



LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending April 17, 1849.

To Allen Eldred, of Openheim, N. Y., for improvement in Machinery for breaking and dressing Hemp. Patented April 24, 1849.

To H. M. Villeneuve, of Paris, France, by his adm'r. William O'Connor, of Jersey City, N. J. for improvement which consists in producing a substitute for Wool from Jute. Patented April 24, 1849.

To Epidaurus Irving, of New York City, for improvement in Tanning by Electricity. Patented April 24, 1849.

To Curtis E. Norris, of Peacham, Vt., for improvements in Machinery for Boring Bobbins. Patented April 24, 1849.

To Mary Ann Woodward, of Palmyra, N. Y. for improvement in Fan Rocking Chairs. Patented April 24, 1849.

To John J. DeHaven, of Reading, Penn., for Removable Fire Box for Locomotives. Patented April 24, 1849.

To Charles Foster, of Pompey, N. Y. for improved Forks for holding Rope Belts upon Drum Wheels. Patented April 24, 1849.

To Malcolm McAulay, County of Thomas, Geo. for improvement in Cotton Gins. Patented April 24, 1849.

To William C. Finney, of Fayette Co. Tenn. for improvement in Cotton Scrapers. Patented April 24, 1849.

To Gilbert Hatheway, of Rochester, Mass., for improvement in Saw Mills with cylindrical Saws. Patented April 24, 1849.

To John Whistler, of Carlisle, Penn. for improvement in Shoe Lasts. Patented April 24, 1849.

To Israel Kepler, of Milton, Penn. for improvement in Corn Shellers. Patented April 24, 1849.

To George Fletcher, Sen. of Greensburg, Ind., for improvement in Machines for Polishing Stone. Patented April 24, 1849.

To Paul K. Hubbs, of Holmesburg, Penn., for Filtering Apparatus for Steam Boilers.—Patented April 24, 1849.

To Abiathar Pollard and Simeon Minkler, of Clinton Co. N. Y. for improvement in Obstetrical Supporters. Patented April 24, 1849.

To Nathan Colver, of Boston, Mass. for improvement in Bedsteads. Patented April 24, 1849.

To Wm F. Converse and Jonathan Burdge, of Cincinnati, Ohio, for improvement in Machinery for cutting Screws on Rails of Bedsteads. Patented April 24, 1849.

To William B. Hibbard, of Boston, Mass., for improvement in Machinery for Spinning Hemp. Patented April 24, 1849.

To Samuel Huff, of New Vienna, Ohio, for improvement in Churns. Patented April 24, 1849.

To L. Aimable Prosper Jacques, of Cincinnati, Ohio, for improvement in Frame for Musquito Bars. Patented April 24, 1849.

To Lewis Brown, of Epsom, N. H., for improvements in cutting Cylinders for Bobbins, &c. Patented April 24, 1849.

To Charles H. Peck and Coleman Hicks, of St. Louis, Mo. for improvement in Planing Machines. Patented April 24, 1849.

To David Gay, of Bath, Me. for improvement in Portable Beer Fountains. Patented April 24, 1849.

To Francis G. Woodward, of Worcester, Mass. for improved method of fastening Railroad Switches. Patented April 24, 1849.

To Knight Reed, of New Haven, Conn. for improvement in Boiling Sugar. Patented April 24, 1849.

To Joseph E. Andrews of Boston, Mass. assignor to Edwin Allyn, of the same, for improved Variable Power Capstan. Patented April 24, 1849.

To J. R. Worster, of Baltimore, Md. for improvement in Diving Bells. Patented April 24, 1849.

To David Bonner, assignee of Joseph M. Toy, of Greenfield, Ohio, for improvement in machinery for Sawing Wood. Patented April 24, 1849.

To Cotton Foss, of Painsville, Ohio, for improvement in Machines for making Grindstones. Patented April 24, 1849.

To William T. Barnes, of Buffalo, N. Y. for improvement in Bellows. Patented April 24, 1849

RE-ISSUE.

To Hezekiah S. Miller, of Cincinnati, Ohio, for improvement in Machinery for making Felt Fabrics. &c. Patented March 5, 1839.—Re-issued April 24, 1849.

DESIGN.

To S. H. Ransom, of Albany, N. Y. for Design for Stoves. Patented April 24, 1849.

Poetry of Science.
BY ROBERT HUNT.

THE ELECTRICITY OF A TEAR.

We tremble when the thunder-cloud bursts in fury above our heads:—the poet seizes on the terrors of the storm to add to the interest of his verse. Fancy paints a storm-king, and the genius of romance clothes his demons in lightnings and they are heralded by thunders. These wild imaginings have been the delight of mankind:—there is subject for wonder in them:—but is there anything less wonderful in the well-authenticated fact, that the dew-drop which glistens on the flower, that the tear which trembles on the eyelid, holds locked in its transparent cells an amount of electric fire, equal to that which is discharged during a storm from a thunder-cloud?

Faraday has shown, by the most conclusive experiments, "that the electricity which decomposes, and that which is evolved by the decomposition of, a certain quantity of matter are alike. What an enormous quantity of electricity, therefore, is required for the decomposition of a single grain of water! We have already seen that it must be in quantity sufficient to sustain a platinum wire 1-104 of an inch in thickness, red hot in contact with the air, for three minutes and three quarters. It would appear that 800,000 charges of a Leyden battery, charged by thirty turns of a very large and powerful plate machine, in full action—a quantity sufficient, if passed at once through the head of a rat or cat to have killed it, as by a flash of lightning—are necessary to supply electricity sufficient to decompose a single grain of water; or, if I am right to equal the quantity of electricity which is naturally associated with the elements of that grain of water endowing them with their mutual chemical affinity."

