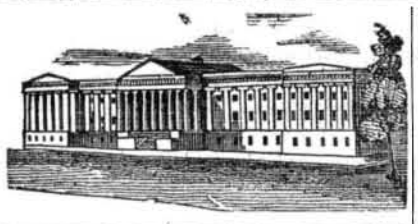

LIST OF PATENTS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending October 23, 1849.

To Erastus B. Bigelow, of Clintonville, Mass., for improvements in Jacquered Looms. Patented Oct. 23, 1849.

To James R. Stafford, of Cleveland, Ohio, for improvement in Cooking Stoves. Patented Oct. 23, 1849.

To Elias M. Ray, of Norfolk Co., Mass., for improved Spring Latch Bolt. Patented Oct. 23, 1849.

To Enos G. Allen, of Boston Mass., for improvement in Planing Machines. Patented Oct. 23, 1849.

To Benjamin F. Miller, of New York, N. Y., for improvement in the construction of Iron Stairs. Patented Oct. 23, 1849.

To William A. Lighthall, of Albany, N. Y., for improved arrangement of the lever half beam of steam engines. Patented Oct. 23, 1849..

To Alexander Beckers, of New York, N. Y., for improvement in Blocks for holding Dagurreotype Plates. Patented Oct. 23, 1849.

To Augustus Faulkner, of Walpole, N. H., for improvements in Looms. Patented Oct. 23, 1849.

To John Karney, of Cincinnati, Ohio. for improvement in Invalid Bedsteads. Patented Oct. 23, 1849.

To John Ericsson, of New York, N. Y., and R. B. Forbes, of Boston, Mass., for improvement in apparatus for distilling Sea Water. Patented Oct. 23, 1849.

To James D. Sparkinan, of Williamsburgh, & Mellville Kelsey, of Brooklyn, N. Y., (Assignees of William Berry, of Bedford, N. Y.,) for improvement in surfacing floor oil cloth. Patented Oct. 23, 1849.

To Elhanan Winchester Scott, of Lowell, Mass., for improved Circular-Saw Set. Patented Oct. 23, 1849.

To Andrew Cathcart, of Madison, Ia., for improvement in Locomotives for ascending inclined planes. Patented Oct. 23, 1849.

To William & William Henry Lewis, of New York, N. Y., for improvement in apparatus for holding Daguerreotype Plates. Patented Oct. 23, 1849.

To Frederick S. Barnard, of Zanesville, Ohio, for self-adjusting valve for regulating the admission of air to Fan Blowers. Patented Oct. 23, 1849.

DESIGNS.

To James Wager, of Troy, N. Y., for Design for Stoves. Patented Oct. 23, 1849.

To Moses Pond, of Boston, Mass., for Design for Air Tight Stoves. Patented Oct. 23, 1849.

To Hosea H. Huntley, of Cincinnati, Ohio, for Design for Stoves. Patented Oct. 23, 1849.

To John F. Rathbone, of Albany, N. Y., for Design for Stoves. Patented Oct. 23, 1849.

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In the List of Patents of Oct. 2, 1849, the residence of Ambrose Torrey was given as Boston, Mass., it should have been Boston, New York.

Apples in France.

In Normandy and Brittany the apples used for cider are in extraordinary abundance. The farmers have been obliged to fix pro s repeatedly under the branches, to enable them to support the heavy weight of fruit, that bends them to the earth. The cider crop will, in most places, be twice or three times more abundant than in ordinary years.

It is decided to supply Berlin with water, from the Lake of Betts, four miles distant, at an expense of $500,000.

Transactions of the British Scientific Association.—No. 1.

This Association held its nineteenth meeting during the last month, at Birmingham, and we will endeavor to give a condensed abstract of its proceedings.

PHOSPHORUS IN IRON.

Mr. Rinman stated that phosphorus had been discovered in Swedish iron, whenever it presented the peculiarity of what is technically termed "cold short." The process adopted was the following:—the pig iron, weighing about three grammes, and reduced to small pieces, was dissolved in diluted nitric acid, the solution evaporated to dryness, the dry mass heated strongly with free access of air, in order to destroy all carbon. After heating, the dry mass was triturated and mingled with six times its weight of soda, a little chlorate of potass, and a little silica, and smelted as long as any gas was disengaged. The smelted mass was exhausted by boiling water, and digested for some hours. The solution was filtered, the undissolved residue washed with hot water, containing a small quantity of chloride of ammonium. The solution was evaporated to dryness, and the dry mass treated with hydrochloric acid and dissolved in water. After filtration, the solution was neutralized, and the phosphate of lime was precipitated in a closed vessel by a solution of chloride of calcium with ammonia. Dr. Percy spoke of the importance of this inquiry—particularly in such a district as Birmingham. He then instanced many of the peculiarities of the Staffordshire iron, which contain phosphorus; and spoke of the peculiarity of the Berlin iron, which is so singularly fluid in casting, as being probably due to some such combination. Dr. Ronalds, Dr. Miller, and Mr. R. Phillips, confirmed the fact of the general presence of phosphorus in cast iron.

