Scientific American

NEW-YORK, DECEMBER 18, 1852.

Award of Prizes.

In the prospectus of this volume of the Scientific American, we offered four separate prizes for the four largest lists of subscribers.—These prizes were, 1st, "An elegant silver pitcher." 2nd, "The Iconographic Encyclopedia." 3rd, "Dempsey's Machinery of the Nineteenth Century." 4th, "Naval Dry Docks of the United States." The time specified has now arrived for declaring the names of those who have gained said prizes. They are, 1st prize, John Marston, of Saratoga Springs, N. Y.; the number of names sent 125. Saratoga is an enterprizing town, but previous to this we had only three subscribers by mail in that place. 2nd prize, to L. A. Miller, Woodstock, Vt.; the number of names sent, 101. 3rd prize, to John J. Conley, of Richmond, Ind.; number of names sent, 72. 4th prize, to R. S. Titus, of Flushing, Long Island; the number of names sent 62. As we have heretofore stated, if the gentleman who has gained the silver pitcher prefers to have its value in money, viz., $60, we will forward the same to him,—his choice is our law. The books which have been awarded are illustrated works of a practical standard character, and are not merely useful for a single reading, but as works of reference for ever. We have no doubt but the gentlemen who have gained them will feel satisfied.

We take this opportunity of returning our sincere thanks to other competitors who have sentus lists, a number of which are nearly as large as that for the fourth prize. Whatever kind turn we can do foryou, we will be happy to do it, and you may be more successful on another occasion.

It would not be just or honest if we pretended otherwise, than that one great object of offering these prizes was the extension of our circulation, it was; but at the same time, we believe the Scientific American to be a useful paper, a standard work, and will return full value to every subscriber for his money. It is not so large as some papers of the same price, but the value of no paper should be estimated by its size or the amount of its mere reading matter—its quality—its real worth is the only standard. We can buy forty yards of calico at one shilling each, for one of broadcloth at five dollars, but a yard is a yard all the world over, the quality, not the quantity makes the difference. We have the means of obtaining more varied stores of useful information about science, art, and new inventions and discoveries than any other paper on our continent. We also spend more money to obtain such information, than any other paper, and our engravings are the best illustrations of mechanical subjects ever attempted in our country. Our experience, our agencies, and correspondence with qualified and able men in different parts of the Union, in France, Germany and Britain, enable us to obtain the *first and most reliable* information about everything that is new in science and art. It has taken —as it always must—a number of years to discover, arrange, and perfect the means of obtaining such information, and now we rest firm and secure on a solid basis of a primitive formation. We feel, and no doubt all our friends do the same, in commending the Scientific American to persons for subscription, a consciousness of returning them a full equivalent for the money they may subscribe. The very engravings of machinery, &c., which we present in one volume are worth more than five dollars to any mechanic, artisan, and inventor, and we confidently aver that the same number and same amount of correct reading matter accompanying such illustrations cannot be obtained in any paper or magazine in the world, and in no book for three times the same amount of money. It is also the only real inventors' advocate, friend, and paper in the United States. We publish a number of valuable and rare receipts; and communications of a most practical, scientific, and useful character, by some of the ablest men in our country, frequently appear in our columns.

Our general subscription list has greatly increased, and we are therefore enabled to expend more upon our present volume than any of the preceding seven. We return our thanks to old friends for the kind interest they have manifested in our success, and to our new friends, we say, our friendship will be much closer before the end of the present volume.

Ammonia.

This substance is placed by agricultural chemists at the head of all fertilizers. Guano derives its chief value from its presence, as it contains over 60 per cent. of it. Could it be obtained cheap in the state of a salt, like the muriate (salammoniac,) a valuable and cheap substitute for guano could be made artificially. But it is a dear substance, and farmers cannot afford to buy it. There appears, however, to be some prospect of obtaining a cheap supply, as it is stated that "Prof. Gale, of the Patent Office, has recently received some crude sal-ammonia, brought from Chincha (whether the Peruvian valley or not we cannot say,) which has recently been discovered in a vein like that of metallic ore, and in quantities sufficient to render it an article of commerce." We hope this information is true, but the quantity may be as moderate as that now found in all volcanic regions. Ammonia is a compound of two gases, viz., nitrogen and hydrogen.—They do not combine directly in their gaseous state, but if a great number of electric sparks be passed through a mixture of them, especially if acid vapors are present, a combination takes place, and a third body—ammonia—(NH^3) is formed. It is always found in the rains of thunder storms, hence it is concluded that the lightning is an active agent in its formation—it is the marrying minister. These two gases, however readily combine in a nascent state; a piece of iron rusting in the air is almost constantly giving rise to a small portion of ammonia. The moisture which covers the iron dissolves the atmospheric air; the oxygen of this air unites with the iron to form the rust—oxide—and the pellicle of oxide constitutes with the metal, a voltaic element strong enough to decompose water. The oxygen thus set at liberty unites with a new quantity of iron, and the nascent hydrogen of the water finding nitrogen in solution in the moisture, unites with it and forms ammonia.

