Scientific American

NEW-YORK, DECEMBER 11, 1852.

Public Lectures--Lost Arts.

It has become a mighty fashion now to have public lectures in all our large and small cities—it is quite the rage—and a very commendable passion it is if rightly directed;—but this we believe is not always the case. Men of note as fancy speakers and authors are generally the selected lecturers; they tickle the ear and captivate the heart for the passing hour, but instead of making the hearers "wiser and better," those who believe all they say, are often made more ignorant than they were before. A great amount of trash is also uttered in some public lectures; there is little that is truly instructive or really true.—Now, as "the true is the beautiful," we must say that the universal taste or passion is for the glitter and gaud of the uncertain, in preference to the true. A respectably large audience could not, we believe, be obtained in all this city to hear a course of lectures on Natural Philosophy, while at the same time crowds go to hear mere opinions expressed about Dean Swift and the English Mind, and so on.—These things are all very well, but they do not exhibit a strong healthy public pulse, when the weighty matters of science and art, as was found in the case of Prof. Agassiz' lectures, are neglected. Some of these lecturers also do not exhibit that amount of correct knowledge which we expect of them. On Wednesday evening, the 1st inst., Wendell Phillips, of Boston, delivered one of the course that are called Popular Lectures, in the Tabernacle, this city, and although a very eloquent and humorsome speaker, his information is not altogether to be relied on. The subject was "The Lost Arts," and we must take exception to much of what he said. He asserted that in all that relates to works of the imagination and the fine arts, we were far behind the people of antiquity. This we do not believe. Shakespeare, Milton, and Burns stand above all the ancient poets, and Raphael, Angelo, Canova, and Thorwalsden, all moderns, were at least equal to the ancients in painting, sculpture, and architecture. He said very truly, that "we were apt to think our age the greatest, and that the ancients knew nothing." We are indeed too forgetful of the benefits we have derived from our ancestors, but at the same time there are some who reverence everything that is old—good and bad, and with an antiquarian taste, deride that which is new and better. There is much ignorance displayed by mere literary men, about the present state of the arts, and Mr. Phillips exhibited not a little. With respect to glass he said:—"This beautiful material that administers so much to our delight and comfort—did the ancients know of it? Even at the time when some skeptics were disputing upon this very question, the peasants broke into a house among the ruins of Pompeii which was filled with it. The lie and its refutation came thus together. It was like Dr. Lardner in 1839 writing a pamphlet to prove that a steamship could not cross the Atlantic, while in that same month the Sirius made her voyage to this country.

Instead of not knowing of glass, the ancients knew more than we do about it. In the first place, they understood the process of transfusing the color through the glass. Sir George Wilkinson brought from Egypt a small piece of glass, in which there was a figure of a duck, protected by another glass and then covered over again; and all this without destroying its beauty.

But I pass to the inquiry, whether they used glass for microscopes and telescopes? If you look at the History of Astronomy, you will find that the Hebrews and Egyptians were acquainted with the shape of the earth.—We also read that the Iliad was put into a nut shell by Alexander. Now this could not have been written in so small a compass without the aid of spectacles. We are also told that Nero had a ring of a peculiar shape and nature, that he looked down into the ring as he sat in the Coliseum, and could see the players distinctly. We are, therefore, led to believe that Nero had an opera-glass."

It is a common opinion (inexecusable in an educated man), that the moderns cannot make as good colored glass as the ancients. This is all nonsense; they can transfuse all colors into the glass, and the manner of covering the duck is quite a common trick among our glass makers. We have seen a miniature on ivory covered with glass and set in a glass frame in England—the glass fused all around it, and not a tinge of light or shade altered. Could the ancients do that? This miniature was formerly in the possession of Dr. Beck, of this State, who used to exhibit it in his chemical lectures. In glass making, the moderns far excel the ancients. The ancients *may* have been acquainted with spectacles, but it certainly requires a spectacle vision to discover any evidence of the same. As for telescopes being known by the ancients, Mr. Phillips draws largely upon his guessing powers. The remark about Dr. Lardner is incorrect; he never wrote any such a pamphlet, and never made any such assertions. A man of education, who lectures to instruct the public, should draw his information from good authority instead of troubadour paragraphs which have appeared in some newspapers. Dr. Lardner has denied over his own signature, that he ever said "a steamship could not cross the Atlantic." The common belief that the ancients were acquainted with malleable glass, is founded on as great a historical error as that committed by Reese, who says, "a fossil glass is wrought by the Americans and used instead of iron." It is our opinion that there was not a single art known to the ancients which is not known to the moderns. Some arts, it is true, were lost during the dark ages, but they were all re-discovered, and nothing can be shown as works of ancients which cannot be done now. It is true we have learned much from the giants of old, but then we know all they ever knew, and can do all they could do, and a great deal more. The common opinion about "the lost arts,"—that the ancients were acquainted with arts about which we are ignorant, is a legend stamped with about as much truth as the story of "Jack the Giant Killer."

