements, and which, for novelty and usefulness, has few if any equals. This invention was nothing less than producing oil from bottled-up sunlight—the distillation of it from the submerged forests of former ages, which, in the shape of coal, had been buried in the bosom of the earth for thousands of years. The light of the sun was necessary for the antediluvian coal-vegetation to condense carbon and hydrogen; hence it is truly this absorbed light of ancient days which now gives forth its cheering beams from our coal-oil lamps!

The first account which we have of this oil, is contained in the patent of J. Young, published on page 186, Vol. XIV., SCIENTIFIC AMERICAN; and although it has been said, that such oils were previously known, we have searched in vain for a record of the fact. It is now only nine years since this discovery was made known to the world, and at that time (1850), not a pint of the oil had been manufactured in our country, nor was there any made for four years afterwards, so far as we have been able to learn. What is the fact now? More oils are made from coals in one week, in our country, than ever was obtained by our whale-fishers in the best year's fishing they ever enjoyed. At present there are large oil manufactories in the cannel-coal districts of Virginia, Kentucky and Ohio, and a great quantity is now made in the neighborhood of this city. The oldest factory of this character in this region, is the kerosene-works near the eastern district of Brooklyn, on Long Island. It is certainly a wonderful place, both on account of the original method of distilling the coals, and the vast extent of the premises. Three years ago, a few pounds of coal, according to the common methods, were here distilled in the old fashioned retorts, now there have been erected several rows of retorts, each of which contains 25 tons of coal and this amount is worked off as a regular charge at one operation. The principle of action embraced in these retorts is totally different from all others; it is exactly the same as that of smoking a pipe of tobacco, and on this account it is called the "meersehaum." Each of these retorts is built of brick, in the form of a huge pipe-bowl and when the coal is packed in, the fire is kindled on the top with anthracite. The draft of the heated products down through the coal is effected by steam power, and the oil vapors that are carried off below are condensed into crude-oil and pass from a conducting pipe into a tank. The process is a strange one indeed; here steam is applied to a new purpose certainly—that of "smoker" on a grand scale for the production of oil for our lamps. The operations are under perfect regulation to prevent the cannel coal undergoing combustion. At these works there is one of such retorts now in the course of erection, which will be able to smoke 100 tons of coal at one operation and there is no reason that can be urged against applying the principle on a still larger scale. By the middle of next September arrangements will be completed for making 5000 gallons of kerosene-oil per day at these works or over 1,500,000 gallons per annum; and from this single fact the public will be able to form some idea of our great and growing oil manufacture.

A SELF-SUPPORTING BRACKET.

Every one knows how the principle of atmospheric pressure is illustrated by a toy called a sucker, which the boys make with a piece of wet leather and a string passed through the center. The principle has just been applied, in an analogous manner, as a means of fixing a piece of

metal in a moment to a wall or ceiling, or the glass of a window. "Lavater's Patent Pneumatic Bracket" is a short brass tube, having at one end sockets in which may be inserted any light frame branches or hooks, and terminating at the other extremity in a trumpet-like expansion, which is covered with a disk of india-rubber. In the center of the disk is attached a smaller one of metal, which can be drawn within the tube by a screw proceeding from a cap that fits over the smaller end of the tube. When the screw is relaxed, the india-rubber disk is flat. Apply it then to the wall, after moistening it with the breath, turn the screw, and the metallic disk, carrying the india-rubber with it, recedes from the wall, and thus causes a vacuum capable of sustaining a weight in proportion to the area of the trumpet-like expansion. The bracket may be detached in a moment, and, it is said, will leave no mark behind it. By means similar to this, any number of brass rods may be secured to a window to hold light articles. This is said to be an English invention, and we copy it from the London Builder. The



idea, however, is American, as the accompanying engraving will show. A is a disk of rubber with a handle of wood, B, the whole forming a most convenient little article to have upon the table, as with it drawers without handles can be opened by simply pressing it against the drawer, and then pulling the drawer open. This little device has been in use here for some years, and it prevents the tearing of clothes, knocking of knees and other inconveniences that arise from the handles of drawers.

FOREIGN SUMMARY—METALS AND MARKETS.

A huge new iron war-ship, called a "war steam-ram," is now being constructed by the British Admiralty. Its length will be 380 feet, breadth 58; capacity 9000 tons; and its propelling power will be sufficient to drive her at the rate of 16 knots per hour. She is to be built of teak wood covered with iron plates 4½ inches thick, and the armament is to be 35 large Armstrong rifled guns, each having a range of six miles. It is intended, not only to blow other ships to pieces, but to run them down by its superior momentum. Its cost will be \$1,600,000. May it never be required for the purposes that have led to its construction, is our humble wish.

The Great Eastern—once the Leviathan—is being rapidly pushed forward towards completion. The decks are now planked from end to end, three of the masts are up, the machinery is in, and the funnels erected. The grand saloon is in a very forward state, and one of the cabins has been finished. This completed department is what is called a "family cabin" containing bed-room, sitting-room and dressing-room, all of them lofty and well ventilated, and possessing a much greater number of conveniences than could be found in a similar suite on shore. The other cabins are also in an exceedingly forward state, and as an immense number of men are kept incessantly at work, there is every prospect of the ship being ready for her trial trip on the 4th of next month. If that trip is successful, she will soon afterwards cross the Atlantic. Her immense proportions now fill the eye more fully, and by the side of other first-class ships in the Thames, she appears almost like a mountain among mole-hills.

There are 2,046 cotton factories in England, of which 1,480 are in Lancashire; Manchester being the metropolis of this business. The cotton manufacture of Scotland is confined to two counties—Lanarkshire and Renfrewshire, and it has been nearly stationary for the past two years; in Ireland, where it is confined to Antrim, it has lately fallen off, but in England it has greatly extended.

