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RAIL-ROAD NEWS.

Railways and Electric Telegraphs in India.

India, which for thousands of years has remained stationary, in the progress of the world, seems to be, in some degree, waking from the sleep of ages. A railway is being built from Calcutta, running to the large towns and cities of the northwest; and it is expected that, within a few years, it will be extended far up even to Lahore, a distance of 1,000 or 1,200 miles. In the region of Bombay, also, within a few months, a portion of a railway has been so far completed that a locomotive has been put on and set at work. The electric telegraph, which, with steam, is revolutionizing the world, is also about to be extensively adopted. Lines are projected from Calcutta to Madras, Bombay, Agra, Lahore, &c. Dr. O'Shaughnessy, who has successfully established a line of telegraph from Calcutta to Kedgeree, has been deputed by Lord Dalhousie, Governor-General of India to visit the Court of Directors of the East India Company, in London, in order to report his success, and to secure the making and carrying out a plan for a line throughout all India, as above mentioned. He will visit the United States to see the operation of the magnetic telegraph. It is expected that he will return within a year.

Canada Railroads.

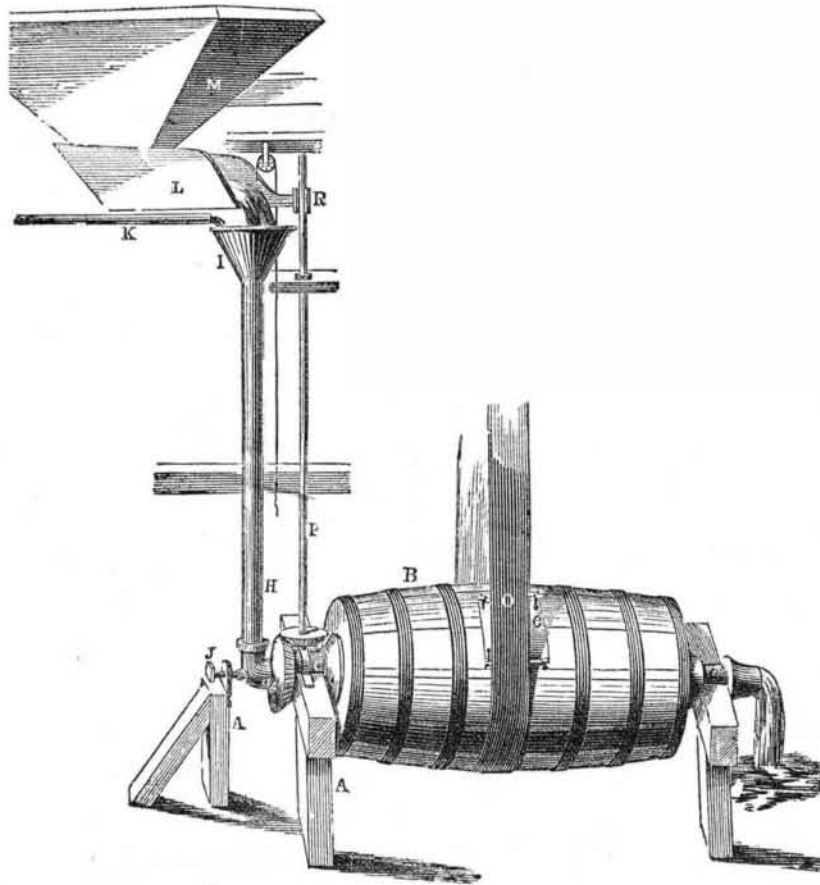
The Canadian Government is about to commence a singular project (as we view it), it being nothing less than a railroad from Quebec to Hudson's Bay, a distance of 600 miles. What in all the world is to be the traffic, we cannot divine. The Hudson Bay lies away up north, far beyond the bounds of habitation and civilization, and what our Canadian neighbors can find there for the support and maintenance of such a long line, is more than we can conjecture. It is so cold up at Hudson Bay, the winters are so long, and the snows so deep, that the railroad must cease operations during a great part of the year. Is it expected that the timber regions of the north are to supply traffic enough for this road; or is Hudson Bay so prolific of fowl, fish, and peltries that a large commerce in these will be established and maintained. It is a prevalent opinion, on this side of the Canadian line, that excepting a strip of about 60 or 70 miles wide along the frontier, all north of that, in Canada, will never be peopled, owing to the severity of the winter seasons there.

It is proposed to build an air-line railroad from Norfolk, Va., along the eastern shore of Maryland, through the States of Delaware and New Jersey, to the town of Freehold, there to connect with the Freehold and Keyport Railroad. Steamboats are to connect the various termini across the Chesapeake, Delaware, and Raritan Bays, and thus passengers will be conveyed to New York from Norfolk, from sunrise to sunset.

A beautiful car, with Paine's Ventilators attached, is being constructed at Hartford, for the Hudson River Railroad.

BARCLAY'S GOLD WASHER AND AMALGAMATOR.

Figure 1.

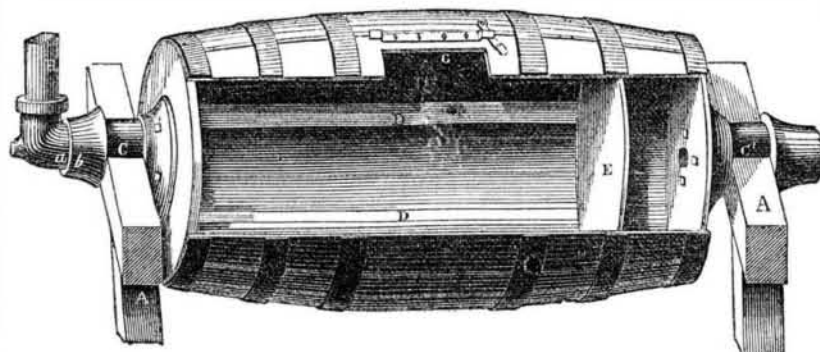


The annexed engravings are views of improvements on machinery for washing and amalgamating gold dust, invented by Alexander Barclay, of Newark, N. J., and for which a patent was granted on the 22nd of last June.