When zinc is dissolved in dilute nitric acid, the liquid is found to contain a marked quantity of the nitrate of ammonia. In the solution of the zinc in the dilute acid, hydrogen gas is set free and nitrate of oxide of zinc is formed, but if zinc is treated with concentrated nitric acid, the zinc is oxidated at the expense of a portion of the nitric acid, and as a mixture of hydrogen and nitrogen is separated, these two gases meeting in the liquid in a nascent state (act of evolution) unite and form ammonia. A notable quantity of ammonia is therefore found in the liquid. It is the case with other gases beside nitrogen and hydrogen, that although they do not readily combine when brought together in their distinct gaseous state, yet do so freely when simultaneously set at liberty in the same solution.

Animal matters burned under exclusion from the air, give off a considerable quantity of the carbonate of ammonia. This is dissolved in hydrochloric acid, and produces the salammoniac of commerce. Ammonia is obtained in a gaseous form by mixing powdered salammoniac with about an equal quantity of dry *slacked* lime, and heating it in a retort having a bent tube. The gas is abundantly discharged, and may be collected in the common way over mercury in a trough. Ammonia is a colorless gas of a very pungent odor, causing tears to flow freely. It is a powerful alkali, and neutralizes strong acids, such as sulphuric, &c.—In water it is very soluble, and being mixed with it, is called aqua-ammonia. Under a pressure of five atmospheres, it becomes liquid; it extinguishes the light of a candle, and does not burn under ordinary circumstances; if breathed undiluted it is fatal to life.—It is very volatile as a liquid, and is employed to give that pungent odor to what are termed smelling salts. The producing of tears which is a peculiarity of onions, is attributable to ammonia. In the destructive distillation of bituminous coal in making gas, a quantity is produced which has all to be removed, for it detracts from its illuminating properties. This is done by a water cooler—a vessel through which the gas passes before it goes into the retaining tanks and pipes for distribution. It would be well for agricultural chemists to devote their attention to the artificial production of a cheap ammoniacal salt, as the Lobos Islands are not yet free property for all the world.

Critical Dissertation on Steam, Hot Air, and Gas Engines.

One of our exchanges asserts that preparations are already in progress to contest the claim of Ericsson to the invention of the "caloric engine." It also quotes from the "London Mining Journal" of Nov. 6th, a paragraph taken from the Augsburg Gazette (a German paper,) which claims the invention for a magistrate named Prehn, of Lauenburg (Germany) who invented a caloric engine some years before Ericsson. It says:—

"By a series of costly experiments he succeeded in expanding and contracting air so rapidly by alternately heating and cooling, as to prove its capability as a motive power. He endeavored to get a patent for England, but found he should lay himself open to opposition and law suits; and although he obtained one for Berlin, and had testimonials of success from Macpherson and George Stephenson, in England, Von Humboldt and Rapsold, of Hamburg, and Schumacher, of Altona, ill-success brought him to the grave, leaving a widow and seven children."

Public journalists and mere literary men generally display a great amount of ignorance respecting the history of inventions. Some believe and assert that James Watt was the inventor of the steam engine, while steam had been applied to move machinery before he was born. Some assert that Fitch, Fulton, or Symington were the first inventors of the steamboat, while a patent was taken out for such an application in 1736 by Jonathan Hulls. There is a great difference between an improver and an original inventor. The original invention may not be much, and an improvement may be everything, and vice versa. The caloric engine, about which so much is just now said, is simply the application of heated air to propel machinery, as a substitute for steam. Now this is no new application nor invention, and neither Prehn nor Ericsson are the first inventors, and it remains to be shown yet whether as an improvement the Ericsson engine will be anything more than has already been accomplished.

