Scientific American

NEW-YORK, JANUARY 24, 1852.

India Rubber Over-Shoes.

Of all the uses to which India rubber is applied, none is so important and beneficial to the human family as the manufacture of it into over-shoes. A few years ago there was a strong prejudice against these shoes; they were called unhealthy and fit only for enervated men, and weak women. Well, even if they were beneficial to no others, if India rubber shoes had done good to only one individual, this should have blunted the edge of prejudice. But against prejudice they have won their way into sensible and universal favor. It is well known that during rainy weather, but more especially during a thaw, when the ground has been covered with snow, the best leather boots and shoes cannot resist the entrance of moisture. People take cold more readily, we believe, by getting their feet wet and chilled than by any other causes. How many people have we known, who, being compelled by circumstances to walk the streets in sloppy weather, have contracted cold from wet feet, and finally consumption. Weakly people have suffered the most from such ills of human life; to them, especially, India rubber over-shoes is one of the great blessings of physical discovery. They resist moisture,—they are impervious to wet; they keep the feet warm and dry when walking in the wet and cold penetrating snow, and they are therefore one of the greatest comforts. There are thousands of these India rubber over-shoes worn now, for one pair that were worn fifteen years ago. They tend to prolong life, by keeping the feet warm and dry, thus preventing cold and disease, and at the same time, they pour drops of comfort into the cup of life. The great necessities of life—the main essentials to general physical happiness—are plenty of food, warm clothing, and dwellings. What would it signify if every man possessed a mountain of gold, if he could not keep his feet warm? A very poor consolation indeed. We are liable to overlook many things which have been done of late years to benefit the human family, and the claims of India rubber shoes have not been so fully acknowledged as they should be.

Ferry Steamboats and Ice.

Owing to the severity of the cold, during the present winter, the rivers which flow on both sides of our city have been unusually difficult to navigate. Huge fields of floating ice, some of great thickness, have greatly obstructed the regular ferries across both rivers. The breaking of wheel-shafts and smashing of paddles have been very common. It has been a time to try the quality of our ferry steamboats. In crashing through the fields of ice, the paddles have had free scope to batter away on hard, though floating surfaces. Many of the Williamsburgh boats have been laid up, and great delays have taken place, to the manifest injury of passengers, owing to their loss of time by irregularity of the boats. The Fulton ferry boats, to Brooklyn, have dashed away, as if the waters were free, and the channel were still. From personal observation, we are convinced, that if our ferry steamboats were fitted with guards for the paddles, like cow-catchers on our Locomotives, they would have far less trouble with floating ice,—less breakage, &c., and they would thereby save a great deal by having fewer expenses. Larger and more powerful boats would also be a saving to some ferry companies. It is surely evident to any man, that a small boat, with an engine of small power, must be subject to a greater amount of breakage, in such cases, than a large boat. The latter has a far greater power to overcome the resistances presented than the former. We would, therefore, request the attention of our Ferry Companies who have small and inefficient boats, to get larger ones, with more powerful engines. The price of original construction would be more to be sure, but they would save money in the end. We hope they will think of this, and act upon the suggestion; they will be gainers, if they do so, and so will the public.

Lead Poisoning.

The last number of the New Jersey Medical Reporter contains an article from Dr. Cleveland on lead poisoning. He describes the terrible state of a young man who was his patient, and who was covered with boils. Thinking the stomach was the cause of the disease, he took sulphur and cream of tartar in small doses for two or three weeks, without any perceptible result. He then took laxative doses of sulphate of magnesia for a week. It did him no good, he was terribly pained and nearly at death's-door. The doctor inquired into the history and invasion of the disease, and learned that he had been engaged in ornamental painting, and while using lead pigments had labored for hours together in a cold room, after which he would warm himself for some time in another room. He also resided in a new cottage, the internal walls of which were painted with colors mixed with lead. Months had elapsed, but by want of ventilation, the odor had not disappeared. He then suspected that lead was the cause of the disease, which had become complicated by injudicious treatment. The sufferer and his friends did not suspect either the occupation or residence as the cause of the disease, although they ranked high for intelligence and scientific attainments. Before attacking the colic, he pursued a course as for inflammation of the digestive tube. He ordered camphor water, 4 ounces; nitric acid, 4 drops; opium tincture, 1 drachm. Dose—one large spoonful as often as the bowels move. Injections of weak starch water and a little laudanum were given to allay irritation of the rectum.—