New York Harbor and Dirty Streets.

Charles H. Haswell, U. S. Navy, Engineer and Surveyor of the New York Board of Underwriters, has addressed a very sensible and interesting letter to the President, W. R. Jones, of said Board. He asserts that the reprehensible practice of covering newly paved cobble stone with sand some inches deep, and allowing it to remain to be carried down the sewers and into the docks by rains, is proving exceedingly injurious to the free navigation of the harbor. Were it not for the dredging machines continually in operation in our docks to remove the dirt carried down the sewers they would soon be filled up. The expense of dredging is enormous, while the manner in which it is conducted is more like the work of insane persons than men pretending to common sense. What do our readers think is done with the dirt excavated from our docks by the dredging machines? "Taken and wheeled up on dry land to fill up pools behind banks, &c., every one will say." No such thing, that would be too sensible a method for our lazy, unthinking gothamites. It is taken from our docks and dumped out into the bay—"transferred from the slips to the channels of the rivers which bound our city." It is not carried out to the ocean; the tides roll it backwards and forwards, and some of it comes back to the very docks from which it was originally taken. Is not this a wise system for the sharp men of New York to be pursuing? With the increase of our city, if the same system continues for 30 years longer, the channels to our city will be shoaled up, and New York will become an exclusive resort for oyster boats and such like craft, instead of being as it is now, one of the finest and deepest harbors in the world. Mr. Haswell recommends that our streets should be kept clean, and that a new system of contracting for the removal of filth should be adopted. "The free navigation of our bay is involved in the cleanliness of our streets. This is what he asserts; we have no objection to the plan he recommends for keeping our streets clean, we like it, but we have something to say which he has overlooked. There is no necessity for covering newly paved streets with sand and allowing it to remain for some time, under the pretence that it is necessary. The covering up of the newly laid stones with sand is to hide bad work, and put money into the pockets of the paving contractors. We have seen plenty of street paving in our lifetime, but never have we seen work done so wretchedly as in New York City. The stones should be laid down snug and rammed hard at first, and then all the loose sand swept off. We shall be glad when all our streets are laid with the Russ pavement, no loose sand is left after it. The cobble stone pavers will then discover that Othello's occupation is gone, and it was principally owing to their inefficient, unscrupulous, and miserable methods of working.

Give us Cheap Gas.

The city of New York contains the most patient, suffering population in the world.—Their rulers, every public chartered company, every city contractor, and every speculator favored by these rulers, enjoy the most delectable privilege of getting the greatest amount of money out of the "dear people." The taxes of New York City are much higher than those of any city in the world, and no city is so poorly served. The citizens of New York pay $3 for every 1,000 cubic feet of gas they use, and the gas companies sell all the coke, (the refuse of the gas retorts,) for $3,50 per ton. We do not know how much the gas companies pay now for their coal; we know that they charged $7 per 1,000 feet of gas made from resin five years ago, and we presume the raw materials now used for making gas are much cheaper. The coal, we believe, comes from Liverpool, and may cost $12 per ton—a most extravagant price. Well let us see what a ton of the best cannel coal will do and then we will have some idea of profit and loss—what gas can be made for, and what citizens should pay for it. A ton of the Scotch cannel coal produces 11,850 cubic feet of gas, and about 44 per cent. of coke, which at $3 for 1,000 cubic feet of gas will make $35,55, and allowing the coke to be 44 per cent., (sold at $3,50 per ton) it will amount to $1·54+35·55 =$37·09 for the product of one ton of coal at $12, consequently, for the simple expenditures and profits connected with one ton of coal made into gas and supplied to our citizens, the gas companies of our city have the exceedingly favorable balance of $25,9. It is our opinion that good cannel coal can be obtained from Virginia for as low a price as $7 or $6 per ton, and if cannel coal was taken from Glasgow instead of purchasing the inferior Liverpool coal, a great saving in that quarter would be effected. As we said before, we do not know exactly what our gas companies pay for their coal; we have put it at a high figure and have shown the results, and we can give chapter and verse for the alleged gas product of good coal, and none other shonld ever be used.

The price of gas, we think, might be safely reduced to $2 per 1,000 cubic feet. If reduced in price, almost every private family would use it in place of oil, camphene, &c. We hope our gas companies will see to this; it would be the means of preventing many of the casualities which are constantly occurring from the use of volatile hydro-carbon fluids, and be a blessing to both rich and poor.