GRAVITATION.

Science has developed the grand truth, that it is by the exercise of this all-pervading influence that the earth is retained in its orbit—that the crystal globe of dew which glistens on the leaf is bound together—that the debris which floats upon the lake accumulates into one mass—that the sea exhibits the phenomena of tides—and the ærial ocean its barometric changes. In all things this force is active, and throughout nature it is ever present. Our knowledge of the laws which it obeys, enables us to conclude that the sun and distant planets are consolidated masses like this earth. We find that they have gravitating power, and by comparing this influence with that exerted by the earth, we are enabled to weigh the mass of one planet against another. In the balance of the astronomer it is as easy to poise the remote star, as it is for the engineer to calculate the weight of the iron tunnel of the Conway, or any other mechanical structure. Thus throughout the universe the balance of gravitating force is unerringly sustained. If one of the most remote of those gems of light, which flicker at midnight in the dark distance of the starry vault was, by any power, removed from its place, the disturbance of these delicately balanced mysteries would be felt through all the created systems of worlds.

LIGHT.

Light is necessary to life; the world was a dead chaos before its creation, and mute disorder would again be the consequence of its annihilation. Every charm which spreads itself over this rolling globe is directly dependent upon luminous power. Colors, and often, probably, forms, are the result of light;

certainly the consequence of solar radiations. We know much of the mysterious influences of this great agent, but we know nothing of the principle itself. The solar beam has been tortured through prismatic glasses and natural crystals. Every chemical agent has been tried upon it, every electrical force in the most excited state brought to bear upon its operations, with a view to the discovery of the most refined of earthly agencies; but it has passed through every trial without revealing its secrets, and even the effects which it produces in its path are unexplained problems still to tax the intellect of man.

FIRST KNOWLEDGE OF ELECTRICITY.

If a piece of amber, electrum, is briskly rubbed, it acquires the property of attracting to it light bodies. This curious power excited the attention of Thales, of Miletus; and from the investigations of this Grecian philosopher we must date our knowledge of one of the most important of the natural forces—Electricity.

If an inquiring mind had not been led to ask why does this curious vegetable product attract a feather, the present age, in all probability, would not have been in possession of the means by which it is enabled to transmit intelligence with a rapidity which is only excelled by that of the "swift winged messengers of thought." To this age of application a striking lesson does this amber teach. Modern utility would regard Thales as a madman. Holding a piece of yellow resin in his hand, rubbing it, and then picking up bits of down, or catching floating feathers, the old Greek would have appeared a very imbecile, and the *cui bono* generation would have laughed at his silly labors. But when he announced to his school that this amber held a soul or essence, which was awakened by friction, and went forth from the body in which it previously lay dormant, and brought back the small particles floating around it, he gave to the world the first hint of a great truth which has advanced our knowledge of a physical phenomena in a marvellous manner, and ministered to the refinements and to the necessities of civilization.

Antiquity of Gunpowder.

The first application of Gunpowder to the firing of artillery has been commonly ascribed to the English at the battle of Cressy, August, 1346; but hitherto this fact has depended almost solely on the evidence of a single Italian writer, coupled with the circumstance that the word "gunners" has been met with in some public accounts of the reign of Edward III.—Upon this point the Rev. J. Hunter has lately communicated to the Society of Antiquaries some new and curious particulars, derived from records of the period, showing the very names of the persons employed in the manufacture of gunpowder, (out of saltpetre and "quicksulphur," as it was called, without any mention of charcoal,) and the quantities supplied to the King just previously to his expedition to France in June or July, 1346. In the Records it is termed *pulvis pro ingenis*; and they establish that a considerable weight had been supplied to the English army subsequently to its landing at La Hogue and previously to the battle of Cressy; and that before Edward III engaged in the siege of Calais, he issued an order to the proper officers in England requiring them to purchase as much saltpetre and sulphur as they could procure.

The Age of the World.

Mother Earth, like other ladies of a "certain age," puzzles her sons to discover "the years of her life." The common notion is that she is some five or six thousand years old speaking of her, that is, as the abode of Man. But what will the old women say to the editor of the Ethnological Journal, who, in his August number, contending that Britain was a civilized country at some remote period anterior to the Roman invasion, coolly observes:—"That this civilization should have so completely vanished before the days of Cæsar, is no degree surprising: the mightiest empires have been utterly swept away, and the most important histories completely forgotten, in a less space of time than 'nine thousand years.'" Yes, indeed the world may be excused, without the reproach of carelessness, for dropping a page or two of its history in ninety centuries.

LITERARY NOTICES.

The New York Pathfinder is one of the most valuable business journals in this city.—When this publication commenced we wished it success, but feared that the public would not appreciate its usefulness. But it has now nearly completed its 3d volume, and has a circulation nearly, if not quite equal to that of any other daily published in this city. It is an excellent medium for business men to advertise through, as you can scarcely step on board a steamboat or railroad car without finding numbers lying about for the attention of travellers. The articles are well written, and are creditable to the editor (Mr. Charles S. Todd) a very modest, unassuming gentleman. The Pathfinder is also published in Boston by the same proprietor, Mr. Bartlett.

The May number of Godey is beautiful indeed, and it will be hardly necessary to say one word in its favor. "The Rose and Lilly" by Ellis, is a beautiful engraving, and is followed a colored plate, of "Children's Fashion" by Pease. "Thirty five," before or after marriage, we are not informed which, by Mrs. Hall the sweet poetess. "The Pilgrims to the Shrine," a scene from Mount Calvary, which is very solemn and impressive. This number contains 29 distinct engravings, all highly creditable to the Artists skill. The contributions are exceedingly interesting, from the pens of well known authors. Persons wishing this work, can find it at H. Long & Bro. 46 Ann Street, also a general assortment of all the new publications.