In 1827, two brothers (one a clergyman, we believe,) named Stirling, in the city of Glasgow Scotland, took out a patent for a hot air engine, which was illustrated and described in "Galloway's History of the Steam Engine" in 1832; this patent was secured for the application of the heated air to propel machinery in a particular manner 25 years ago. This engine communicated motion to a piston by alternately heating a portion of air connected with one side of the piston, and at the same time cooling that in connection with the other side. This was done by means of two air vessels, the one communicating with the upper and the other with the lower side of the piston. An air vessel was filled with thin plates of iron perforated with holes, or with pieces of brick, and the lower part of each air vessel was heated by a fire placed under it, pretty much the same as the Ericsson engine. The Stirlings, however, did not claim hot air in their patent specification, and the conclusion is—they did not believe themselves to be the first inventors; it is probable that they knew a patent had been taken out in 1824 for an atmospheric engine, by E. & J. Prentice, Baltimore, Md., or the one with two cylinders by W. Willis, of Charleston, S. C., in 1826; at any rate, the application of hot air to propel machinery is anything but a new invention. Ericsson took out his first patent in 1834, a long time ago, and the illustration of his principle, as exhibited on page 60, last volume, Scientific American, appears to embrace the very principle of Stirling's, only the arrangement is not the same. The principle of the new caloric engine, which as asserted, will make it successful and more economical than the steam engine is, that after the heated air has acted upon the piston, it is not lost—the heat is saved and applied over again. This very principle is described as belonging to the Stirling engine, which was improved and patented twelve years ago. We are thus particular because we wish to let the public know distinctly that the "hot air," alias *caloric engine*, is not a new nor untried invention, very different from what many have been led to believe by the numberless feuilletonists of our daily, weekly and monthly periodicals.

Gas Engines.—Many accounts have lately been spread before the public, about the employment of ether, chloroform, carbonic acid gas and other gas engines, as substitutes for the steam engine. As far back as 1824, a patent was taken out by Samuel Brown, of London for the United States, and Minus Ward, of Baltimore, took out one in 1827, for a gas and heated air engine. Thos. S. Brown obtained his English patent in 1823. It was called a *gas vacuum* engine, and was actuated by the inflammation of hydrogen in a vessel containing a portion of atmospheric air sufficient for combustion. This created more sensation in 1826 in London, than the caloric engine now does here; it, however, was a failure. In 1825 the celebrated Brunel obtained a patent for employing carbonic acid gas as a motive agent after it had been reduced to a fluid by Humphrey Davy, but he did not test it, being satisfied, we suppose, that it would be more expensive than steam. Benjamin Cheverton, an English gentleman, who sometimes writes now for our London scientific cotemporaries, obtained a patent in 1826, for an improved carbonic acid gas engine, but it, like Brunel's, amounted to nothing at all. A patent was taken out the same year (1826) by a Mr. Howard, for an ether-alcohol engine, which was identical in principle to the one said to be now invented by Mons. Tremblay, of France, for working with chloroform, which is a similar chemical agent. Gunpowder, smoke, and we do not know how many more substitutes have been proposed and tried as substitutes for the steam engine, not one of which has maintained the least semblance of a decent competition. The reason why, we will endeavor to set forth next week.

Falling Houses Again.

Guilty indeed are the magistrates of New York City for the many lives which have been lost by the falling of buildings because of insufficient workmanship. Every few weeks, a building in the course of construction tumbles down, and some poor fellow is killed, leaving perhaps a widow and small family, wrecked on the cold world's bleak shore.—On Tuesday last week (7th inst.,) a large five story brick building, 50 feet front and 40 feet deep, together with two large houses on Thirty-second street, this city, in course of erection and near completion, fell with a terrible crash, and instantly killed three of the persons who were at work, and severely injured a number of others. The cause was insufficient strength of supports. When shall we be able to cease chronicling such calamities.

All Gone, All Gone.

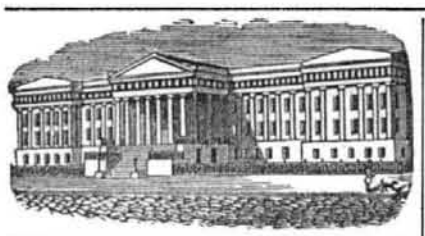
At the commencement of the present volume, we printed 5,000 extra copies, which we concluded would be sufficient for the subsequent demand. It is now but 14 weeks since Vol. 8 was commenced, and to the disappointment of many we are obliged to announce that the entire editions of the first four numbers are all gone, and that we shall not be able to furnish the back numbers to any parties who order after this date. Of Vols. 6 and 7 we have a few, complete, left, and have reserved a few sets of Vol. 8, from the commencement to supply those who have ordered and paid for the volume, but who prefer receiving it at the end of the year.