ELECTRIC BATTERIES—USEFUL DISCOVERY IN PLATING.

Mr. W. S. Ward produced a paper on this subject, and stated that a series of calculations, founded on data, produced to the Chemical Section at Swansea, showed the efficient power of three generally useful forms of battery, known as Smee's, Daniell's, and Grove's, would be equal when 100 pairs of Smee's, 55 pairs of Daniell's or 34 pairs of Grove's were used, and that the expense of working such batteries, as regards a standard of 60 grains of zinc in each cell per hour, would be about 6d., 7½d., and 8d., respectively.

This communication led to conversations on the economy of the electric light and electro-magnetic engines, in which Dr. Faraday, Mr. Shaw, Mr. Hunt, Mr. Elkington, and other gentlemen joined. Dr. Faraday remarked on the imperfect character of the electro light, and its inapplicability for purposes of general illumination: all subjects appearing dark when the eye was embarrassed with the intensity of the electric arc. Mr. Shaw and Dr. Percy instanced the magneto-electro machines which are employed at Birmingham for electro-plating, in which the current cost of the motive power—viz., a steam engine to put the magneto-electric machine in action, was the only working cost. Mr. Elkington stated that they had never been induced to abandon the voltaic battery which they employed in their manufactory, finding it more economical than the magneto-electrical machine, of which he was the patentee. He also stated the remarkable fact, that a few drops of the sulphuret of carbon, added to the cyanide of silver, in the decomposing cell, had the property of precipitating the silver perfectly bright, instead of being granulated so dead as it is when thrown down from the solutions ordinarily employed.

This information is of the utmost importance to many of our readers, in this city, Boston, Philadelphia, Baltimore, and other places, who are engaged in the Electro-plating—either lamps, or any other articles in the electrotype line.

CHAIN-PIPES FOR TELEGRAPHS UNDER WATER.

Mr. Whishaw presented some links of a full sized pipe for enclosing the wires of Electric Telegraphs under water. The pipe was formed of links connected together by sockets, each link varying according to circumstances, from 18 inches to 24 inches in length, and from 1 inch to 2½ inches internal diameter, according to the number of wires to be inclosed. These pipes being of wrought iron are exceedingly strong—and are required merely as a protection to the wires, which are previously insulated by means of gutta percha. Pipes of somewhat similar construction are laid under the Rhine and other rivers in Prussia—where the underground system of telegraphs is adopted by the Prussian Government (already to the extent of 1,200 miles)—although many of the railway companies suspend the wires between posts, as practised in England, America, France, &c.

BURSTING OF THE BRAMAH CYLINDER OF THE TUBULAR BRIDGE.

Mr. Robert Stephenson being present, was requested to give some account of the bursting of the cylinder of the hydraulic press, when raising the first tube of the Britannia Bridge at the Menai Straits, and which has stopped the work for some time. He said it was first intended that the tube should be raised six feet, a link then taken off and the space built up. Fortunately this plan was not carried out, and such was the care taken, that as the tube rose, men were stealing in, so to speak, small planks of timber. But for these precautions the fall would have been fatal to the whole structure, for as it was, it fractured bearers of cast iron upwards of 500 tons weight. The tube was never for a moment suspended in air, and he had since taken the additional precaution of packing the space between the cross-heads and the pump with small iron wedges. No accident could now take place. The fracture in the cylinder occurred in what might have been considered the very strongest place. The pressure at the time was no more than 3¼ tons to the square inch, no means unusual pressure. As connected with the cause of the accident, he might state that a short time previously, when the presses on both ends were working simultaneously, it was remarked that the tube had a strange tremulous motion along its whole surface. In a short time it increased, until the vibration assumed the character of a short wave. At every action of the pump the whole mass seemed to acquire a state of pulsation, comparable to nothing but the pulse of a man's arm. The presses were stopped, and since they have only been worked at one end. With respect to the immediate cause of the accident, he might state that the shape of the cylinder-square was not the best, and no doubt the weakness had arisen from unequal cooling. Only one of the presses was at work when the accident occurred. Dr. Robinson, in moving the thanks of the meeting to the President, remarked upon the singular fact of the vibration spoken of by Mr. Stephenson. He (Dr. Robertson) presumed that the motion in the end of the tube being raised, was reflected from the fixed end, and hence the vibration. Mr. Stephenson said that the fact of his having allowed the damaged cylinder to be used after he knew it was faulty, had been strongly commented upon. In answer to that accusation of indiscretion, he begged to state that the fault lay in the collar of the casting, where no pressure came. Mr. Roberts remarked that the way to obviate vibration was to work the engines at unequal speed. He considered that the shape of the casting was bad, and the mode of casting also not the best. It would greatly improve the strength of such work if spiral casting were to be adopted; that is, to pass the metal into the mould in a spiral direction. Mr. Webster considered the pulsation spoken of might have had some influence in causing the fracture. There might be a conspiration of vibration in the tube and the press, which would destroy the cohesion in the particles of the metal, and cause the fracture. After a few other conversational remarks from Mr. Eaton Hodgkinson, and others, the subject was dropped.