Holden's Dollar Magazine for May, as usual is an excellent number, the embellishments are "The Port of Honolulu, in the Sandwich Islands," "The Welcome Home," A Portrait of Father Mathew the great apostle of Temperance, and a faithful likeness of the eloquent "Dr. Durbin" accompanied by a well written biography.

The literary contents, for originality is not surpassed by any other Magazine published. Holden indulges very little in wild romance, and his selections are calculated to instruct as well as amuse.

Some clever author has commenced "Dissecting the Doctor" and he really turns the tables upon them in a capital manner. "The Toilette and its devotees" is a very common sense review of the distinguishing feature between "man and the lesser orders of creation." We commend this No. to the particular attention of his readers, they will find much to interest them.

The Western Continent is the title of a large and ably edited weekly Literary Journal published in Baltimore at \$2, per annum.

The Literary Union, an "Independent in everything," Journal has been sent us by the publisher, W. W. Newman, Syracuse N. Y.—We should think it a very interesting and useful paper, and not a wit behind literaries of ten times its age.

No. 15 of the Encyclopedia of Chemistry is just issued by Messrs. Carey & Hart of Philadelphia. Those who desire to possess a comprehensive and compact work on Chemistry as it is, in its present advanced state, will find this work the very thing to suit them.

Charms of Rural Life.

Besides the benefit of mental discipline derived from the study of nature, for which agriculture opens as wide a field as any other pursuit, the charms of rural life are unalloyed by the reflection of ill-gotten gains, and uncontaminated by immoral influences. The farmer has no occasion to review with remorse, a life of injustice to his fellow-men, or mourn the loss of fortunes accumulated by an occupation almost necessarily dishonest. The lawyer looks upon his briefs prepared for unjust causes; the physician upon the emaciated forms of his patients, and the speculator upon the wealth amassed from the ruined fortunes of others, with the humiliating consciousness that they have not in all instances, returned an equivalent for what they have received. But the cultivator of the soil may pursue his calling with the cheering reflection, that an all-bounteous Providence has rewarded his efforts, and through him bestowed more of happiness upon his fellow-men.

A New Aristocrat.

The heir of the Earldom of Angus (a title of the Douglass family) has been discovered to be an old gardener at Capetown, who calls himself Dalgleish. The Queen means to give him the Earldom, and its income of £30,000 a year.

He should get a bit of a decent farm, and the rest of the estate should be given in 50 acre lots to the tenants and poor of the parishes.

Many inventors have written to us to advocate a mechanic for Commissioner of Patents, as a right.

TO CORRESPONDENTS.

"J. G. P. of R. I."—The plan of your apparatus does not possess novelty sufficient to warrant you in spending money on an application. Machines for this purpose, constructed upon the same principle as yours, have been used before. They are, however, very excellent for the purpose intended.

"J. B. of S. C."—You would require an engine of ten horse power to drive the mill stones, which could be purchased complete for \$1200 in this city, having one of Bentley's tubular boilers attached. We can furnish you mill stones 4 feet in diameter, for about \$145. All the improvements known to us in this branch of business have been published in the Scientific American.

"W. W. of N. C."—We are informed by Mr. K. that second hand rolling mills are very hard to be found. New ones can be purchased for \$11 per foot of a superior manufacture. Mr. F. promised to write you the particulars about the expense, &c. of repairing the burnt one. Those tickets will be purchased as soon as the agents will sell them for "the ready go down." Don't be uneasy, we are wide awake at all times here, and will attend to the business early.

"C. B. J. of Mass."—You have surely not given your attention to the correct proposition, "two parallel lines," not geometrical lines, it should be, as all kinds of lines are geometrical lines. If two parallel lines meet then they are no more parallel, that's all, for parallel lines must ever be equidistant to be parallel. Be sure and have your propositions right.

"A. H. of Pa."—Brass is made to adhere to iron by first tinning the iron. Steel is softened by decarbonizing it. You will find the process described at length in vol. 41 of the Transactions of the Royal Society. If there is a library in your place, this work should be in it. We can give you the process if paid for writing it, as it is somewhat long. Send us five dollars.

"J. K. of Ct."—Inventions are always arranged in classes, and taken up in their order. There is no certainty at what time an application will be examined. Patents are issued sometimes in 2 months, and sometimes 6 or 7 months elapse before any examination is made. We should think it high time you had some knowledge of its results, as you say the application was filed in June '48. Mr. Burke has always been prompt in acknowledging the receipt of the papers and models forwarded from this office.

"H. C. of N. J."—Your plan might be made to operate on a very small scale, but we should consider it a dangerous undertaking to pass over the Rocky Mountains. We should rather see an experiment made with a load of mice over a mole hill than to encourage a party of human beings to attempt to ascend the rugged steeps of Popocatepetl in a train of Railroad cars.

"W. C. H. of Ala."—We have no confidence in the statement, and we would advise you not to spend time or money, until better evidence is brought forward to sustain it.—You will find the notice in No. 20 Scientific American.

"T. & T. of Ky."—We prefer to advise you by letter, which will be attended to immediately. \$2 received on account of subscription.

"A. B. W. of S. C."—Since the receipt of yours of the 10th inst. we have been on the look out for such a work as you describe; if we meet with success you will hear from us hereafter.

"H. J. C. of Wis."—Accept our thanks for your interest in the Scientific American. The subscribers names are properly entered for 6 months each. You had better send the balance of the subscription by express from Milwaukee. \$57 received.