Cloths, wet with a strong infusion of mustard, were placed over the stomach for some time; then others wet with brandy and laudanum. Weak brandy sling was also given to keep him from sinking; he enjoyed a quiet night, but not sound sleep. The pain was allayed and the treatment was continued for two days, when the camphor mixture was neglected by the nurse for a few hours and he got worse. He was then ordered sulphate of quininia, 1 grain; cubebs, 2 grains; this was pulverized and given once every 6 hours. He grew better, and in two days was ordered to take elixir vitriol 1 ounce; sulphate of quininia 1 scruple. Dose, 15 drops in sweetened water taken before eating. He soon got better and recovered entirely. Dr. Cleveland thinks that people become sick from the poisonous effects of lead more frequently than is generally supposed. He knows a doctor who has been attacked with it a number of times, and yet has been unable to convince him that *lead* was the cause of his pains. He uses water drawn through a long leaden pipe; croton oil afforded him relief. Dr. Cleveland has administered croton oil successfully in other cases. He is stringent against the use of leaden tubes for water pipes, or lead for cisterns, and cooking utensils. Cases of lead colic are often brought before him.

The Scalpel, by Dr. Dixon, of this city, also contains a searching and able article on lead poisons. He goes against the employment of white lead for painting the interior of buildings, and exhorts people to use white zinc as a substitute. We would also recommend, in the strongest language, the use of the white zinc for inside painting. It is safe and will keep its color much longer than white lead. Lead affects some people more readily than others, but all persons should give it a wide berth when they can. We have known persons who worked every day for months among solutions of litharge, acetate and nitrate of lead, and yet enjoyed good health. Sulphur has been recommended by some as an effectual cure for the lead colic, yet in the foregoing case it appears to have done evil instead of good. The use of the quininia seems to favor the chrono-thermal theory.

Russian Sheet Iron.

Russian sheet iron is manufactured by Mr. W. Devees Wood, at the McKeesport Iron Works, a few miles above Pittsburg, on the Monongahela river. It is described as a beautiful article, with a smoother surface, a finer gloss, and a richer color, than any sheet iron made in Russia.—[Ex.

The process of making Russia sheet-iron has long been kept a secret. A few years ago, a person made application to Mr. Burke, then Commissioner of Patents, to see if he could not be protected in its manufacture, as he had discovered the secret. In England he could have secured a patent; our patent laws afforded no protection to the introduction of a new art. Mr. Burke mentioned in his Report, that it would be well if some protection could be afforded to the introduction of such a useful art; we entertained the same views and do so still. We know nothing about the manufacture of the iron, except what is stated in the above extract, but we have been told frequently that the process was a very simple one when understood.

Paraguay.

Mr. A. E. Hopkins, son of Bishop Hopkins, of Vermont, who has resided for a number of years in South America, delivered a lecture before the American Geographical Society, at the Rooms of the Historical Society, this city, on the evening of the 13th inst. This South American State is contained within the boundaries of the Paraguay and Parana rivers, and an undefined boundary between Brazil. The Rio de la Plata is formed by the junction of the two rivers spoken of; it is very broad and shallow. The river Parana flows for thirty-six leagues through a narrow gorge in the Cordilleras forming a series of the most extraordinary rapids in the world, and which have never been seen by a white man. This river is very suitable for navigation, excepting through these rapids. The Indian barbarians have increased lately upon the once civilized portions of the country; this is owing to domestic dissentions. Paraguay has a population of 1,200,000. Mr. Hopkins explored the Tibicuari river last year; its banks are thickly populated, and it can be navigated by steamboats of light draft for eighty leagues. Paraguay has been a sealed country to the rest of the world for a number of years; this was brought about by the tyrant Dictator Francia, who adopted a policy of non-intercourse with the world. He died in 1840, when the country was opened to foreigners. The country is now shut out from the world, owing to the tyranny of the Dictator Rosas, of Buenos Ayres, who has annihilated all freedom, and has been guilty of every crime. He has twice been supported in his despotic work by France and England. His policy is to shut out the light of civilization and commercial intercourse, and the only communication which he permits Paraguay to have with the sea-board, is a monthly mail carried by an Indian scout. Paraguay produces gold, precious stones, sugar, rice, corn, and coffee equal to Mocha. The forests teem with the most useful woods, and medicinal herbs flourish in luxuriant variety and profusion; it produces fine indigo, and the cochineal insect—the most splendid scarlet dye in the world—is abundant and excellent; the finest gums exude from the trees, and the air is perfumed with the breath of the most fragrant shrubs; the India Rubber Tree is there, and a cedar which yields a glue that is unaffected by the weather when dry. A tree named Lapacho grows there, and it appears to be indestructible, for he saw door sills of it which had been used for two hundred years, and looked as fresh as when laid down, (this tree we recommend to the Directors of the Panama Railroad, for piles). There is a tree named the Palo de Vivora—snake tree—the leaves of which are an infallible cure for the poison of serpents. The Palo de Leche, or milk tree, is a vegetable cow; and the Palo de Borracno, or drunken tree, is a vegetable distillery. The upper classes of Paraguay are brave, stout, hospitable, and intelligent; they have a good feeling towards the people of the United States. The time has come for the United States to extend its supporting influence to the intelligent people of Paraguay, so as to force an open intercourse with it by the freedom of the Rio de la Plata.