Coke for Fuel.—The gas companies in this city could sell twice the amount of coke which they make. Orders have to stand for a month before they can be filled; and we presume that if coke could always be furnished for the price mentioned, not a single family would use any other kind of fuel; anthracite would find but a poor market here, for the coke is much pleasanter, cleaner, more easily ignited, and has none of that offensive smell peculiar to bituminous and anthracite coals. Every person with whom we have conversed, who has used coke, likes it, and would burn nothing else, if it could be got as easily as coal. We look forward to the time when the volatile products of our bituminous coals, will, in the west, be distilled for many useful purposes, and the coke sent forward to the east and north at reasonable prices for family use.

Sea Island Cotton.

In a very able article on the cotton plant, by Isaac Croom, Esq., in the American Cotton planter, an able new magazine, edited by Dr. Cloud, of Montgomery, Ala., it is stated that the first seed of the Sea Island long staple cotton was sent from the Bahamas to some gentlemen in Georgia in 1786, and the first experiments were made with it on the Sea Islands near the mouth of the Savannah river. The plants did not bear the first year, but the winter proving mild, the rattoons bore fruit the year following, and thus became acclimated. The original seed came from Persia. The successful growth of this world-wide famous kind of cotton is confined to a string of islands stretching from Georgetown, in South Carolina, to the St. Mary's river in Georgia, a distance of nearly 200 miles including a belt of coast not over 15 miles wide.

Safety for Ferry Boat Passengers.

A great many persons fall into, or jump into the river at our ferries, and not a few among the number of such get drowned. It is quite a common thing when a ferry boat is pushing out from its dock, to see persons rush forward to get on board before it departs, and some of them generally imperil their lives by leaping on the boat after it has started off. Among those who have resided in Brooklyn or Williamsburgh for a number of years, and whose business has led them to be regular passengers in the ferry-boats, there is scarcely one who has not at some time fallen into the water, or come very near doing so by jumping after a departed boat. The coolest of men in a hurry, when they see a boat just pushing off, as they arrive, are apt to play the *impatient* by springing after it. We have heard many plans suggested for preventing people from jumping on board of our ferry-boats, but it requires no ingenuity to devise an effectual one. All that has to be done is to board up all communication between the rooms where the passengers wait for the boat, except a small sliding gate under the control of the collector, and whenever he tolls the last bell, he should close it and not allow a soul to pass through until the next boat arrives. The boat should not leave for one minute after the bell is tolled, so that every one inside will be enabled to get on board, but not one outside. This plan would involve no extra expense; it is a simple and certain remedy for people getting into the river by jumping after a departed boat.

State Tariffs on Passengers.

In Africa and among Asiatic savage tribes, the chiefs have to be bribed by handsome presents before travellers will be allowed to journey through their territories. Some of our States seem to have learned intelligent lessons from these savage potentates. Thus New Jersey and Maryland charge the railroad companies 50 cents a head for every passenger—brother and sister republicans of other States—who travels on a railroad through them. It is reported that the present Tory Ministry of England intends to propose a tax on the railroad incomes of that country. Kindred governments have kindred feelings. This is protection by these States to their own citizens, with more than African or Asiatic refinement. "Brother republicans," say these States, "we are all of one family, and we are always glad to see you, but remember whenever you come past our doors you must have 50 cents each of you in your pockets; remember flunkies live by perquisites."

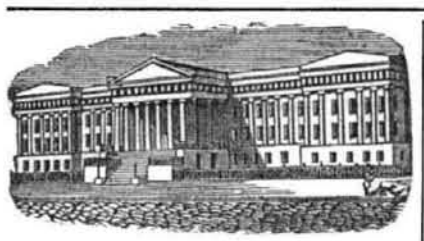
Planing and Sash Machinery.

The attention of our readers is called to an advertisement in another column of this paper for a mechanic to engage in the lumber business at the south. The advertiser is an energetic business man, in whom the utmost confidence may be placed, and his acquaintance at the south will render peculiar advantage to any party who may become engaged with him in the proposed business.

Award of Prizes.

In the next number of the Scientific American, we shall announce the names of the successful competitors for the prizes offered by us for the four largest lists of subscribers.

Communications sent to this office without the real name of the author attached, cannot, under any circumstances receive attention.—This is a rule common with all editors, and no writer should be ashamed to give his name, as it is always withheld from the public if a request is made to this effect.



Reported Officially for the Scientific American

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

FOR THE WEEK ENDING NOVEMBER 30, 1852.

SCREWING BOLTS, &C.—By John Caswell, of Syracuse, N. Y. (assignor to A. C. Powell) : I claim, first, the movable ways running in yielding bearings, back and forth, under the machine, and supporting the vise, as set forth.

Second, the adjustable stop or gauge on the side of the friction nut working in contact with the movable finger, or any similar projection in the die chuck.

ATTACHMENT FOR CONVERTING THE ORDINARY INTO A PAPER VISE.—By J. W. Bliss, of Hartford, Conn.: I claim an attachment to the vise, substantially as described and for the purposes set forth, which attachment is removable at pleasure, and require no change in the construction of the vise to which it is applied.