"Mrs. D. of N. Y." "J. H. of O." "S. C. care of T. & F. of Ct." "C. M. M. of Pa." and "A. J. F. of Mass."—Your papers have been sent to you for signatures. As soon as you have signed and had them otherwise properly executed, please return them for our further action.

"W. M. of Geo." "H. D. F. of Pa." "R. S. T. of N. H." "R. Y. F. of Vt." and "S. G. G. of Mass."—Your papers have been safely lodged in the Patent Office since our last issue

"J. H. of Mass."—Why do you not send us the balance of our funds, so that we can file your application without further delay?

"E. J. of Mass."—In a few days you shall hear from us. Your business is progressing.

"A. H. of Me."—Pardon our delay and look for your papers early next week.

"J. S. of Pa."—Ten dollars more received.

"C. R. W. of Ky."—The Clevis which you describe is quite old. No person can get a Patent on it. Your subscription expires with No. 39.

"A. & J. J. of N. Y."—Will appear in our next.

"W. H. P. of Va."—We shipped your business in due time, and gave the particulars by letter of the 27th ult. You can draw on us at sight for \$250 through you agent here and the balance will be appropriated as you have already directed.

"C. H. T. of St. Louis."—Yours of the 17th inst. reached us in due time but no pamphlet. You had better send us a drawing of the safety gauge and we will write you the expense of an engraving.

"W. H. S. of Del."—Your circulars were forwarded on the 1st inst. by Express.

"G. B. M. of Texas."—Your model and funds came safe. Shall write you soon.

"C. W. T. of Mich."—The books referred to can be sent by Mail with safety.

"A. B. W. of Mass."—The drawings of your Sewing apparatus were received duly and have been thoroughly examined. We think your machine far surpasses all others that we have become acquainted with, for accomplishing the end sought for, and we think your success inevitable. \$20 received. Your request shall be speedily complied with.

J. Armour's model has arrived. What shall we do for you?

Mr. G. W. Van Vleck, of Belfast, or Syracuse, will please report himself immediately. All persons are cautioned against paying money on our account to L. Van Vleck. We have reason to suppose that he is soliciting subscribers in the name of G. W. Van Vleck.

Table with 2 columns: Location and Agent Name. Includes entries for New York City, Boston, Philadelphia, Jackson, Miss., Southern, Albany, Andover, Mass., Baltimore, Md., Bermuda Islands, Bridgeport, Ct., Cabotville, Mass., Concord, N. H., Dover, N. H., Fall River, Mass., Greene, N. Y., Hartford, Ct., Houston, Texas, Halifax, Nova Scotia, Jamestown, N. Y., Lynn, Mass., Middletown, Ct., Nashville, Tenn., Norwich, Ct., New Haven, Ct., Newburg, N. Y., Newark, N. J., Paterson, N. J., Providence, R. I., Rochester, N. Y., Raleigh, N. C., Springfield, Mass., Salem, Mass., Summit Hill, Southport, Wis., Saco, Me., Savannah, Geo., Syracuse, N. Y., Taunton, Mass., Utica, N. Y., Vicksburg, Miss., Williamsburgh, Warren, Ohio, Webster, Mass.

Advertisements.

FOR SALE.—A NEW AND VALUABLE PATENT.

THE subscriber has just received letters patent for a Machine for making Lasts, Spokes, &c.—The principle of the machine is such that a large number of spokes may be made at the same time, with only one model. If the laster model be for a right or left foot pairs will be produced at the same time. The first and only machine after this patent has been in constant use about one year and a half, and makes the most perfect work that has ever been produced by a model (a sample of the work may be seen at this office.) A machine with 10 cutters will produce 5 pair of lasts or 10 spokes at one and the same time, and would require about the power of two horses, and would produce about 1000 spokes per day and 500 lasts. The subscriber will dispose of the whole patent or a single State. In the application for a patent the attention of the Commissioner of Patents was called to that of Thomas Blanchard to show in what way it was unlike his machine for turning lasts and spokes, that was granted in 1819 and extended in 1848. The subscriber is and has been prepared for a long time to have the question tested before the proper tribunal.

JOHN KIMBALL, 43 Tremont Row, Boston, Mass.

MINIFIE'S MECHANICAL DRAWING BOOK.

THIS is one of the most valuable works ever published, for Mechanics, desiring to learn the art of Drawing. The rules are all familiarly explained, and it is well illustrated with drawings, sections and elevations of buildings and machinery, an introduction to Isometrical Drawing, and an Essay on Linear Perspective and Shadows, 46 steel plates, containing over 200 diagrams. The work is bound in a beautiful and substantial manner. Price \$3. For sale by MUNN & CO. Agents for this city. Also Leonard's Mechanical Principles, a very valuable work, and should be in the hands of every mechanic—price \$1.50. Also superbly bound volumes of Ranlett's Architecture, complete, embracing splendidly executed engravings of buildings, plans, &c. Price \$7.

FOR SALE CHEAP. TWO Looms for Weaving Rubber Webbing for BRACES, with ten shuttles each, nearly new.—Also, a first and second Rubber Cutter, together with other machinery for manufacturing Rubber Braces. Enquire of NORCROSS & CO. No. 60 Nassau st. New York.

TO IRON FOUNDERS. FINE ground Sea Coal, an approved article to make the sand come off the Castings easily; fine bolted Charcoal Blacking; Lehigh fine Dust, and Soapstone Dust for facing Stove Plates, &c. &c.; also, Black Lead Dust, for sale in Barrels, by GEORGE O. ROBERTSON 283 West 17th st. New York

Great Improvements in Planing, Tongueing and Grooving Lumber. JOSEPH P. WOODBURY'S PATENT PLANING MACHINE.

