



## LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending June 19, 1849.

To B. F. Blodget & H. B. Horton of Akron, Ohio, for improvement in Reed Musical Instruments. Patented June 19, 1849.

To D. L. Walker of Roxbury, N. Y., for improvement in Washing Machines. Patented June 19, 1849.

To Alexander Bond, of Philadelphia, Pa., for improved Sculling Propellor. Patented June 19, 1849.

To E. F. Martin, of Rockport Mass. for improvement in Cooking Stoves. Patented June 19, 1849.

To Wm. Ball, of Chicopee, Mass. for improved Gold Washers. Patented June 19, 1849.

To A. Palmer, of Brockport, N. Y. for improvement in Grain Drills. Patented June 19, 1849.

To T. W. Harvey, of New York City, for Rotating Tumbler Gun Lock. Patented June 19, 1849.

To G. E. Gill & J. B. Tillinghast, of Chillicothe, Ohio, for improvement in Churns.—Patented June 19, 1849.

To John M'Carthy of Somerset, Pa. for improvement in Carding Machines. Patented June 19, 1849.

To Jacob J. Mann & H. F. Mann, of Clinton, Ind. for improvement in Grain Carriers for Harvesting machines. Patented June 19, 1849.

To J. F. Weishampel of Baltimore, Md. for improvement in Revolving Horizontal Coal Grates. Patented June 19, 1849.

To E. Myers, of Carrol Co. Md., for improvement in Seed Planters. Patented June 19, 1849.

To Charles Austin, of Concord, N. H. for improvement in Melodeons. Patented June 19, 1849.

To S. B. Francisco of Reading, Pa. for improvement in Atmospheric Churns. Patented June 19, 1849.

To B. D. Sanders, of Brooke Co. Va., for improvement in Winnowing Machines. Patented June 19, 1849.

To Benson Owen of Seneca Falls, N. Y. for improvement in Self-regulating Dampers for Stoves. Patented June 19, 1849.

To Roswell Wilson of Albany N. Y. for improvement in Cooking Stoves. Patented June 19, 1849.

To J. W. Hoffman of Philadelphia, Pa. for improved lever to be placed on a railroad track and acted upon by the wheels of cars or Locomotives. Patented June 19, 1849.

To Edmund Morris, of Burlington, N. J. for improved Door Holder. Patented June 19, 1849.

To J. H. Patten, of New York City, for improvement in Drying Grain. Patented June 19, 1849.

## RE-ISSUE.

To R. D. Granger, of Albany N. Y., assignee of E. Johnson & D. B. Cox of Troy N. Y. for improvement in Cooking Stoves. Patented July 22, 1845. Re-issued June 19, 1849.

## True Heroism.

A missionary of the American Board of Bombay, having acquired a thorough knowledge of the Mahratta, the English East India Company offered him a salary of \$13,000, if he would relinquish his calling and aid them in writing and making contracts with the natives. On his peremptory refusal, they offered him \$50 per week if he would afford them occasional assistance, two hours in a day. This offer he also rejected, saying no one could tempt him to relinquish the work he was sent to perform.

The Springfield, Mass. Republican announces that a coal mine has been found on the premises of Edmund Palmer, Esq. of that place. The coal is said to be of fine quality.

## Richard Arkwright.

The general fate of inventors has been singularly unfortunate. Many have struggled through life against the ills of poverty and neglect, and but few of them have enjoyed the benefits or fruits of their genius. The difficulties of introducing a new improvement, although valuable, are often very great and frequently lead to embarrassment and ruin, although supported with considerable means.—And the inventors who do succeed are generally the objects of envy—the world seeks to deprive them of their justly earned honors, if they fail to render their labors and inventions of no avail by chicanery and fraud, seldom do inventors reap a harvest from the seeds they have sown.

The person whose name stands at the head of this article was a splendid exception to this result, not that he had not enemies to contend against, who exerted every influence and employed both calumny and wrath to rob him of honor and profit—not because he was rich, for he was of the humblest class, but he lived down the malice of foes and rose above their machinations to a princely opulence, and was at last honored with Knighthood and acknowledged “a public benefactor.”