Washington Monument.

A calculation made by William Darby, Esq., the Geographer, goes to show that if the National Monument at Washington be elevated to five hundred feet, its apex will be visible at a distance of twenty-seven and a half miles. He asserts that on the same mathematical principles a height of six hundred feet gives a horizontal radius of a vision to about thirty miles.

Self Reliance.

It must be confessed that the young men of the present generation have too little reliance upon their own powers, and look for success in life as the result of aid from others. We know it is hard to pass through the world alone, with no one to guide, counsel and assist us, but even that is better than to sit idly down, with a repining spirit, and wait for some one to bring into reality the airy castles which fill our imaginations. We should be up and doing, and not set our hopes beyond the reach of ordinary exertions. We should remember that but few attain high honors, and remember too, that those most able to assist others in their progress, are themselves generally in great need of those feelings and sentiments which will alone cause station or wealth to bring happiness. There are but few after all better off than others, and the various grades of society do not cause so much actual as apparent difference in the happiness of the world. It is incompatible with the ideas of a just Providence to suppose that the majority of the human race are unhappy, and yet by far the largest portion are continually looking forward to some change of position, which shall create an increased value in life. We have considered the subject long, and believe that if a young man throws aside all hope of any pushing forward from others, and enters upon the real conflict with the world, in the full determination to be the maker of his own fortune, that his chances for enjoying life are materially increased. We should never, however, rest contented when our own wants are supplied, but consider that a care for the wants and feelings of others, is far different from the usual cringing dependence upon those more fortunate in worldly matters than ourselves. Mankind cannot progress without every man is willing to aid his fellow, and contentment will never reign upon earth till he is ready to rest contented with a position which his own energies can give him. Let us, while assisting the steps of others, march bravely on wherever the course of human events may lead us; we shall find that wherever we go, the same Providence will still watch over us, that the same world is about us, and that the great end of our exertions, happiness, is still within our grasp, if we will only reach forth and seize it.—[Western World.

The Rumbling Spring in Alabama.

MESSRS. EDITORS:—I send you a short description of the Rumbling Spring near this place, which will no doubt be interesting to many who are fond of hearing about the natural wonders that exist in our country. The spring lies about three-quarters of a mile from my land, and exactly 75 miles due north from Mobile, and six and a half miles east of Coffeeville, near the meridian line. The water is impregnated with the carbonate of lime, and it flows out, affording water enough to run a saw and grist mills, if the banks were high enough. I have seen the water in the spring boil up as large as the head of a flour barrel, when the back water from the Satilpa Creek was once six feet deep over the spring. Before bad weather, the rumbling sound is much louder, and the trembling of the earth more perceptible, and the water boils straight up, but the sound appears to come from a westerly direction. I have a nephew, a stout boy, who went there to get water, and by accident fell in. The water boiled up with such force that it threw him out on the bank, when, in attempting to rise he fell in again, was thrown on the bank—and thus for three times at least, when he was found on the bank senseless, but soon recovered. In the spring of the year, a great number of beautiful trout may be seen playing in it, as the water is clear as crystal.

M. C.

Coffeeville, Ala.

How to Make a Good Cup of Tea.

M. Soyer recommends that, before pouring in any water, the teapot, with the tea in it, shall be placed in the oven till hot, or heated by means of a spirit lamp, or in front of the fire (not too close, of course) and the pot then filled with boiling water. The result, he says, will be, in about a minute, a most delicious cup of tea, much superior to that drawn in the ordinary way.