THE Subscriber having received Letters Patent for a Stationary Cutter Planing, Tongueing and Grooving Machine, now offers for sale the right to use the same. This machine will plane six thousand feet of Boards to a uniform thickness in one hour, producing a better finished surface than it is possible to plane by any other means now known, not excepting the hand plane, and is peculiarly adapted to plane and joint clapboards or weather boarding, and will do the work faster and better than any machine heretofore invented. This machine is so arranged that it planes the board with an unbroken shaving the whole width and length of the material, and does not take more than two thirds the power that is required to do an equal amount of work by the rotary cutting cylinder now in common use. The construction and organization of this machine is different from any now in use. Communications for further particulars cheerfully responded to by addressing the subscriber (post paid) Boston, Mass. One of the above planing machines may be seen in operation by calling on the patentee. JOSEPH P. WOODBURY, Border street, East Boston, Mass.

HAND PLANING MACHINES. THE subscribers have on hand and are constantly manufacturing Hand Planing Machines of the most approved construction: will plane 22 inches in length and 10 inches in width a sample of which may be seen at Wood's Tool Store, corner of Chatham and Duane sts. N. Y.

THE subscribers also make to order larger sized Planers, to work by power. Also, Lathes, Drilling Machines, Mill Gearing, Shafting, Pulleys, &c. Orders left at T. J. Wood's Tool Store, or addressed to the subscribers at Union Works, Meriden, Ct. will receive prompt attention. OLIVER SNOW & CO. N. B. All work done by us is warranted to give satisfaction. m31 6t

SOUTH WESTERN PATENT AGENCY.

THE Subscriber has opened an Agency for the sale of patent rights, machinery, &c. of every description. My object is to enable inventors and manufacturers to realize the fullest advantage from their rights by introducing them into the West. All kinds of really good machinery and inventions are wanted, such as stove dressing, barrel making, morticing, sash, iron and wood turning, drilling, pressing and railroad machinery, as well as water wheels, windlasses, steam engines, cotton and woolen machinery, &c. To sell machines, &c. a model or machine will be needed; for patent rights a power of attorney would be requisite. My charges will be moderate, and energy used to forward sales. No charge will be made until some benefit is realized. Letters (Post Paid) will receive immediate attention. References:—Geo. Higgins and Geo. J. Mankin, New York; L. Pickering and S. Laffin, St. Louis; Hon. Jas. H. Woodworth, Mayor of Chicago. JOSEPH E. WARE, 65 Second st., St. Louis, Mo.

MANUFACTURER OF Lead Pencils.

Graduated Drawing; writing and Stylographic; and Artist's pencils, Crayons, Ever points, Pen Holders &c. The above pencils are peculiarly adapted to Mechanics use, as they possess great firmness and strength of points. Orders solicited from all parts of the country and goods forwarded with despatch. Concord, Mass. j20 1t

TO MECHANICS & MANUFACTURERS.

THE Subscribers having made arrangements with some of the principal Machinists and Foundries in the country, are prepared to execute any orders for machinery, tools or mechanical implements of any kind on short notice, and very low prices. The attention of mechanics is particularly called to the fact, that we will furnish all articles pertaining to mechanics at low rates, and with despatch.—We have constantly on hand a variety of second hand machinery which will be sold very low.—Those ordering from us may depend upon being satisfied both as to quality and price. Where an order is made any information on mechanical subjects will be given without charge. We will also receive proposals from Patentees for the sale of their articles, and patent rights in different sections of the country. NORCROSS & CO. 60 Nassau st.

RIVED STAVES, &c.

THE Subscriber has invented (to be patented) a new Stave machine, with which one boy will dress 8 to 10 hoghead staves per minute and do it well. It is very simple and compact measuring four and a half feet by one and a half. With a slower feed one horse will work it with ease. Prices very low. He also sells at higher prices his Stave Dressing and Jointing Machine—a truly excellent article. Also, a new Planing and Matching Machine, which cannot be surpassed by any other in use. Address H. LAW, 216 Pearl st. N. Y.

SUPERIOR TURNING LATHES.

JAMES STEWART, 15 Canal-st. and 106 Elm-st. is constantly manufacturing and has now on hand between 50 and 60 superior lathes of the following descriptions and at reasonable prices, namely: Dentist's Lathes, very highly finished. common, Brass and Wood Turner's Lathes. Jeweller's and Pencil-case maker's very superior. J. STEWART is also authorized to act as agent for the sale of the celebrated Lathes manufactured by James T. Perkins of Hudson, of large size and at prices from \$250 to \$800. A specimen of this description may be seen at his factory as above. j27 1t

BRITISH PATENTS. MESSRS. ROBERTSON AND CO., PATENT SOLICITORS.

(Of which Firm Mr. J. C. Robertson, the Editor of the Mechanics Magazine from its commencement in 1833, is principal partner.) undertake The Prosecution of Patents. For England, Scotland, Ireland, and all other European Countries, and the transaction, generally all business relating to patents. Instructions to Inventors can be had gratis, on applying to Mr. THOMAS PROSSER, 28 Platt Street New York; as also the necessary forms of Petition and Declaration for British Patents. PATENT OFFICE. 106 Fleet Street, London.

PATENT LUBRICATING OIL FOR MACHINERY.

THE subscribers are now prepared to supply Devlan's Patent Oil in any quantity. Machinists, Manufacturers &c., are invited to examine the article. Certificates of its superiority over all other oils from some of our most extensive manufacturers can be seen at this office. KENNEDY & GELSTON, 5 1-2 Pine-st. New York, Sole Agents for the New England States, and State of New York. Samples of the oil may be seen at the Scientific American Office. m10 1t

SUPERIOR ENGINE LATHES.

