



NEW YORK, SEPTEMBER 8, 1849.

Inventions of the Day.

There are many who wonder, and enquire, "What becomes of the inventions that are now so numerous, and for which so many patents are obtained? Surely," they say, "they cannot be of much worth or we should hear more about them." It is true that many things are patented which are of minor importance compared with other things, but there is not a single article patented but must show some decisive proofs of originality and usefulness. The Patent Office marks "useful" a part of its creed in deciding upon applications for patents. We have no doubt but that many good patented inventions are slumbering in silence—inventions about which our country knows nothing, except those readers of the Scientific American who may have noticed, and no more, the inventors' names and the character of their inventions, on our patent list; unless the inventors let the world know something about the results of their genius, by advertising, or some other suitable way, how can they expect the public to obtain a knowledge of their patents. Many good inventions, we have no doubt, have but to be known to be appreciated.

The public must not judge lightly of the value of patents, because their virtues are not blazoned abroad continually with trumpet tongue. Let any person of experience pass in review before his mind, the advancement made in the improvement of things really useful, and the value of such improvements will be felt and acknowledged. It is only by encouraging invention, that we can expect a continuance of improvement in those things useful to man. We are too prone to neglect the worthy, and be ungrateful to inventors above all others. Does the merchant who is whirled over the railroad in one tenth of the time which it once required him to travel from this to that place, ever offer up a heartfelt tribute to the inventor of the locomotive—to him who has saved him so much time and expense in performing his journey? We will answer in the negative. What man among us offers a tribute of heartfelt thankfulness to our inventor—him who, by his wonderful genius, sends a message of life fraught importance, over a thousand miles of space, in a few seconds, bringing back on the lightning's wings, words of hope and gladness, relieving a dreadful suspense, which not long ago, would have had to endure for days and weeks? We will answer: No one. We might go on piling up name upon name of those men who have benefitted every individual, by the works of their genius; but we believe that we have said enough to impress the mind of every person with the importance and value of the inventions of the day.

Jacob Perkins.

The London papers of a late date, inform us that "Jacob Perkins" died on the 30th of July, at the residence of his son, Regent Square, London, at the advanced age of eighty three. This event, in other cases, would have been passed over without a single word from us, for what is the name of Jacob Perkins more than the name of John Smith. But it is not the name, it is "the man."

This Jacob Perkins was an American, born at Newburyport, Mass., we believe. He must have been born about 1766, consequently he was one of the olden Colonial time. In his younger days, it is stated, that he invented the machine for cutting and heading nails. Whether he was the first inventor of the nail machine or not, we cannot tell at present, the evidence before us is adverse to his claims for priority in this invention. Mr. Perkins was but little known in the world until he went to London, when his experiments with high pressure steam at once made him a conspicuous person, as his ingenuity, daring and perseverance proclaimed him to be no ordinary man. In 1819 his steam gun was patented in Ameri-

ca, and in 1823, we think, he introduced it to the notice of the British Government. He made experiments before the Duke of Wellington and a numerous party of officers, and at a distance of 35 yards he shattered iron targets to pieces, and sent his balls through eleven planks, one inch thick each, and placed an inch apart from one another. His gun was very ingenious, and could discharge about 1000 balls per minute. His steam gun, however, was not purchased by the British Government, and we believe that although he was employed to build one by the French, yet it somehow or other ended in disappointment.

Within the past two years there have been reported accounts of two great French discoveries for generating steam. One to raise it to an astonishing pressure, by suddenly letting in a small quantity of water into a heated vessel, and the other relating (but the same thing) to the spherical property of water. These discoveries belong to Perkins. No man, until the daring Perkins did it, investigated the property of steam at extraordinary high pressures, he even employed it more than once at 65 atmospheres, 975 pounds on the square inch. The artistic and literary world is more indebted to Mr. Perkins, that perhaps one in a million is aware of. He it was who first discovered the method of softening steel plates for mezzotint engraving; this was in 1821. Although the name of Mr. Perkins, has for a long time ceased to be heard as connected with inventions and discoveries, and although his steam gun and his high pressure steam boiler have long laid as low as he now lies, yet his fame cannot depart. His extraordinary inventive powers were highly appreciated in London, both by high and low. One well qualified to judge, says of him, regarding his experiments in high pressure steam: "Viewing his exertions from first to last, no other mechanic of the day has done more to illustrate an obscure branch of philosophy by a series of dangerous, difficult and expensive experiments." From all those experiments in practical mechanics, (and what subject is more harrowing to the mental faculties) Jacob Perkins, the American Inventor, is now set free. He sleeps far from his native Newburyport, his home by the side of the sea, and he reposes in the City of the World—the wilderness of myriad homes. His hammer is silent in the workshop, he has ceased from his labors, but "although dead he yet speaketh."