Hydraulic Pumps.

Thirty-six sets of hydraulic pumps are in the process of construction at the Washington Navy Yard, designed for testing steamboat boilers required under the law of the last session of Congress, which was passed with a view to the safety of passengers on board of vessels propelled in whole or in part by steam.

A Large and Small Wheel.

We have been considerably edified with the discussion which the question of "a large and small wheel," has provoked throughout the country. In quite a number of our cotemporaries, long communications have appeared on the subject, and editorials two and three long columns in length have been produced.



Reported Officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING DECEMBER 7, 1852

MACHINERY FOR BENDING PAIL BALES, ETC.—By Robt. Bunker, of Rochester, N. Y.: I claim the combination of the saddles, brake, bar, and movable block, all operating as described.

SEED PLANTERS—By L. W. Colver, of Louisville, Ky.: I claim making the cells in the tops of the grooves, so that they shall carry single grains, and combining therewith a cleaner, which extends into the groove behind the seed, as each cell in turn arrives at or over the seeding tube, for the purpose of carrying around and depositing with certainty the seeds or grains, singly, substantially as described.

SAW GUMMERS—By R. S. Cramer & C. C. Blossom, of Somerville, Ohio: I claim the nut, having gudgeons occupying notches in one of the jaws of a saw gumming apparatus, in which the cutting portion is situated between the power and the fulcra for the objects explained.

DRILLING MACHINES—By Chas. W. Coe, of Ashtabula, Ohio: I claim, first, the peculiar manner of giving the slow automatic feed-motion to the spindle, and the fast receding motion, by means of the sliding pinion, collar and screw, which is attached to the spindle, combined with the two sets of cogs, or their equivalents, upon the face of the same disc, the several parts above-named being constructed, arranged, and operating in the manner and for the purpose described.

Second, the peculiar method of constructing and arranging the clutch, by which the inclination of the clutch may be changed, as described, and the position of the clutch also moved or changed bodily in a horizontal direction.

HATS—By Francis Degen, of New York City: I am aware that metallic rings or bands have been used in helmets and similar articles, for the purpose of a support, but I do not know of any hat in which a strip of foil has been inserted between the leather or sweat and the hat; therefore, I claim the metallic strip or strips, inserted between the leather, or sweat, and the hat, and attached to either or both the hat or sweat, as described.

TONGUING AND GROOVING APPARATUS—By Phineas Emmons, of New York: I claim the shaft, connecting rods, cutter stocks, cutters, and slides, in combination with the stationary tonguers and groovers, for the purpose of tonguing and grooving boards, &c., as set forth.

HOT AIR FURNACES—By Stephen Gates, of Albion, N. Y.: I claim the combination of the deflecting plates, with the system of upright flues directly over the fire chamber, when such flues are arranged in the manner set forth, so that each flue of itself shall act as a deflector and insure a complete circulation through the whole system, substantially as described.

BENDING CARPET BAG FRAMES, ETC.—By E. L. Gaylord, of Newark, N. J.: I claim the employment for the purpose of bending and forming carpet bag frames, or for bending two or more flat metal bars edgewise, for any purpose, of a pair of clamps, each moving independently of the other, in the direction of the width of the bars, and having recesses and self adjusting movable pieces, as described, combined in any way, substantially as set forth, with a table, and bending plate.

GRAIN AND GRASS HARVESTERS.—C. B. Brown, of Griggsville, Ill.: I claim the combination of the crown wheel, with the shafts, with their respective pulleys, acted upon alternately by the cogs of the wheel, the shafts being connected so as to turn in opposite directions, whereby a vibratory motion is given to the blade.

I do not claim either of these singly, but when combined, for the purposes and in the manner substantially as described.

GALVANIC BATTERY—By Louis Drescher, of New York City: I claim the improved arrangement of the old voltaic pile, the same consisting in so separating each galvanic pair from that next it, in the series, and connecting them with short wires, and forming the plates with suitable perforationt, as that the strips of leather or flannel, or their equivalent, may be at once saturated with the exciting liquid, by immersing the battery therein.