WE are manufacturing and selling at our establishment in New London, Ct. a superior article of Screw Engine lathes and also hand lathes of every dimension at an extremely low price. Address ALBERTSON, DOUGLASS & CO. Post Paid [d2 6m*] New London, Ct.

Z. C. Robbins, Consulting Engineer and Counsellor for Patentees. Office on F street, opposite Patent Office, Washington, D. C. j20 1t

WONDERFUL CHURNS.

THAT will cause butter to come from milk in three to four minutes, for sale at \$3, \$4 and \$5 each, at the Agricultural Warehouse of S. C. HILLS & CO. 43 Fulton st.

SAW MANUFACTORY.

LEAVITT & M'DANIEL, Fisherville, N. H., Manufacturers of Mill, Circular, Tennon, Cross-cut, and Pit Saws. Also, Fellos, Turning and Veneering Saws; Billet or Wood Cutter's Saws; Iron or Brass Web Saws, Pruning and Butcher's Bow Saws, Chest, Hand, Pannel and Ripping Saws. Also, Planing Trowels. J. McDaniel, Concord, Wm. D. Leavitt, Fisherville. RUFUS R. LEE, Manufacturers' Agent, No. 11 Kilby st. (up stairs) d30 3m*

TO RAILROAD COMPANIES.

THE Subscriber has made application for letters patent on his self-acting Railroad Gate, designed to close up the common road in dangerous places, that nothing may intrude upon the Railroad at the time the engine or train are passing, and is now ready to negotiate with Companies, on most reasonable terms, for the erection of such Gates. For further particulars, apply to A. C. Coffin, Haverhill, Mass. a21 3t

FELTING MANUFACTORY.

JOHN H. BACON. (Late of the firm of R. Bacon & Sons.) Manufacturer of Feltings for Water Filters, &c., Steam and Water Pipes, Emery Wheels, Calico Printers', Jewellers', Marble Workers' Boot Felts, Felting for Railroads, &c. &c. Also Lambs Wool Wadding for Cloaks, Skirts, Hoods, &c. For sale and orders received by T. C. BACON & CO., corner of Union and Ann sts., also by E. C. TURELL, No. 26 Ann st. Boston, next door to Oak Hall. a7 3m*

Johnson's Improved Shingle Machine.

THE Subscriber having received Letters Patent for an improvement in the Shingle Machine, is now ready to furnish them at short notice, and he would request all those who want a good machine for sawing shingles, to call on him and examine the improvements he has made, as one eighth more shingles can be sawed in the same given time than by any other machine now in use. Manufactured at Augusta, Me. and Albany, N. Y. J. G. JOHNSON Augusta, Maine, Oct. 23, 1848. o28 1y

Lap welded Wrought Iron Tubes FOR TUBULAR BOILERS,

From 1 1-2 to 8 inches diameter. THESE are the only Tubes of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers. THOMAS PROSSER, Patentee, d30 28 Platt-street, New York.

GENERAL PATENT AGENCY. REMOVED.

THE SUBSCRIBER has removed his Patent Agency from 189 Water to 43 Fulton street. The object of this Agency is to enable Inventors to realize something for their inventions, either by the sale of Patent Goods or Patent Rights. Charges moderate and no charge will be made until the inventor realizes something from his invention. Letters Patent will be secured upon moderate terms. Applications can be made to the undersigned, personally or by letter post paid. SAMUEL C. HILLS, Patent Agent.

E. NEVILLE, WOOD ENGRAVER.

122 Fulton st. corner Nassau. The above is prepared to execute all orders at the shortest notice and on the most reasonable terms

PRIZE ESSAY.

Essay on the Patent Laws.

WITH SUGGESTIONS OF ALTERATIONS AND ADDITIONS FOR THEIR IMPROVEMENT.

By Edmund Maher, Civil and Mechanical Engineer, Washington, D. C.

(Continued.)

The great expense attending this appeal, moreover, in the form of government, and counsel fees, and the other necessary outlays incurred, apart from his unwillingness to leave the decision of the question to a person whom he regards as unqualified for the task, from ignorance of the subject to which his invention belongs, deters the inventor, who is generally limited in means, having in most cases expended his all in the perfection of his invention, from availing himself of this alternative of the law, and causes him to abide by the decision of the Examiners expressed through the Commissioner, although conscious in his own mind that it is unjust.