Camels for the Western Prairies.

Mr. F. G. Skinner, of the Patent Office, is preparing an Essay for the next Patent Office Report, on the adaptation of Bactrian Camels to the prairies of the Great West. We should like to see a fair trial made with them, although we have strong doubts of their success. It is our opinion that during the period it will require to introduce and acclimate the camel, our go ahead people will have a railroad made to the Pacific. Our country is altogether different from Asia in the requirements of the camel. In that ancient continent we find it studded with large and rich cities, separated from one another by mountains, deserts or lonely wastes. A trade can always be carried on between two cities, to exchange the products of one for the products of another, but a country without cities, is a country without a commerce or trade, and therefore no trading caravans are required. Our Great West is a primitive country, in respect to cities. We must first make them before we require to establish lines of canals, railroads, or it may be ships of the desert, to bring the products of the East to the West, and the West to the East. When we have made Anglo Saxon cities in the West, the world will then discover that the Rocky Mountains will form no impassable barrier to our locomotives, the disc fee: of which will roll along our western prairies, with a speed as much greater than that of the camel, as the camel is to that of the donkey.

Singular Case of Hydrophobia.

A. Mr. W. Willett recently died in Philadelphia of hydrophobia, and there was no evidence that he had been bitten, except that, it was stated, he had received a scratch of a bite from a dog about a year ago. The Doctors that attended him believe that it was a case of spontaneous hydrophobia,—which is more than a doubtful conclusion, we think.

Cochineal.

This beautiful dye drug, is an insect, the *Coccus Cacti* of Linæus. When first introduced into Europe, it was thought to be a vegetable seed. It lives upon the cactus, and the greatest quantity of it used to be raised in Mexico. Two kinds of it are gathered, the one wild the other cultivated; the wild is inferior to the cultivated kind. The males of the insect have wings and are seldom found in the cochineal of commerce. The female insect has no wings; she is of a reddish brown color, with a hemispherical wrinkled back. The species of cactus on which the cochineal insect attains to the greatest perfection, is named the cactus cochenillifer. It has red and crimson colored fruits. When the Spaniards arrived in Mexico, they found the natives well acquainted with the use of cochineal as a coloring drug. In 1759, John Ellis, F.R.S., of London, received from Dr. A. Garden, of Charleston, S. C., some joints of the cactus with the nests of the insects upon it, which were laid before the royal society, and along with the plant and insects, Dr. Garden sent a very minute description of his investigations into the habits and form of the insect. There are two varieties of the true *nopal cacti* in Mexico, on which the insect is raised, but the wild kind when cultivated and raised upon the special kind (Castilian Nopal), becomes about half as good as the other. The nopsals or cacti on which the cochineal insects are raised, are not covered with hard thorns like most of the cacti or prickly pear—the name by which it is generally known,—the thorns at least are quite soft, rendering them accessible to collect the cochineal.

There is one male for about 3000 females, it is supposed; great care is taken to destroy those that are to be used as a drug, at the time they are about to bring forth their young. The insects are stripped from the plants by laying down cloths and drawing the dull blade of a knife between the under surface of a branch of the *nopal* and the clusters of the insects on it. They are then killed by steaming them in the cloth, or dipped in scalding water, and then spread out to dry in the sun. To preserve the stock of cochineal insects, they are secured on the plant from wind and rain in the wet seasons, by covering them up with matting; but the wild insects need no such care, and they propagate quicker, giving six crops in one year, while the cultivated superior gives only three. Where the wild and cultivated are raised on one plantation, the two kinds are kept separate, so that the one kind may not amalgamate with the other. The delicate superior cochineal has attained to its present perfection by long care, through many generations, both by the Indians and Spaniards. It is generally allowed that the color of the cactus has nothing to do with the color of the insect, as it feeds not on the red fruit, but upon the branches. There has always been a very great demand for cochineal, yet from 1790 to 1835, the increase of importations by Europe only amounted to 18,320 lbs. In 1791, 400,000 pounds were imported, and in 1835, 418,320. The cochineal sold in London is often adulterated with what is called the East India cochineal, a worthless insect; but we are not troubled with such adulterations in the United States, although a great deal of very inferior stuff is sold. The best cochineal is a full and plump insect of a crimson brown color, having a whitish color in the wrinkles on its back, which run across the same and are intersected with a central longitudinal furrow.