Richard Arkwright was born at Preston in Lancashire, England, in 1742. He was the youngest of 13 children, was brought up a barber, and supported himself at this employment till he was more than 30 years of age, and here let us digress somewhat from the chain of this narrative. “It is too often the case that mechanics and artisans laugh and despise the labors of others, not of their own trade, who attempt to improve upon some part of it, they consider them as nothing better than ignoramus.” “What do they know about this and that branch,—they have never learned it,” are common expressions. There is some truth in attributing to new amateurs an ignorance of many principles, but still, they are the very class who are apt to strike into an original path out of the beaten road. History furnishes us with illustrious examples. Franklin was not by profession an electrical engineer. The first Herschell was not by trade a maker of lenses. Watt was a philosophical instrument maker. Col. Benthams was not a practical mechanic. Fulton was a painter and Arkwright a barber.

It is not known how the mind of Arkwright was first directed to make an improvement on machinery for spinning cotton, but it is supposed that he took interest in the complaints of his neighbors in Preston respecting the defective supply of cotton yarn. At that time James Hargrave, a weaver in Lancashire, invented a new mode of carding and then invented the spinning jenny. The spinners took alarm at his invention and destroyed his establishment, after this he removed to Nottingham but persecution awaited him there also, and melancholy to relate this ingenious man died soon afterwards, but not in great misery as is commonly reported.

During the persecution of James Hargrave, Arkwright was making efforts to change the process of spinning then in use, but owing to his want of mechanical skill, it was difficult for him to get machinery combined to operate according to the idea he had formed in his mind. In 1767 Arkwright formed an intimacy with John Kay, a watchmaker of Warrington, who was well acquainted with mechanical combinations and who made a machine according to his suggestions, but according to his opponents, he gave Arkwright the first good idea. But after the first machine was made Arkwright spent five years in improving upon it to make it perfect—none before this had been successful. He then entered into a partnership with a Mr. Smally of Preston, his native place, but the spinners rose to put down their machinery and their establishment was ruined. He then removed to Nottingham, formed a partnership with Messrs. Shute and Mead and took out a patent for his *spinning frame* in 1769. He then erected his mill and set it in motion by horses. In 1771, he erected one at Cromford, Derbyshire, to be moved by water; Arkwright's invention was for drawing and spinning the cotton by rollers, a grand idea and which could in no way be derived from the old wheel—it was a most original thought. His first patent was called an im-

provement on the *water spinning frame*. It is said that he got his first idea from seeing iron rolled in a rolling mill. When Arkwright was just beginning to enjoy some benefits from his invention his patent was contested in 1772, on the ground that his improvements were not original. Every effort of malice, envy and selfishness was exerted to resist his rights, but he prevailed over all opposition and afterwards his patent was undisputed. After this he made more improvements, and brought his machine to its highest state of perfection in 1775 and took out another patent. This second patent after severe litigation was cancelled in 1785; after this he had indeed many difficulties but success seemed to smile on his efforts. For a short time he formed a partnership with David Dale, Esq. of Lanark Mills, Scotland,—the grandfather of the Hon. R. Dale Owen of Indiana. Of Mr. Dale who was one of the best of men, Mr. Arkwright was very fond, as he was of all his countrymen who generally appreciated his ingenuity more than his own. It may be said that from 1772, the success of Arkwright in making an abundant fortune was but little interrupted, for from that time he received a tribute for each spindle and the rapidity with which they multiplied after the first introduction, was something like the spreading of a flood. Very little more may be said about him. He saw his machine first driven by horses, then by water power and he lived to see the invention of Watt successfully and well applied to them likewise. He was made a Knight with the title of Sir Richard, in 1786, and he died in 1792. He was of a hasty temper, but of great mental powers, and he exhibited amid his rank and wealth his old burly frankness. Having said so much in favor of Richard Arkwright, we must admit, that his was not the first roller spinning frame, although we believe the idea was new with him. In 1738 Lewis Paul took out a patent for spinning by rollers but his specification was very bad—not clear, while Arkwright's was good and clear. Since Arkwright has gone to the tomb, the spinning by rollers is claimed to have been the invention of John Wyatt of Birmingham, England, who was one of the witnesses of Paul's specifications, but to Arkwright belongs the merit of successfully completing and applying the invention of spinning yarn by drawing and twisting between rollers. Roller spinning however is greatly improved, now. Arkwright would still see his principles but scarcely know the features, of his machine, if he was to enter one of our factories.

The whole world has been benefitted by his invention and no country more than America. It well becomes us then as a people to appreciate the benefits conferred upon us by the inventors of useful inventions.

For the Scientific American,  
Butter.