Figure 1 is a side elevation, and fig. 2 is a vertical longitudinal section. The same letters refer to like parts. The nature of the invention consists in the employment of a hollow cylinder, with brackets placed longitudinally around its inner periphery, said brackets extending from the feed end of the cylinder to within one-fourth of its length from the discharge end, and connected with an inner head or partition, between the outer periphery of the cylinder, an annular space is left through which the water and earthy matter pass to the discharge pipe, while a fresh supply is being poured into the cylinder through a feed pipe having a funnel at its top. A is the frame for supporting the cylinder and working ma-

chinery. B is the revolving cylinder, the interior of which is shown in fig. 2, G being the door, and D D the brackets. The journals, C C' of the cylinder, B, are hollow, one is the discharge and the other is the entrance pipe. H is the feed pipe connected to the hollow journal of the cylinder by a hollow elbow, a b, which is tightened by a screw, J. I is the funnel; K is the water pipe; L is the feeder, and M, is the hopper, in which the golden earthy matters are placed. The feeder, L, is hung upon swinging straps, to allow it to shake down the golden matters in pipe, H. This feeder receives its shaking motion by cams, R, on a vertical shaft, P, which is revolved by bevel gearing below. The cylinder is revolved by a belt, O, or by any of the known ways. The brackets, D D, are secured to the inner periphery of the cylinder, and to the inner head or partition, E, fig. 2. This partition is of less diameter than the cylinder head; the object of this is to form an annular

Figure 2.



space for the passage of the earthy matter and water to the discharge pipe, C'.

The objects effected by constructing the cylinder with brackets along the inner periphery, and with an inner head, are these: the brackets serve to agitate the mass thoroughly and separate the gold from the earthy matters, and thereby prepare it for washing and amalgamation. The inner head serves to stop any

central current which might pass from the central feed to the discharge pipe; all the particles, as the cylinder revolves, are compelled to pass to the surface of the inner periphery of the cylinder, when the gold, by its gravity and the centrifugal action of the force applied, is retained; the lighter earthy matters pass off with the water through the annular space between E and the cylinder, and out at the

discharge pipe. To amalgamate the fine gold which is mingled with ground quartz, if mercury be placed in the cylinder, and the pulverized ore fed in by the feed pipe, water being constantly admitted, the brackets, D D, serve as distributors and agitators, to throw the quicksilver so minutely and forcibly among all the particles of the ore, as to cause the gold to unite very quickly with the mercury, while the lighter matters pass out with the water.

The claim is for constructing the hollow cylinder, B, with the brackets and partition, E, for the purpose of washing, separating and amalgamating gold as described.

More information may be obtained by letter addressed to the patentee.

The Oil of Cloves.

The oil of cloves is extracted from the dried flower-buds of the caryophyllus aromaticus. It is colorless, or yellowish, has a strong smell of the cloves and a burning taste. Its specific gravity is 1.061. It is one of the least volatile oils, and the most difficult to distil. At the end of a certain time it deposits a crystalline concrete oil. A similar steareness is obtained by boiling the bruised cloves in alcohol, and letting the solution cool. The crystals thus formed are brilliant, white, grouped in globules, without taste and smell. Oil of cloves has remarkable chemical properties. It dissolves in ether, alcohol, and acetic acid. It does not solidify at a temperature of 4° under 0° F, even when exposed to that cold for several hours. It absorbs chlorine gas, becomes green, then brown, and turns resinous. Nitric acid makes it red, and if heated upon it, converts it into oxalic acid. If mixed by slow degrees with one third of its weight of sulphuric acid, an acid liquor is formed, at whose bottom a resin of a fine purple color is formed. After being washed, this resin becomes hard and brittle. Alcohol dissolves it and takes a red color; and water precipitates it of a blood-red hue. It dissolves also in ether. When we agitate a mixture of strong caustic soda lye and oil of cloves in equal parts, the mass thickens very soon, and forms a solid mass of small crystals. If we then pour water upon it and distil, there passes along with the water, a small quantity of an oil which differs from oil of cloves both in taste and in chemical properties. During the cooling, the liquor left in the retort lets fall a quantity of crystalline needles, which being separated by expression from the alkaline liquid, are almost inodorous, but possess an alkaline taste, joined to the burning taste of oil. These crystals require for their solution from 10 to 12 parts of cold water. Potash lye produces similar effects. Ammoniacal gas transmitted through the oil is absorbed, and makes it thick. The concrete combination thus formed remains solid as long as the phial containing it is corked, but when opened the compound becomes liquid; and these phenomena may be produced as many times as we please. Such combinations are decomposed by acids, and the oil set at liberty has the same taste and smell as at first, but it has a deep red color. The alkalis enable us to detect the presence of other oils, as that of turpentine or sassafras, in that of cloves, because they fix the latter, while the former may be volatilized with water by distilling the mixture. The oil of cloves found in commerce is not pure, but contains a mixture of the tincture of pinks or clove-gilly flowers, whose acrid resin is thereby introduced. It is sometimes sophisticated with other oils.

Salvo for Burns.

Take two parts of olive oil to one of laudanum, to be applied as soon as possible. It has long been used, and never known to fail in giving immediate relief, and heal without leaving a scar.