Isthmus of Panama.

This is the title of a neat little volume, by Dr. Griswold, lately one of the surgeons of the Panama Railroad Co., and published by Dewitt & Davenport; it contains a graphic account of what he saw there, and is full of interesting information. From the formation of the Isthmus, he says, "it is impossible to resist the conclusion that, at no remote period, the two Americas (North and South) were completely separate, the ocean flowing freely and uninterruptedly between them, and occupying nearly all the space from Tehuantepec to Darien." The Isthmus, Col. Hughes states, was formed by igneous agency—the elevating cause of Geology. The India Rubber Tree grows there, and is tapped for its juice, like the maple with us, which, however, is employed for a far different purpose than making sugar, it being made mostly into shoes. The juice is white, of a creamy consistence, and the shoes are made by dipping moulds into it, the same way as candles. The shoes are blackened by smoke, they being held over a fire after every dip in the juice, and are dipped until they are of the required thickness.

The Panama Railroad is progressing with vigor: the track is laid for about twenty miles, and the cost altogether, for crossing the Isthmus, is about $35.

Steam Boiler Explosions.

General James, Senator from R. I., has introduced a resolution into the Senate, requesting a committe to be appointed to inquire into the causes of boiler explosions, and to provide measures for their prevention. We hope that good will come out of this. Gen. James himself can throw light on the subject. But various reports have been made in Congress on it before, and the number of boiler explosions are no less now than before Congress passed the statute of inspection. There must be something wrong; who will provide a sure remedy? On Tuesday, the 13th inst., the steamboat George Washington, on her way from New Orleans to Cincinnati, exploded her boilers a little way from Grand Gulf, and sixteen persons lost their lives. It is a sad thing to be recording the deaths of so many human beings by steam boiler explosions.—When a few men are condemned to die for crimes, philanthropy is excited to a high pitch, in order to prevent the execution of their sentences. This we do not say is wrong, we like to see a display of mercy instead of wrath, but when we look at the hundreds of lives that are yearly taken by recklessness, through the explosion of steam boilers, we cannot but conclude that there are few who have just views respecting the objects of philanthropy.

Explosion of a Drum.

A sheet-iron drum or "dumb stove," used in a chamber of the sash and blind factory of Mr. Phelps, in Salem, as a receiver of surplus heat from a stove, blew up last week, with a loud report, and was completely demolished. The stove was fed with anthracite coal, but chips had been thrown upon the top of the coal, and it is probable that the flame passed up into the drum, and set fire to gas which had collected there.—[Exchange.

[It is not an uncommon thing for some people to close the dampers of their stoves, when the coals are all red hot, in order to get all the *benefit* of the heat. It is a bad and unhealthy custom, for the gas emitted into the room is poisonons. The above drum in all likelihood contained carbonic acid gas slightly condensed by cold, which suddenly expanded by the rapid ignition of the chips, and burst the frail drum asunder.

Virginia Farming.

A very great improvement has taken place in agriculture in every one of our States, within the past fifteen years. In Virginia, like the Mohawk Valley, where many farms, once fertile, had become deserts,—these very deserts, by superior cultivation, now blossom like the rose. We see by an article in the "Plow," that General B. Peyton, of Richmond, Va., purchased a farm, a few years ago, on the James River, which had been abandoned as almost worthless, it having been reduced by improper cultivation; but now, merely by plowing deep, instead of scratching, he raises fine fields of wheat. He has subsoiled the farm and restored its fertility. To others, we say, go and do likewise. Some people have an idea that land *runs out*; this is all nonsense—the older the land is, so much the better, if properly cultivated.

Steam Engines.

The reader's attention is directed to the advertisement of Steam Engines, on another page; they present rare opportunities to those having need of such articles. Those who require such engines have peculiar advantages presented to them.