The cream which rises to the top of milk after being skimmed off and churned yields about 4.5 of butter to every 100 parts, it is of a white, or yellow color and has an agreeable smell. Milk is composed of butter, casein, sugar of milk, several salts and water in variable proportions. Butter appears in the form of small globules nearly alike in size, and transparent, and is not soluble in water, and it oxidises or becomes rancid by exposure. It is composed of margavin, olein, butyryrin, caprine, and caprines, and some say stearin, a substance found in tallow. By steaming butter a certain time, or keeping it at a heat of 70° degrees for about a day and a half, the stearin, and margavin can be separated by filtration, as they graduate. The liquid portion is then acted upon by alcohol in which the butyryrin, caprine, and caprine are taken up, and the olein left behind.

The making of butter is known to every person, but there are few who know any more about it, than merely, that by churning, *butter is made*. But the true theory is this, that agitation breaks the globules of butter and makes them unite in a mass, and the introduction of air during the churning aided by a heat nearly up to the fermenting scale, occasions the formation of lactic acid which coagulates the casein and assists in the separation of the butter. In Summer, there is fre-

quently too high a heat in the milk or cream which prevents the ready coherence of the butter. In that case, after the butter is formed a piece of ice introduced into the churn readily brings the particles into contact. After butter is made or separated from the milk, the grand object to be attended to, is the entire separation of the casein, which is the substance that so readily imbibes the oxygen and makes rancid butter. Butter ill-beaten, squeezed and packed, will not be good in an ocean of salt; butter well squeezed to drive out all the casein and milk, keeps best. This is the great secret of making butter to keep, and the superior flavor of some kinds of butter, is more indebted to its absence of casein than any chemical mixture introduced into it. In some dairy districts the butter is trampled with clean tidy milkmaid's feet into tubs with false bottoms—perforated with fine holes through which the casein is pressed, (a cloth being between) and the pure butter retained, which is then lifted and packed into clean firkins. Butter so treated is sure to be good.

## Formation of Character.

The mind of man receives its first bias when the seeds of all our future action, are sown in our hearts, and when causes in themselves so trifling as almost to be imperceptible, chain us to good or bad, to fortune or misfortune forever. The character of man is like a piece of Potter's clay, which when fresh and new is easily fashioned according to the will of those into whose hands it falls; but its form once given and hardened, either by the slow drying of time, or by its passage through the ardent furnace of the world, and one may break it to atoms, but never bend it again to another mould. Our parents, our teachers, our companions, all serve to modify our dispositions. The very proximity of their faults, their failings, or their virtues, leave as it were an impress on the flexible mind of infancy which the steadiest reason can hardly, no more modify, and years themselves never can erase.

## Gold and Silver Point East and West.

Every horse shoe shaped magnet has one of its ends a north pole, and the other a south pole. If such a magnet be made very powerful by means of a galvanic battery, all substances whatever, if made into bars and suspended over it by a delicate thread, will point either to these north and south artificial poles or else in a direction equally between them, that is, east and west. Gold and silver point in this latter direction, as also do many others. This has lately been discovered by Faraday in London, who has named the influence *Dia-Magnetism*. In order to produce it, the artificial magnet must be very powerful.

## An Author's Prediction.

Walter Savage Landor, one of the oldest living English authors, in a recent letter to Lord Dudley Stewart, asserts that the world is at the commencement of a crueller and longer war than history has recorded; a war of civilization against barbarism, of freedom against despotism, of nations against cabinets. He adds that in twenty months, or earlier, Russia will be on the frontier of France, or perhaps within it.

[Being neither a prophet nor the son of a prophet, we do not step out of line very often to speculate upon common events, but in this case we beg leave to disagree with Mr. Landor. Time will tell who is prophet.

## LITERARY NOTICES.

## The Bankers Magazine.

This Monthly Periodical, is a very excellent one, and one that is instructive to every person. By it we learn that the Bank Capital of this city is \$6,149,910 and that of the whole State, \$144,330,553. South Carolina has the greatest concentrated capital of all the States, viz. \$11,431,183, divided into six different places only. The Bank Capital of New York city is greater by \$1,438,029, than that of all Pennsylvania. Massachusetts has a capital of \$33,285,000 being \$9,135,090 more than this city.

Godey's beautiful Ladies Book for Ju'y, has been laid on our table by H. Long & Bro., agents for this city. It is superbly embellished, and exceeds in quality and quantity any previous number. What a volume of praise has been heaped upon this grand work, it cannot be excelled.