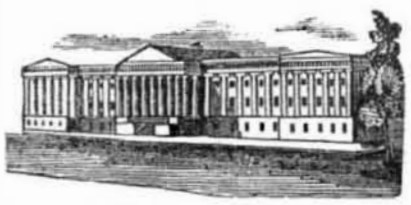

LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending April 10, 1849.

To W. Hunt of New York City, for improvement in Dress Pins. Patented April 10, 1849.

To C. Meyer of Philadelphia, Penn., for improvement in elevating the tops of Piano Fortes. Patented April 10, 1849.

To P. Bryant of Chesterfield, Mass. for Instrument for drawing Spikes. Patented April 10, 1849.

To T. N. Shipton of Lewistown, Penn., for improvement in Threshing Machines. Patented April 10, 1849.

To S. Titcomb of Farmington, Me. for improvement in Bee Hives. Patented April 10, 1849.

To J. Carpenter of Uniontown, Penn., for improvement in Tailors' Measures. Patented April 10, 1849.

To C. Wilson of Springfield, Mass. for improvement in Machines for Dressing Stone.—Patented April 10, 1849.

To J. H. Johnson of St. Louis, Mo. for improvement in the Spring Lancet. Patented April 10, 1849.

To D. Pease Jr., of Floyd, N. Y., for improvements in Hulling Machines. Patented April 10, 1849.

To B. S. Mathews of Stamford, Conn., for improvements in Skiving Leather. Patented April 10, 1849.

To H. Diehl & C. M. Diehl of Norristown, Penn., admr's. of W. Diehl, deceased, for improved Nail Plate Feeder. Patented April 10, 1849.

To F. R. Babcock of Westfield, Mass., for improvements in Cooking Stoves. Patented April 10, 1849.

To W. S. Jewett of New York City, for improvements in Shaving Brushes. Patented April 10, 1849.

To H. Knowles of Washington, D. C. assignor to J. Levey, New York City for improvement in Planing Machines. Patented April 10, 1849.

To L. Stockwell of Sutton, Mass., for improvements in Machinery for Dressing Shingles. Patented April 10, 1849.

To A. H. Forbes, of New York City, for undetachable swinging Bottle Stopper. Patented April 10, 1749.

To H. F. Baker, of Centreville, Ind., for improvement in Churns. Patented April 10, 1849.

To J. M. Hoffman, of Buffalo, N. Y. for Folding Centre Board. Patented April 10, 1849.

To W. Snell, of Easton, Penn. for improvement in Machines for Cutting Gaiter Boots. Patented April 10, 1849.

To J. Laubereau, of Paris, Republic of France, for improved Air Engine. Patented in France October 30, 1847—in America April 10, 1849.

To T. Franck, of New York City, for improvement in Extension Tables. Patented April 10, 1849.

To J. Edgar, of Baltimore, Md. and B. Hallowell, of Alexandria, Va., for Revolving Cradle for unloading Canal Boats, or sections thereof. Patented April 10, 1849.

To W. H. Clye, of De Ruyter, N. Y., for improvements in Planes for bevel edges. Patented April 10, 1849.

To N. C. Sanford and H. C. Smith, of Meriden, Conn. for Machine for regulating the twist and diameter of Screw Augurs. Patented April 10, 1849.

To S. P. Winne, of Albany, N. Y. for Sliding Cut-off Valve. Patented April 10, 1849.

To D. Linzie, of Petersham, Mass. for improvement in Fan Chair. Patented April 10, 1849.

To H. Perry, of Pittsburg, Penn., for improved Rotary Gold Washer. Patented April 10, 1849.

To H. Law, of Wilmington, N. C., for improvements in Planing Machines. Patented April 10, 1849.

To J. M. Singer, of Pittshurg, Penn., for Machine for carving Wood or Metal. Patented April 10, 1849.

To W. Scarlet, of Newark, N. J., for Machine for making Suspender Buckles. Patented April 10, 1849.

DESIGNS

To Peter Lawson, of Lowell, Mass. for Designs for Carpets, (3 patents.) Patented April 10, 1849.

To R Cornelius & Co., assignees of J. F. Baker, ot Philadelphia, Penn, for Designs for Furniture Ornaments, (2 patents.) Patented April 10, 1849.

To G. E. Waring, of Stamford, Conn., for Design for Stoves. Patented April 10, 1849

To C. J. Woolson, of Cleveland, Ohio, for Design for Stoves Patented April 10, 1849.

Mineral Wealth of Alabama.