By specifying in clear and exact terms in this section of the law, what shall form a patentable subject, and striking out all portions contained in the whole code giving an extreme discretionary power to the Examiner and Commissioner, to reject an application for a patent for an invention, possessing wholly or in part a novel combination, or arrangement of known parts, or a difference of form from any thing heretofore discovered, or in fact containing any material variation from a previous invention, because it is not in their opinion useful, or does not accomplish a beneficial object, over such previous invention; and otherwise restricting the powers of said Examiners, and Commissioner, many useful inventions that have been rejected, and consequently lost to the world, would have been patented, and the litigation and consequent trouble and expense, occasioned by appeals to the appellate tribunal, have been prevented. If upon a thorough examination of an alleged invention, by the proper tribunal, it is found to possess a patentable difference, an exclusive governmental privilege or right, to hold and enjoy such difference, of whatever character it consists, as his own property, with the same reservations as other property is held, should be extended to the inventor, without regard to its usefulness, except in cases of difference of material, or others of a like nature, where the effect or result produced is apparent to the general understanding of all—or is in opposition to well established principles or rules of the branch of the arts to which the alleged invention refers, or the alteration made is designed to evade an existing patent, on which it professes to be an improvement. In all cases, a discretionary power to reject a patent should be invested in the Commissioner and Examiners. Many of the greatest inventions ever produced have met upon their first introduction with either adverse opinions as to their practicability or utility, or lukewarm receptions from scientific men, tending to influence and prejudice the public generally against them, and have from such causes been delayed or forestalled in their development. In proof of this assertion, I might instance the cases of the Magnetic Telegraph, and the application of Steam to river and ocean navigation, in which delays of many years, occasioned by erroneous opinions formed in the public mind, through the agency of adverse opinions of persons professing to be versed in the mechanic arts and sciences, were caused to intervene between the time of their conception in the minds of the respective inventors, and their introduction to practical and general use. Scientific men, without practical experience in mechanics, are generally governed in their opinions by what they have read in books, and are only acquainted with the effects likely to be produced by a new invention, by rules bearing on the subject laid down in books, (which are in many cases nothing more nor less than fallacious opinions of book authors,) without understanding the nature of the several parts, and operating causes, from practical observation, and hence, if a problem is given them to solve, they invariably apply these rules to the exclusion of all others, to elucidate the result. The utility and practi-

cability of an invention, cannot be fully ascertained, until such invention is subjected to a suitable experimental test, and if the producer of any discovery or invention, of a patentable nature, believes it to be useful, and desires authority from the government to hold it as his own property, previously to subjecting it to practical operation, he should be granted this conferment or privilege, and in case of the alleged improvement proving otherwise, he alone will suffer from the result.

All inventions and improvements more or less, have their origin in new combinations and arrangements of known parts—differences in construction and form, or new modes of operation in the several branches of mechanics and the arts, and in order that inventors, who are generally practical mechanics, should have a fair and candid examination and decision of their claims to originality, in their alleged new combination, arrangement, or other patentable peculiarity or difference from any thing of a similar nature, the Board of Examiners should consist of persons of acknowledged ability, in the particular branch of the mechanical, or chemical arts, allotted to the department, to which they are respectively assigned by the Commissioner, and one half of their number at least, should be thorough bred mechanics who have served a term of apprenticeship, of at least three years with some mechanic, or mechanics, so as to become thoroughly and practically acquainted by their own labor and observation, with some department of the arts embraced in the branch to which they may be assigned. In fact, a proper numerical representation of intelligent mechanics in this department of the government, where their services could be brought to such good account, is not only demanded, by reason of their peculiar fitness for the trusts and duties reposed in the Examiners, but also as a return for the shameful neglect of the government towards this industrial class of citizens in the bestowal of its patronage, notwithstanding they contain within themselves the nation's wealth, and contribute in a greater degree than any other portion of the community to its increasing growth, in the various branches of commerce, agriculture, manufactures and science at home, and honor and fame abroad.

Mechanics being virtually excluded from all other departments of the government, the assignment to them of the offices in this mechanical department, which has its origin and present elevation from their exertions, is no more than a just and merited return for their labors, and would at once give an impetus to thought in the minds of those of our citizens who possess the natural attributes and genius essential to the production of original and useful ideas in mechanical and chemical philosophy, by the assurance that the results of their thoughts would be examined by men impressed with their importance by practical experience and observation, who sympathize with their efforts in elucidating and bringing to light the hidden treasures in the various elements of the mechanical professions in which they have themselves toiled, and are ready and willing to encourage and assist them to the extent of their powers, by the conferment of adequate security in the original conceptions of their brains. All the Examiners should, moreover, be possessed of a variety of scientific knowledge, co-extensive with the diversity of the mechanic arts, and other subjects, legitimately coming within the scope of Patent Laws, and should in fact, possess all the necessary attributes required to properly carry out the trusts reposed in them.

For the more perfect organization of the Board of Examiners, with a view to the correction of the evils arising from its present imperfect composition, and to more clearly define the powers and duties of said examining board, and what shall form proper subjects for patent, I propose the following amendments to the existing laws.

1st. Strike out all relating to appointment of Examiners in the code, and embody, in suitable legal phraseology in lieu thereof—

The Commissioner of Patents may, with the approval of the Secretary of State, appoint eight examining clerks, at an annual salary of \$1500, who shall be divided into four committees of two each, whose duty it shall be

to examine and pass judgment upon applications for patents, for improvements in the mechanic arts, in the particular branch to which their respective duties have been assigned; and those other Examiners, who shall be designated the chief board, at an annual salary of \$2500, whose duty it shall be to examine and pass judgment upon all rejected applications, and perform other duties hereinafter stated. And if the respective members of the first mentioned committees, concur in the prayer, wholly, or in part, of an applicant, whose case is before them for a patent, a patent shall forthwith issue, but if said committee shall reject said petition, or any part of the same, they shall state fully in writing the causes of objection, and reasons, and authorities, for so doing, and shall hand up such written objection, with the papers, drawings, and model, and all the information in their possession, bearing on the subject, to the chief board of examiners.

2d. The chief board shall consist of three examiners, whose principal duty it shall be to examine, and pass judgment upon all rejected applications. They shall first give notice to the applicant of the rejection of the application, and appoint a day, as early as will suit the applicant, and the members of the revising board, to hear the case, and the said applicant may appear by counsel, or in person, or in both, and be at liberty to overcome all objections, if in his power, and to produce all needful testimony to substantiate his rightful claim to a patent, and it shall be in the power of said revising or chief board of examiners to grant or reject the application, on second full hearing, and said decision shall be final. Said decision, to make it legal, shall receive the approval of a majority of the members of said board, and shall with all its views, be written out and recorded, together with the views advanced by the first, or inferior board of examiners, in a book kept for the purpose, which shall at all times be accessible to the public, either for examination, or for the purpose of transcribing copies for publication.