In Clavigero's History of Mexico it is stated that the ancient inhabitants of Mexico obtained a purple color from cochineal. This was doubted for a long time in Europe, but with a mordant of alum and a small portion of iron, it can produce a purple; this, however, is not the common way to produce this color, cochineal is used to dye the most brilliant of all colors, the scarlet on silk and wool. It is used to impart the ruby blush to the cheek of the vain one, who dreams not, while she flaunts her borrowed beauty, that she is indebted for it to an humble insect. Red can be dyed on silk and wool with ground cochineal, by first impregnating the fabric with a solution of alum. A more brilliant color is produced by a mordant of the chloride of tin

and cream of tartar. The beautiful pigment, carmine, is made from cochineal, and a very chaste pink is dyed upon cotton, by first impregnating the cotton with a solution of sugar of lead. Owing to the high price of cochineal, another drug named *lac* is much used as a substitute for it. It is imported from India and is much cheaper, although far inferior in point of brilliancy of color. Were it possible, and we think it is, to raise cochineal for one dollar per pound, we would not depend upon India for her lac as a dye drug. The cultivation of cochineal is something which should arrest the attention of our people, especially, since we have recently extended our sway over some territory, which, no doubt, can yield it in perfection. As far back as 1793, the sale of it, exported from the Spanish colonies to Europe, amounted to \$3,000,000. It may be said that every pound of it that could be raised, would add \$1.25 at least, to the wealth of our country. This subject, then, is certainly worthy of much attention.

Distinctions in Society.

In America we have no national aristocracy, we have no laws of entail. The rich of to-day are among the poor of another generation, in their descendants. The majority of our wealthy citizens have battled poverty at some period of their lives. If wealth is honestly obtained, is there one who can consistently revile its possessor, with the stigma "codfish aristocracy," &c. No intelligent man, however poor, will do it. Those who are continually stigmatising and ridiculing one class, acting as demagogues to get the favor of another class, should be looked upon with jealousy, for assuredly they cannot be honest men. There should be no distinctional feeling of classes in our country. Every man, be he rich or poor, should be estimated by the worth of his moral character alone. It is often the case that working people look with envy and talk with ill-will against those who have become rich, and who once labored hard with the horny hands; and those who become rich often forget the rock from whence they were hewn. These things should not be; we are all Uncle Sam's "bairn's," and the true way to live happy is for every one of us to "do justly and love mercy," on all occasions.

Victor Vardalle's Perilous Ascent in a Balloon.

On the 30th of Aug., Victor Vardalle, the celebrated French Balloonist, who made a number of ascents at New Orleans, head downward and feet up, was to make an ascension from Vauxhall Gardens, New York, on the day stated above, and to perform some pantomime tricks in his airy flight. Shortly before six o'clock the inflation was completed, when the car was attached, and on the signal to let go the ropes being given, the excitement became very great. This part of the business being managed very unskillfully, the balloon struck against a tree, and then went a short distance in a slanting direction, tearing up a pole which had been several feet in the ground, and to which was still fastened one of the ropes. By the effort of the aeronaut himself and the exertions of one or two in the gardens, this difficulty was surmounted, and the balloon ascended amidst the cheers of those on *terra firma*, but it had not proceeded far before it came in violent contact with Dr. Gray's house, in Lafayette place, the car lodging on the front, and the main part of the balloon hanging from the chimney top. Vardalle displayed great courage and self possession while in his perilous situation. He tried to open the blinds of the window, which he was unable to do, but he held on until he was relieved by those inside. At first it was thought that he could not, by any possibility, escape with his life. Thousands surrounded Dr. Gray's house to see the man, who in a short time made his appearance, and seemed quite unconcerned at what had occurred, and only regretted the serious injury which his stock in trade had suffered.

Blake's Fire Proof Paint.

We would call attention to the advertisement of this article in another column. We will speak of its nature, use, &c. next week.

Thirty-four Fire Engines are now building in this city.