A railroad bridge of great strength and beauty, which has been two years in course of construction over the Nile at Kaffr Azzya, (Egypt), has just been completed.

It is composed of iron and was built by Messrs. R. Stephenson & Co., of Newcastle, England.

PRICES OF FOREIGN METALS, JULY 1.

	£ s. d.		£ s. d.
Staff bar-iron, per tun.	8 00 00	Swedish steel, in faggot	21 00 00
Common English	7 00 00	Copper in tile	107 10 00
Single sheet	9 10 00	British pig lead	22 15 00
Double sheet	11 00 00	Tin, block	129 00 00
Round nail rod	8 00 00	Bar	130 00 00
Square nail rod	9 00 00	Banca	134 00 00
Hoop iron	9 00 00	Plates (per box)	1 19 00
Welsh iron rails	5 15 00	Spelter	15 00 00
Staffordshire pig-iron	3 10 00	Zinc, in sheets	29 10 00
Scotch pig-iron	3 8 00	Copper sheathing, per lb	00 1 00
Swedish iron	13 00 00	Brass sheathing	00 00 10
Swedish steel	20 10 00		

English tin was more enquired after since our last, and lead was in good demand; the demand for tin plates for America was much improved, but there were very few orders for rails.

Orders for the best qualities of malleable iron, from America, are very good at present; boiler-plates, sheet bars, and hoops are in greatest request.

The French iron trade is in a very depressed condition; the prices in markets are stated to be lower than the first cost of making the metal. This depreciation in the prices is attributed to the war in which France is engaged with Austria.

For these commercial statistics we are indebted to the London Engineer and Mechanics' Magazine.

New York Markets.

COAL.—Foreign cannel, \$3; Anthracite, from \$4.50, \$4.75, to \$5. Cotton.—The market has been quiet, with a fall of one-fourth of a cent from last week's prices. Good ordinary Upland, Florida and Mobile, 10½¢; Texas, 10½¢. Middling fair from \$12½¢ to 13½¢.

COPPER.—Lake Superior ingots at 21c. per lb. for cash. Copper belts, 30c. Sheathing, 20c.

FLOUR.—Genesee extra brands, \$6.75 a \$8.75; Ohio choice, \$7.70 a \$8; common brands from \$5 up to \$6.70.

HEMP.—American undressed, \$140 a \$150; dressed from \$190 a \$210. Jute, \$95 a \$90. Italian scarce. Russian clean, \$210 a \$215. Manilla 6½¢, a 6½¢ per lb.

IRON.—Anthracite pig, \$21, \$22 and \$23 per tun; Swedish bar, \$85 a \$86, and English refined, \$52.50 a \$54.50. Russian sheet, first quality, 10½¢ a 11½¢ per lb.

LEAD.—Galena, \$5.75 per 100 lbs.; German and English refined, \$5.70.

LEATHER.—Oak slaughter, light, 34c. a 36c. per lb.; Oak, heavy, 33c. a 35c.; Oak, crop, 40c. a 42c.; Hemlock, middle, 25c. a 26c.; Hemlock, light, 25c. a 25½¢; Hemlock, heavy, 23½¢ a 24½¢; Patent enameled, 18c. a 17c. per foot, light. Sheep, morocco finish, \$7.50 a \$8.50 per dozen. But a moderate business in oak and hemlock.

NAILES.—Cut are quiet but steady at 3½¢, a 3½¢ per lb. American clinch sell in lots, as wanted, at 5c. a 6c.; wrought foreign, 3c. a 3½¢; American horseshoe, 15c. a 20c.

OILS.—Lined oil, 61c. a 63c. per gallon; whale, bleached, 55c. a 57c. a 63; sperm, crude, \$1.30, \$1.35, and \$1.40; lard oil, 36c. a 34c.; refined rosin, 30c. a 40c.; coal, refined, \$1.12 a \$1.25; camphene, 44c. a 46c.

RESIN.—Common, \$1.82½ per 310 lbs. bbl.; white, \$3.75 a \$4.50 per 280 lbs.

STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5½¢; American blister, 4½¢ a 5½¢.

TIN.—Banca, 31½¢ per lb. Plates per box, \$7.12 a \$9, according to quality—a decline from last week.

ZINC.—Sheets, at 7c. a 7½¢ per lb. The foregoing rates indicate the state of the New York markets up to July 14.

The demand for cotton has somewhat improved, especially for the higher qualities.

The prices of flour are very irregular; every arrival from Europe seems to denote a decline in prices.

Refined copper is in but moderate request. Lead is somewhat stiffer.

Mr. Charles Minot, formerly Superintendent of the New York and Erie Railroad, having associated several gentlemen with him, has submitted a proposition to the company which manages this railroad, to lease it for a term of ten years, agreeing to pay for it, \$1,500,000, the first year, \$1,600,000, the second, \$1,700,000, the third, and so on with an annual increase for ten years. We hope this proposition will meet with that attention which it deserves, as an entire change in the management of this railroad is imperatively demanded.

The Mississippi Central Railroad which is 200 miles long, will soon be completed, and will then afford continuous railroad communication between this city and New Orleans. It is stated that it will be built and equipped at a cost not exceeding \$20,000 per mile. If well managed this road should be one of the most profitable in the Union.

The Boston trade sales (alluded to by us in a former number) have commenced, and are being continued as we pen these lines. An immense crowd of buyers were present on the 14th inst. and 15,000 packages of dry goods valued at 1,500,000, were sold. The bidding was spirited, and it is stated "the merchants appeared satisfied." On the same day 3000 cases of boots and shoes were disposed of, also a great quantity of Horace Day's india-rubber goods.