3d. No person shall be eligible to the first mentioned, or inferior board of examiners, who is not fully conversant with the Patent Laws, with common law, in its applicability to cases of litigation, in conflicting claims, to priority of invention, and other cases requiring such application, and who is not familiar with the advanced state of improvements in the various branches of the mechanical and chemical arts, coming within the scope of their respective duties. One half their number should, also, be thorough-bred mechanics, who have served an apprenticeship of at least three years with some mechanic, or mechanics, so as to become thoroughly and practically acquainted, by their own labor and observation, with the department of the mechanic arts, involved in the division or committee to which they may be assigned.

4th. No person shall be eligible to the board of chief examiners, who does not possess the same capabilities, as those required of the members of the first, or inferior board, and mentioned above, and one of their number should be a practical chemist, capable of subjecting to experimental test, or analysis, any composition of matter, or other alleged discovery of a chemical nature; and the remaining two members of said board, should be, like one half the members of the first mentioned board, thorough bred mechanics, who have likewise served an apprenticeship of at least three years, in some mechanical branch, and are otherwise, by experience, and acknowledged ability, and soundness of judgment, possessed of the necessary qualifications for the duties coming within the sphere of their action.

5. All applications for patents, that have been heretofore rejected, may be revived and revised, and again entered, with, or without alterations and additions, to modify and restrict their former claims, or to embrace improvements made, subsequent to the original presentation of their claims for adjudication, upon the payment of full fees, and may in all respects, be treated as if they had not been formerly made.

6th. All novel differences, in mechanical or chemical combinations, arrangements, constructions, or modes of operation, that, in the

opinion of the inventor, increases the usefulness or efficiency, or in any manner betters them for the object of their design, from the originals, shall be legitimate subjects of patent. Such changes may consist, in the material of which they are composed, or in the manner of construction or mode of application, or difference in combination, or form, forming in their perfection, a machine, compound, form or composition of matter, capable of producing different and more beneficial results, from such previous invention; provided, however, that the examiners be allowed a discretionary power, to patent or reject an application for a patent, for an alteration in a former machine, or composition of matter, or other alleged invention, where it is clear that such alteration was designed to evade an existing patent, or where the result designed to be accomplished by such invention, is in opposition to well established principles or rules of the arts, to which it appertains, or where the alteration, forming the subject of the claim, is a difference of material, in which latter case, the inventor or discoverer thereof, should fully state the beneficial objects, effected by the change, and the examiners should make such benefits a *sine qua non* to the issuing of a patent, for such difference of material.

7th. Any person obtaining a patent, for a new machine, or other invention, or discovery, of a patentable nature, that shall be found to involve parts of other machines or inventions, already patented, shall be held liable to pay to the patentee of such invention or his representatives, such a proportionate patent value, as their relative importance has to his invention—such relative value to be determined by a jury to be appointed by the proper officer of the United States District Court, on application of such person, whose patent is used, and such decision shall determine, for said judicial district. Said jury may direct a gross sum to be paid, or shall direct a specific sum, for each machine, manufacture, instrument, compound, or composition of matter made—the costs, arising from this adjudication, to be paid by the parties, in proportion to their respective interests in the article, as determined by jury.

(To be Continued.)



THE BEST
Mechanical Paper

IN THE WORLD!
FOURTH YEAR OF THE

SCIENTIFIC AMERICAN!

416 Pages of most valuable information, illustrated with upwards of

500 MECHANICAL ENGRAVINGS!

The Scientific American differs entirely from the magazines and papers which flood the country, as it is a Weekly Journal of Art, Science and Mechanics, having for its object the advancement of the INTERESTS OF MECHANICS, MANUFACTURERS AND INVENTORS. Each number is illustrated with from five to TEN original ENGRAVINGS OF NEW MECHANICAL INVENTIONS, nearly all of the best inventions which are patented at Washington being illustrated in the Scientific American. It also contains a Weekly List of American Patents; notices of the progress of all Mechanical and Scientific Improvements; practical directions on the construction, management and use of all kinds of MACHINERY, TOOLS, &c. &c.

It is printed with clear type on beautiful paper, and being adapted to binding, the subscriber is possessed, at the end of the year, of a large volume of 416 pages, illustrated with upwards of 500 mechanical engravings.

TERMS: Single subscription, \$2 a year in advance; \$1 for six months. Those who wish to subscribe have only to enclose the amount in a letter, directed to

MUNN & CO.,
Publishers of the Scientific American,
125 Fulton street, New York.

All Letters must be Post Paid.

INDUCEMENTS FOR CLUBBING.

5 copies for 6 months	\$4 00
5 " " 12 " "	\$8 00
10 " " 6 " "	\$7 50
10 " " 12 " "	\$15 00
20 " " 6 " "	\$15 00
20 " " 12 " "	\$30 00

Southern and Western Money taken at par for subscriptions. Post Office Stamps taken at their full value.

A SPLENDID PRESENT!

To any person who will send us Three Subscribers, we will present a copy of the PATENT LAWS OF THE UNITED STATES, together with all the information relative to PATENT OFFICE BUSINESS, including full directions for taking out Patents, method of making the Specifications, Claims, Drawings, Models, buying, selling, and transferring Patent Rights, &c. This is a present of GREAT VALUE, yet may be obtained for nothing, by the reader of this prospectus, if he will take the trouble to get Three Subscribers to the Scientific American. It will be an easy matter to obtain two names besides his own.

MUNN & CO., Scientific American Office, N. Y.