HINGE FOR MOULDER'S FLASKS—By Geo. Grant, of Troy, N. Y.: I claim a hinge for moulder's flasks, constructed substantially in the manner as described, by means of which the cope is raised in the jaws of the hinge, as set forth

CHAIRS—By J. T. Hammitt, of Philadelphia, Pa.: I claim operating the leg rest of the chair from the motion of the seat and back, by means of the lever and rod, or their equivalent.

MACHINES FOR HAT BODIES—By L. E. Hopkins, of N. Y City: I claim the feeding belts, constructed substantially as described, with jointed chairs, having cloth stretched between them, as set forth, by which their motion is exactly determined and equal.

Also the combination of the revolving endless planking board or table, with the feeding belts, both moving with the same velocity, for the purpose as described.

LOCK—By Richard Ketcham, of Seneca Castle, N. Y.: I claim the circular tumbler or its equivalent, in combination with the slotted collar, which encompasses the spindle of the knob, said collar and tumbler or its equivalent, being constructed and operating as described.

PADLOCK—By Rhodolphus Kinsley, of Springfield, Mass: I claim giving a forward motion to the hasp, and acting upon the tumblers by means of the same key, when the parts are arranged so that the key acts directly upon a portion of the hasp, substantially as described.

Secondly, the double acting spring described, only when used in connection with such a form and arrangement of hasp as will cause it to actuate the tumblers, and not only throw the hasp out, but hold it thrown out and fully open in the manner described.

MODE OF FROSTING GLASS—By John Levy & C. Jones, of New York City: We claim, first, frosting and figuring glass, by fixing the plates to be treated in a trough or vessel containing sand, pebbles, and water, and subjected to a short, quick, vibratory motion, in a longitudinal direction, by any suitable mechanical movement, thus causing the glass to pass through the mass of gritty material, before any considerable momentum is imparted to that mass.

Second, forming ornaments upon the glass by the application of patterns or designs, in connection with the process of frosting by, the action of the sand and pebbles, as set forth.

WOODEN TYPE—By John McCreary, of Chesterville, Ohio: I claim the arrangement of the propelling lever, as that, by its return movement, in combination with the feeding lever, spring, dog, and feeding tube, it will move forward as required, the blank wood to receive the impression, as set forth.

PILL MAKING MACHINES—By E. H. Pond, of Rutland, Vt.: I claim, first, moulding or forming pills by means of two cylinders, having each a number of recesses in its periphery, the recesses in one cylinder matching with those in the other, and each matching pair forming a mould of the required form of the pill, the said cylinders revolving in opposite directions, and the pill mass being conducted between them, as described.

Second, the bands of india rubber, or any sufficiently elastic material passing round or partly round the mould cylinders for the purpose of expelling the pills from the recesses, after the moulds are open, substantially as set forth.

SHINGLE MACHINES—By Wm. Stoddard, of Lowell, Mass.: I claim the combination of the rifting knife (connected with the main driver by means of elastic arms) with the inclined planes placed upon the rails, as described, for the purpose of enabling the knife to be carried forwards under the block, during the forward movement of the said driver, and then be elevated to the proper height to split off a shingle, during its return movement, as set forth.

Also the arrangement of a secondary driver placed above and acting independently of the main driver, in such a manner that it will drive the rived shingle from under the block and deposit it upon the bed, in such position that it will be carried forwards to be dressed during the forward movement of the said dresser, substantially as set forth.

SCREW DRIVER—By J. W. Switzer, of Basil, Ohio: I claim the screw driver, spring catches, attached to the flat portions of the screw driver, and permitting longitudinal as well as lateral adjustment, and the barrel in which the whole is placed, in combination with the brace and stock, or their equivalents, the whole being constructed, arranged, and operating in the manner and for the purpose substantially as set forth

[See engraving of this invention in No. 6 of the present volume of the Sci. Am.]

REEL FOR HARVESTERS—By Warren W. & Clark C. Wright, of Canton, Pa.: We claim, first, extending the axle of the driving wheels, so far beyond the carriage as may be necessary to form a pivot for the reel to turn upon and allow of its rotation, by a band, as described, independent of the rotation of the axle, substantially as set forth.

SLAGS OF FURNACES—By Wm. H. Smith, of Philadelphia, Pa.: I claim the process of utilizing the slags of iron and other like furnaces, refining and working the same, substantially as set forth, whereby I bring into successful operation, for useful purposes, a class of hitherto useless products.

