



## LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending June 5, 1849.

To Gideon Griest, of Adams Co. Pa. for improvement in Brakes for Carriages. Patented June 5, 1849.

To F. P. Taylor assignee of J. W. Briggs, of Cleveland, Ohio, for improvement in Cockeyes for Harness. Patented June 5, 1849.

To Jacob and John Pringle, assignees of Jas. Cox, of Ebensburg, Pa. for improvement in extension machines for raising bricks, mortar &c. Patented June 5, 1849.

To F. Bush & J. H. Pratt, of Meriden, Conn. for improvement in making ivory fine tooth Combs. Patented June 5, 1849.

To Carlton Dutton, of Rochester, N. Y. for improved Railroad turnout. Patented June 5, 1849.

To A. Gilmore, Wayne, Me. for improvement in Bee Hives. Patented June 5, 1849.

To T. A. Davis, of New York City, for improved Trap and method of Setting it. Patented June 5, 1849.

To J. E. Dow, of Washington, D. C. for improved Tent frames. Patented June 5, 1849.

To Edward Steacy, of Strasburg, Pa. for improvement in Grain Drills. Patented June 5, 1849.

To C. B. Hutchinson, of Waterloo, N. Y. for improvement in Wind Mills. Patented June 5, 1849.

To E. R. Brown, of Albany, N. Y. for improvement in Parlor Cooking Stoves. Patented June 5, 1849.

To A. Downes, E. Mynders, H. C. Silsby & W. Race assignees of B. Holley, of Seneca Falls, N. Y. for improvement in Pumps. Patented June 5, 1849.

To Stephen Coats, of Lafayette, Wisconsin, for improvement in Corn Ploughs. Patented June 5, 1849.

To H. B. Babcock, of New York City, for improvement in Metallic Alloys. Patented June 5, 1849.

To Christain Buckhardt, of Cincinnati, Ohio, for improvement in the consumption of fuel in Steam Boiler and other furnaces. Patented June 5, 1849.

To J. D. Willoughby of Chambersburg, Pa. for improvement in Seed Planters. Patented June 5, 1849.

To Joseph Heygle, of Cumberland, Md. for improvement in Smut Machines. Patented June 5, 1849.

To James Scott, of Portland, Me. for improvement in Sun Dials. Patented June 5, 1849.

To Jesse Reed, of Marshfield, Mass. for improved Steering Apparatus. Patented June 5, 1849.

To Henry Bacon, of Tecumseh, Michigan, for improvement in Subsoil Corn Ploughs. Patented June 5, 1849.

To C. Perley, & J. Terry, of New York City, for improved shank pointer stopper. Patented June 5, 1849.

To Ezra Ripley, of Troy, N. Y., for Chills for Casting Rasps, Files, etc. Patented June 5, 1849.

To G. W. Brown, of Tylersville, Illinois, for improvement in Cultivators. Patented June 5, 1849.

To S. S. Fitch, of New York City, for improvement in Shoulder Braces. Patented June 5, 1849.

To Richard Coffin, of West Haverhill, Mass. for Machinery for operating railroad gates by means of the Locomotive. Patented June 5, 1849.

To Wm. H. Marston of New York City, for improved Gun Lock. Patented June 5, 1849.

To Geo. E. Warner, of Springfield, Mass. for improvement in Machine for raising Brick, Mortar and other materials, to any required height for buildings in progress of erection. Patented June 5, 1849.

A new steamer named the San Francisco, exploded her boilers at St. Louis on the 23d ult.

## The History of the Solar System.

By J. P. C. Nichols, Professor of Practical Astronomy in the University of Glasgow