The Mobile Tribune says:—"We have before us a specimen of Alabama marble, taken from a quarry near Centerville, Bibb county. A company is now in existence there, with a capital of some $50,000, for the joint purpose of marble and coal mining. The specimen before us, although taken from the surface, is of most exquisite grain and color, and equal, we are assured, to the best Italian material.

In the immediate vicinity of this quarry, iron ore of great richness, bituminous coal, similar to that of Tuscaloosa, and immense quantities of limestone are found. This region is also finely timbered. Pine, cedar, oak, poplar, cherry, walnut, &c., suitable for cabinet furniture, houses, mills, steamboats, ships, &c. can be obtained in large quantities at accessible points. All of which, put into flat-boats and rafts, could be safely and rapidly sent to market. Throughout this region, too, any amount of water power, on the Cahawba rias well as its tributaries, can be used for all kinds of mills and manufactories. Neither is any portion of the Union more noted for a mild agreeable and healthy climate; and besides, there is a sufficiency of land to produce all the breadstuffs and provision needed for a large population."

Depth of Coal Mines.

The greatest depth at which a productive mine is worked appears to be one in New-Castle, England. 1794 feet; though we observe in a new work, statements of a mine in Wales, worked at the depth of 2100 feet.—The minimum depth that we observe in Great Britain, is 66 feet. The average depth of the mines in Great Britain varies from 233 to 750 feet; and to strike a eneral average, would not bring it far from 400 feet. If they undertook, as we do, to remove the earth from above the coal, it would be almost as cheap to burn carbon in the shape of diamonds as coal.

If it is remembered that this depth below the surface involves the expenses incident to raising and lowering everything that is to be used—workmen, tools, &c., together with the coal that they get; that the water which collects in the mines in alarming quantities has to be pumped up all this distance—a work totally impossible without the aid of of the steam engine; that the distance from fresh air involves great expense for ventilation and great danger in case of any of the thousand accidents to which these worlds under ground are exposed—if all these disadvantages and others which might be mentioned, be borne in mind, it will be seen at once how convenient comparatively is the location of our mines—so abundant near the surface—and affording such facilities for drainage as to remove most of the difficulties above referred to.

Ice and steam.

The ice houses are filled, and the dealers are now engaged in stacking the ice, to be covered, unless exported, hereafter. A stack of clear blue, transparent ice, of the size of a meeting house, is no ordinary sight, butis a sort of Yankee Pyramid worth going to Fresh Pond (in the neighborhood of Boston, Mass.,) to behold. To show the great rapidity with which ice is taken from the water, under favorable circumstance, we are told that Mr. Wyeth has put into his ice-house, with the aid of a steam engine and his machinery, no less than eight hundred tons of ice in one hour and a half!

For the Scientific American.

Explosions in Steam Boilers.

MR. EDITOR.—There are still a variety of opinions among both scientific and practical men respecting the real cause of steam boiler explosions. Explosions have occurred owing to the want of a sufficient quantity of water in the boiler,—the water being so low as to allow some part of the boiler to become red hot, which when cold water was admitted generated steam so rapidly as to force the boiler to pieces. Almost every person accounts for boiler explosions by this theory. No person can rebut the truthfulness of this as one prolific means of boiler explosions, still there have occurred explosions which could not in any manner be accounted for by the foregoing theory. Many boilers have exploded with plenty of water in them, or else the testimony of many respectable men must be denied. In the two separate reports made upon the explosion of the locomotive Tahconic, on the Providence, R. I. Railroad, the causes of the explosion are stated in one report to be a want of water, and in the other to arise not from a want of water, hut from some cause produced by water in a spheroid state. Before an explosion should be accounted for by water in a spheroid state—the nature of that state of water should be accounted for. With plenty of water in the boiler, I cannot see how that it can assume the spheroid state of Perkins, but it can and does that of Johnston. When a vessel is put on a fire, the water forms at the bottom and around the sides in clusters of small spheres. These rise to the top one after another and burst, giving out a gas which will explode if Johnston's experiments are to be credited. Now may it not be true of water in a boiler under a high pressure that the elementary gases of it may combine with carbonic acid gas, and by some motion of the current of the steam a spark of electricity be passed through it and cause an explosion. A great deal of electricity is set free in the generation of steam, and a great number of explosions have taken place, just at the moment the engine was set in motion—the steam let off from a state of rest by touching the valve. If when the engine is stopped and the fire kept up, some of the steam, however little, was allowed to escape continually, we would not hear of so many explosions. The boilers of the steamboat Defiance that exploded below New Orleans on the 25th March were new and of Mr. Montgomery's patent. They exploded when the engine was set in motion after having been standing for some time. Now may not a great quantity of electricity have been generated and resolved gases also in the boiler, and as steam like excited glass in passing from an orifice, is in a highly positively electrical state, the gases may have been ignited and thus cause the explosion. Water is composed of oxygen, and hydrogen, but these two gases form into water only when ignited. If these two gases were resolved in the boiler by heat, and ignited by the electric spark, they would not cause an explosion but a collapse which would not happen in a boiler, as the outward pressure would be less than 15 pounds on the square inch. If carbonic acid gas be generated and mix with the two others, we have a highly explosive gas when ignited and which will account for all the phenomenon of sudden explosions. The writer of this is inclined to the opinion that carbonic acid gas, has something to do with all such accidents. He has detected it more than once in a boiler which had evaporated all its steam with the fire under it.