MACHINERY FOR MAKING WOOD SCREWS, ETC.—By Cullen Whipple of Providence, R. I. (assignor to the New England Screw Company): I claim, first, the feeder, composed of a sectional trough, with a close bottom and open top, into which the blank drops and arranges itself before a traversing rod, which pushes it into the griping jaws, substantially as described.

Second, the combination of the traversing rod, actuated substantially as described, with an adjustable stop, for the purpose of setting the blank between the jaws in the exact position required, as set forth

Third, the method of operating the jaws and holding them closed with the requisite force to hold the blank firmly between them, without end strain upon the mandrel, by means of toggle or knuckle joint levers, which are thrown slightly past centres, when the jaws are closed to hold them closed, when they are used in connection with elastic and long shanked nippers, substantially as described, whereby all end strain of the mandrel against its bearings is prevented, during and by the griping and holding of the blank.

Lastly, the spring discharging punch, constructed and arranged in such a manner that the same shall be compressed by the entrance of the blank between the griping jaws, and shall throw the blank out of the jaws, the instant they relax their hold of it sufficiently; such pushing out depending upon such relaxation and the force of the spring, and being entirely independent of the motion of any other part of the machine.

DESIGNS.

COOK STOVE—By Ezra Ripley & N. S. Vedder, of Troy, N. Y. (assignors to Samuel McClure, of Rochester, N. Y.)

NOTE—The applications for one-third of the list of patents given above were prepared at the "Scientific American Patent Agency." Besides the great amount of home business, we are securing a great number of patents in foreign countries.

Reform of the Patent Laws.---Patent Office and Patent Funds.

MR. EDITOR.—I was glad to see your timely recommendation of a reform of the patent laws, whereby the inventor and applicant for a patent would be put on an equal and just level with the Patent Office in the defence of his inalienable rights. I refer to cases of appeal. It is certainly anything but justice—much less republican policy—to make a rejected applicant for a patent pay the expenses of his appeal even when right and the Patent Office wrong. It would be no more than simple justice to alter our patent laws so as to make the Patent Office pay the stated expense of an appeal if its decision has been wrong, not as the law now is, by which the inventor has to pay the expense right or wrong—successful or unsuccessful.

President Filmore, in his message of Monday the 6th inst., recommends by the suggestion of the Secretary of the Interior that "provision be made for the publication and distribution periodically of an analytical digest of all the patents which have been or may hereafter be granted for useful inventions and discoveries with such descriptions and illustrations as may be necessary to present an intelligent view of their nature and operation. The cost of such a publication," says the message, "could easily be defrayed out of the patent fund, and I am persuaded that it could be applied to no object more acceptable to inventors and beneficial to the public at large."

This is very well in words; the French government does this, and that government also defends patents, so that a poor patentee, can have an able lawyer and an officer to pursue infringers. The great expense of lawsuits is the crying evil that poor patentees labor under. Why does not the President or the Secretary of the Interior recommend a reform in the Judiciary connected with patents? Is it because it would take away some of the lawyer's fees? The President is surely above this although a lawyer, by profession.

There is a surplus fund belonging to the Patent Office, and some people are continually on the look-out for such appropriations as may be beneficial to themselves. I trust that no one so interested has suggested from personal motives, such a plan as that proposed to the Secretary of the Interior; yet when it is taken into consideration that the Patent Office Report for 1851 is not yet printed, the recommendation made by the President is anything but well timed in accordance with the present and past practice of government publishing. I have been informed that the late Commissioner of Patents was an urgent advocate of the government publishing a digest of the patents, but he was favorable to a sum being granted by authority to the "Franklin Journal" for so doing. It is well known that attempts have been made (and glad I am they have all as yet been unsuccessful,) to get a grant from the patent fund, by some publishers of magazines. I hope that no movement of this kind is now going on "under the rose." JUNIUS REDIVIVUS.

Lecturing Noblemen.

A lecturing mania has invaded the ranks of the nobility of England. The Earl of Carlisle is announced to lecture on Gray, at Sheffield; the Duke of Newcastle is to lecture at Worksop; Sir Alexander Cockburn at Southampton, and Lord John Russell at Manchester. Nobility is looking up.—[Ex.