It may be thought that, when the astronomer has surveyed the extent of the sidereal universe, and has assigned their places in it to our solar system, describing the distinctive features of the latter, and the indissoluble sympathies of its members, his task has here ended. But in this, as with other branches of knowledge, we have no sooner reached what appears to us satisfactory in this line of inquiry, than difficulties pursue us from unexpected quarters. It soon occurs to the inquirer, that though the law of gravitation explains how it is that the elements of our system are bound together, and many multiplex relations of all the orbs we see, still there are facts of the highest import, connected with our system which the law of gravity does not account for, and does not even remotely touch upon. We find in particular one very important disposition of the orbs of our system, namely, their all lying nearly in the same plane. All the planetary bodies, and also the satellites, by which some of them are attended, are very nearly in a plane, which is the plane of the equator of the sun. If we take the sun's equator, and extend a plane which cuts through it equatorially, the orbits of the planets are found to lie very nearly all that way. The law of gravity affords no explanation of this fact. We see that gravity will sustain the planets in the plane, but so it will sustain comets in their planes, and these latter are in no way connected with that plane. These planes are inclined at angles; very different angles to the sun's equator. The law of gravity cannot then account for this remarkable disposition of planets in one plane. We find also that the planets are moving round the sun almost in circles, but not precisely; they move in ovals or ellipses. Comets too move in ellipses, but in ellipses much more elongated, and the law of gravity agrees with both kinds of orbits. This is the second remarkable fact, that the orbits of the planets are all ellipses, slightly elongated, almost approaching to circles. Another point to be noticed is, that the planets all move round the sun in the same direction. Gravity has nothing to do with the fact; accordingly, we find comets moving in all directions. Once more; the planetary bodies and the sun itself rotate on their axis, and this motion too takes place in the same direction that the bodies move in their orbits. This remarkable concurrence of circumstances manifests to us a power very different from blind chance.

We have now, then, to start afresh with our speculations, and to ask what is the true cause of these remarkable dispositions. Before proceeding further however, there is the exception to the general statements which must be noticed. It relates to the satellites of Uranus. Sir W. Herschell who discovered this planet, imagined he saw six satellites around it; since his time only three have been observable.

These satellites do not move in the same planes as the planets, but in others nearly at right angles to them. Are we to conceive that this exception forbids us to say that the previous harmonies shows the order of the system; or are we to say that the correspondence of all the other planets and satellites establishes the general fundamental order, and that the case of Uranus is an exception referrible to some disturbing cause, with which we are unacquainted? It appears to me that this exception must be due to some disturbing cause, and is to be treated as an anomaly, and not to overturn the results of our investigations as to the rest of the system. If any one shall feel himself entitled to say that the instance of Uranus forbids us to assume the general fact as the fundamental order of the system, then a bar is put to the investigation on which I am about to enter. The facts I have related must be regarded as peculiar to the solar system, and as constituting its indeductivity. What are we to make of these irregular concurrences—whence came they? There are, I think, but two possible answers to this question—either we must say, these are the dispositions originally impressed on matter, when it was brought into being in accordance

with the creative fiat; or that they are now in the system in consequence of that system having progressed out of some previous form of being; that form of being, being indicated distinctly by these circumstances. To which of these views shall we incline? Look at the blossom of spring, its delicate structure, its true adjustment, its brief existence. But this existence is not of the briefest.

(To be concluded in our next.)

## Motion.

BY B. F. MOTCKNEY.

No. 1.

The primary cause of motion, does not appear to be fully understood. That there is a Universal Fluid pervading all things that exist, appearing under different names, such as Electricity, Galvanism, Magnetism, Nervous Fluid, Fire, Light, &c., no one will doubt.—Although invisible, it is a material pervading all space, demonstrating its power by its effects. There is in this fluid; as its fundamental quality, a perpetual motion, from which all motion, is derived. Every animal, and every vegetable, is a machine having perpetual motion, derived from the universal perpetual motion, as an inherent quality in the universal fluid. By this fluid "we live, move, and have our being," and so does every other animal and vegetable. Could its action be suspended for one minute of time, the millions of worlds must fall into chaos. We are told that this fluid can be so applied as to produce animal life, and sustain it, (in the lowest grade of animalcula.)

Much has been spoken and written to show how animal life is sustained. They minutely survey every part, but more especially the vasserial system; they show how the air is taken into the lungs, and the component parts that are required to produce a healthy action. They show how this atmospheric air is taken into the lungs, and the changes it undergoes there before it is expelled; how crimson venous blood is changed to scarlet arterial blood and say it is by the absorption of oxygen. But they appear to have no use for this universal fluid, the primary sustainer of all life. This fluid being invisible, but little is yet known of its action. It is has various forms of motion as involution, zigzag, and vibratory, or alternate. It is continually moving from high charged localities, to less charged; called positive and negative charges. It is one of the peculiarities of this fluid, to collect in globular masses before it changes from its positive to a negative locality, and the concussion of the atmosphere by its rapid motion, makes a great noise that we call thunder. We perceive the same upon a small scale in the electric spark. We sometimes see this alternation of motion in 2 clouds at a distance of ten or twenty miles apart; thundering and lightning, at regular short intervals, first one, and then the other, as regular as the motions of a pendulum, yet we see no fluid pass from one to the other, nevertheless, it is fair to conclude that it does pass. But in this great question of sustaining animal life by respiration, we conceive that this fluid is to be looked to as the primary agent. When we inspire, we say we take in atmospheric air. Can we take in this combination of gasses (oxygen, nitrogen, hydrogen, and carbon) without this fluid, that pervades all space? Were it possible to deprive this air of the all-pervading fluid, we conceive it would not sustain life for a moment.