Every person knows the tremendous expansive power of carbonic acid gas, and it has a peculiar penetrability as mentioned by Mushat in some letters on the manufacture of steel. The object of the writer is to call the attention of engineers to this subject, as he is of the opinion that all steam under a pressure above 80 pounds contains a portion of carbonic acid gas.

EVANS.

Transplanting Evergreens.

It seems not to be very material whether evergreen trees are transplanted in April, May, or June. They may be made to live in either of these months when they are properly taken up and set; as it is all important to take up a sod with the tree it may be as well to transplant this kind early in the season before ploughing commences.

It is not necessary to take up a long root with a fir, a hemlock, or a pine; but it is absolutely necessary to take up a sod with the roots; and sods will adhere to them better at this season of the year than when the earth is more dry.

There is not much risk in taking firs from good nurseries, for the multitude of fibrous roots that are found in every direction hold enough earth to insure their growth. But pines or firs taken from forests have but very few roots, and they need more care.

The bark that covers the roots of pines and other evergreens is very thin and tender, and when the trees are pulled up and set, as we set apple trees, the bark comes off, and not one tree in fifty survives. Long roots are not needed, and the trees may be taken up by cutting around at a distance of twelve inches from the trunk when that is not more than five feet in height.

These trees and clumps of earth may be set when the earth is wet, for there is not the same need of spreading out the roots and keeping them separate as there is when trees are taken up without the earth. Yet it is important in all cases to keep the earth loose, and light, and free from weeds around them.

Devil Sticker of South America.

In many of the huts or habitations in the Indian vilages passing up the great rivers, is to be found the devil-sticker. It is of a spongy nature, and smooth skin, not unlike the large slug of England. It is brought into the hut with the fire-wood, or it may creep in unperceived. It, however, creeps up the side wall and getting on the edge of the rafters of the ceiling to which it adheres, it looks like a small ball, or more properly like the slug coiled up. It is frequently known to drop from its hold without being molested, and wherever it falls it throws out from its body five or six fangs, which are barbed like a fish-hook, and on to whatever, softer material than brick or stone it chances to fall, these fangs enter; nor can it be removed unless by cutting the animal off, and picking the prongs out of the substance into which they are so firmly fastened. When they fall on the person who happens to sit or stand underneath, the consequence is dreadful.

Warm oil is the substance used to destroy successfully the poison of this Southern pest.

Curious Imprisonment of a Bat.

A curious fact in Natural History occurred a short time ago in the woods of Blair Adam, Scotland A silver fir tree had been felled, which, as is very usual with that species, had separated into two stems, (about twelve feet from the ground) but they afterwards grew together again, and the tree grew in a single stem for 18 or 20 feet above the junction, which appeared to be about four feet in length, and twelve inches in diameter. When the tree was cross cut about four feet below where the junction was supposed to have commenced, a small hollow was discovered in the heart of the tree, and something was observed to flutter within it. A boy put his hand in and pulled out a large bat, one of the ears of which was cut off by the saw; but the animal was in such a lively state, that, when thrown on the ground, it flew away over the tops of the adjacent trees. Robert Wishart the woodman, an experienced and steady man, said that the aperture from which the bat was taken was about seven inches long, and barely three inches in diameter; and that the animal, when found, was with its head down towards the root of the tree; that he examined the tree very carefully, but could find no communication with the external air. He thought the parts of the tree must have been growing together for six or eight years.

Effect of Imprisonment.

The Physician one of the State Prisons in this State, in his last report says "that from a careful investigation, five years is the longest term which a convict can pass in confinement and be restored to the world with a sound mind and sound body." He thinks that after a long confinement, it would be more merciful to retain for life, than to turn them out upon the world, incapable of self-control.