[This is no new thing, Lord Mahon delivered a most beautiful lecture four years ago to the mechanics of Leeds, and the Earl of Carlisle (formerly Lord Morpeth), has delivered some lectures every year to the mechanics in different parts of England. The conduct of these men confer dignity upon their position in society. No title but conduct can make a nobleman. The nobility of England at the present day present an amiable and commendable contrast to those of the last century.—Many of them are laboring to lift workingmen to their own positions in all that can make a man noble, viz., morality, intelligence and courtesy.

We have often been surprised at the want of taste or desire for good information, or want of spirit, we do not know which, manifested by our mechanics in the different large cities of our great country. They would not like to be called ignorant, or stigmatized for exhibiting a want of intelligence, nor would it be just to do so; for they are both spirited and intelligent, but we must blame them for not directing their attention to objects which have a most elevating tendency, and which confer honor and dignity upon men. We allude to useful public lectures by eminent men. We honor the young merchants of the City of New York, because they have the sagacity to perceive and the spirit to carry out the object of obtaining eminent lecturers every winter. Did they not engage the philosophic Nichol to deliver his splendid Astronomical Course, and this winter secure Thackeray, whose fame as an author is world-wide? The gentlemen of the Mercantile Association, with a sagacity which does them credit, understand how to make their Institution popular. The city of New York contains a population of 500,000; the city of Glasgow, Scotland, contains a population of about 365,000; both of them have Mechanics' Institutes; the latter is the oldest in the world, but at the same time the mechanics there do not possess the same means to maintain a good Institute as do those of our own city, but the following extract from the "Scottish Guardian" will show how that Institute is conducted:—

"The winter session, 1852–53 of this excellent institution is about to commence; classes on the following interesting subjects are already announced—viz., Chemistry, by Dr. Frederick Penny; Natural Philosophy, by Professor J. Scott; Popular Anatomy and Physiology, by Dr. Alexander Lindsay; Arithmetic and Mathematics, by Professor J. Scott; and Mechanical and Architectural Drawing, by Mr. Robert Harvey."

Can our mechanics not learn a lesson about rendering institutions devoted to their benefit popular and honored among the people?

Action Against the New Steamboat Law.

It is well known to our readers that a new law for steamboats was passed during the last session of Congress, which law was to take effect on the 1st of next month (January 1853.) We understand by the St. Louis Intelligencer that a petition is on foot in that city for the purpose of getting an extension of the time appointed for this law to go into operation.—The reason offered is, that little or no preparation has been made to meet the provisions of the law, in procuring the required life boats, extra safety valves, &c. One or two boats have made themselves ready to meet the legal demands, but the majority, it is stated, have not; hence quite a number of captains, pilots, and engineers have signed the petition. The real intention of the step is to procure the repeal of the statute.

Congress will no doubt treat the petition as it deserves; if it does not, and consents to act upon and give it countenance, then it will stain its character with a most reprehensable act. Since the law was enacted every steamboat company in our land has had sufficient time to prepare for and meet all its requirements.

The Cheap Postage Law

By the Postmaster General's Report, we learn that the gross receipts of the Post Office Department for the last Fiscal year have been $6,925,971,28, from which $101,388,59 have to be subtracted as being due to Britain, which makes the real sum $6,824,582,69. The expenditures have been $8,745,771,20, leaving a deficit of $1,921,194,51, to be made up by special appropriation, which can easily be done, as we have a surplus revenue from other sources of $20,000,000. The receipts from all postages have been less by $1,431,696,54, than the past year under a higher postage. The reduction is owing to the decreased rates of postage under the new law. This diminution is greater than was anticipated by the Post Office Department, and greater than the friends of cheap postage expected, for it was hoped that there would be such an increase of correspondence as would make up for the reduced rates of postage. This was the case in respect to the penny postage law of Great Britain, and it was anticipated that the same results would be produced by our cheap postage law. No increase of postage, to make up the deficit is recommended; the report says, "all experience warrants the expectation that as the community becomes accustomed to cheap postage, written correspondence will increase." So think we; and as stamped envelopes will soon be ready for sale, no evasion of the law will take place by private correspondence—then letters with these envelopes can be carried by any person without being liable to damages for infraction of law. We hope that no person will ever be found evading the law for the future.

Packing Apples.

The following method is practiced in some parts of Maine for packing apples for shipment to California:—Each apple is wrapped in paper, and then placed in the barrel in layers. Between every two layers of apples is a layer of powdered charcoal. The apples are thus prevented from coming in contact with each other, and through the anti-putrescent qualities of the charcoal, the rot, even should it attack a part of the fruit, will be prevented from communicating to the remainder.