Another question that arises, is, if we say that this fluid in question is the nervous fluid, then what is the common avenue of entering and leaving the nerves? It is probable that the most common entrance is by the skin or through the lungs? if we say the latter, then would it not be a plausible mode of extending the theory, by saying that this nervous fluid entered the lungs and friction taking place in its passage, the latent fluid becomes active, and a chemical change takes place and the changed composition of gasses is expelled, and a new quantity is revived. Thus action and re-action is kept up like the clouds and the electric spark above mentioned. And by this process the nerves are supplied with the fluid, and the lungs and the heart are kept in motion and the blood propelled through the arteries and veins.

## Earth the Natural Friend of Man.

The great Roman naturalist, Pliny, in one of the most beautiful passages of his elaborate history of nature, observes:—It is the earth that, like a kind mother, receives us at our birth, and sustains us when born. It is this alone, of all the elements around, that is never found an enemy of man. The body of waters deluge him with rains, oppress him with hail, and drown with inundations; the air rushes on in storms, prepares the tempest or lights up the volcano; but the earth, gentle and indulgent, ever subservient to the wants of man, spreads his walks with flowers, and his table with plenty; returns with interest every good committed to her care; and though she produces the poison, she still supplies the antidote, though constantly teased to furnish the luxuries of man rather than his necessities; yet, even to the last, she continues her kind indulgence, and when life is over she piously hides his remains in her bosom.

## The End of Prudence.

The great end of prudence is to give cheerfulness to those hours which splendor cannot gild, and acclamation cannot exhilarate.—Those soft intervals of unbended amusement, in which a man shrinks to his natural dimensions, and throws aside the ornaments of disguises which he feels, in privacy, to be useless encumbrances, and to lose all effect when they become familiar. To be happy at home is the ultimate result of all ambition, the end to which every enterprise, and labor tends, and of which every desire prompts the prosecution. It is, indeed, at home that every man must be known by those who would make a just estimate of his virtue, or felicity; for smiles and embroidery are alike occasional, and the mind is often dressed for show in painted honor, and fictitious benevolence.

## Expenses of British Colonies.

An interesting return, moved for by Mr. Vernon Smith, supplies the following information respecting the Colonies: The North American possessions of Great Britain which include Canada, Nova Scotia, Prince Edward's Island, New Brunswick, Newfoundland and Bermuda, entailed a total expense, for the five years ended March 31, 1847, of £2,646,094 for the pay of troops and commissariat expenses; the West Indian possessions entailed, during the same period, a cost of £1,779,337 for the same purposes; the Mediterranean and African possessions, including Gibraltar, Malta, the Ionian Islands, the Cape Colony, Sierra Leone, Gambia, the settlements on the Gold Coast, and St. Helena, entailed an expense of £3,170,988; and the Australian and miscellaneous possessions an expense of £2,052,935. It follows that the colonial empire of Great Britain entailed upon the mother country, for the five years ended March 31, 1847, a gross total cost of £9,742,354 solely for the pay of her Majesty's troops and for commissariat expenses, being on an average, nearly £2,000,000 per annum.

## Cocoa Nuts.

The tree is a native of Africa, the East and West Indies, and South America. It is a kind of palm, from 40 to 60 feet high; the trunk is entirely naked having immense feathers, each 14 or 15 feet long, 3 feet broad and winged. The nuts hang from the summit of the tree in clusters of a dozen or more. The uses made of the tree and its fruit would require a long description. It affords food clothing, shelter and protection in innumerable ways.

## The Office of the Bat.

The Philadelphia Ledger says:—That a gentleman of observation and reflection, informs us that the common bat, which many people consider an annoyance when it flies into and about their house during the summer and fall evenings, will destroy and effectually clear a room full of mosquitoes in a few minutes. He says they are perfectly harmless, and from repeated observations of their visits and business, he believes their object in visiting a room is to make a meal of the flies, mosquitoes and other small insects which collect there. He has watched them so closely as to both see them catch the insect and hear the fine snap of their teeth upon them. He, therefore, never drives a bat out of his room, as many people do, who do not know their usefulness.