HOES.—By Wm. C. Finney, of Fayette Co., Tenn.: I claim the extension of the blade of the common cotton hoe, upward and backward, in a curve, in such form and manner to enable the laborer, by inserting his instrument and pushing it from him, to remove, by the cutting edge, any grass, weeds, superflous plants, &c., as described.

MORTISING MACHINES.—By Jos. Guild, of Cincinnati, Ohio: I claim the sliding wrist connected with the chisel and also with the driving power, in the manner described, in combination with the mechanism described, or its equivalent, for sliding said wrist, so that the operator can, during the motion of the machine, vary the depth of cut of the chisel, or cause it to be suspended without disconnecting the driving power.

ENDLESS BELTS TO THRESHING MACHINES.—By J. R. Moffitt, of Piqua, Ohio: I claim the continuous open apron, having its belt formed of links, whose cogs are at one part of their rotation (in connection with the pinions), or means of propulsion, and are, at another part of their rotation (in connection with the rollers or other stationary objects) a means of agitation of the said apron.

PLOWS.—By F. E. Richardson, of Hicksford, Va.: I claim mounting the double pointed share upon the central shoulder-piece, and fastening the same by a link piece, as described.

ROTARY KNITTING MACHINES.—By Horatio G. Sanford, of Worcester, Mass.: I claim the combination of the mechanism termed the stop-motion, with the rotary knitting machinery of the kind, as specified, the object of the stop-motion being to arrest the operations of the machine on breakage of the yarn.

ROTARY KNITTING MACHINES.—By David Tainter, of Worcester, Mass.: I do not claim the combining one or more draft rollers and a take-up roller, or drum, in one frame, which, when put in rotation, shall carry them simultaneously around with it, so as to draw forwards and wind up a rope or cord, or like manufacture, formed of strands twisted together.

Nor the application of a take-up roller or mechanism as used on either a common warp or flat braid knitting machine: but I claim to so combine a draft and take-up roller, and mechanism for revolving it, with a rotary series or set of needles and other mechanism of the peculiar kind mentioned for knitting, that such draft roller shall rotate simultaneously, or with the same velocity, with such series of needles, so as to prevent the longitudinal rows of stitches from being produced in helical lines, and the evil consequences resulting to the fabric therefrom.

Also the arrrngement of the draft and take-up mechanism, in connection with the knitting mechanism, supported by two separate frames, and also their connection with the mechanism for producing an equal and simultaneous rotation of these frames, all substantially as described, whereby there shall not only be no connection between the frames to extend through the fabric but no projection from the frames come in contact with the presser, stitch wheels, and cam bar, or their respective supports, during the simultaneous and equal rotations of both or either of the said frames.

COOKING STOVES.—By H. J. Ruggles, of West Poultney, Vt.: I claim the combination and arrangement of the front and rear flues and air chamber, as set forth.

STONE AND EARTHENWARE.—By Jacob & Freeman Wise, of Fredericktown, Pa.: We claim, first, the mode of attaching the mandrel so that it may revolve on its axis, by means of friction with the clay, and at the same time be moved from side to side within the mould.

Second, the mode adopted for varying the relative thickness of the different parts of the manufactured article.

GENERATING HEAT.—By Wm. Hartell, of Kensington, Pa., and Jos. Lancaster, of Spring Garden, Pa.: We claim the adaptation of, or rendering available tar as a fuel, for the production of the intense and steady heat required for the melting and manufacturing of glass, by introducing water or the vapor of water into the furnace in contact or in close proximity, or in combination or mixture with the tar, in the manner set forth.

RE-ISSUES.

CREAM FREEZERS.—By Eber C. Seaman, of Philadelphia, Pa. Originally patented Oct. 3, 1848, and ante-dated April 3, 1848 : I claim the arrangement of two scrapers at an angle with the bottom and sides of the vessel, as described, sothat the action of the rotation shall throw the scrapers against the sidesand bottom of the vessel.

WELDING CAST-IRON TO MALLEABLE IRON OR STEEL.—By Mark Fisher & Wm Martin, Jr., of Newport, Me. Originally patented Oct. 16, 1847 : We claim uniting the steel and cast-iron, as described, by first preparing the steel, in the manner set forth, and then causing the cast-iron to flow over and upon the surface of the steel thus prepared, in the manner and for the purpose set forth.

DESIGNS.

PARLOR STOVE.—By D. Arnold, of Providence, R. I.

FRANKLIN STOVE.—By Saml. F. Pratt, of Boston, Mass. (assignor to Jagger, Treadwell & Perry, of Albany, N. Y.)

WINDOW BLINDS.—By Nathan Chapin (assignor to Nathan Chapin & J. F. Driggs), of New York City.

A New Steamboat Paddle Wheel.

The following is the description of a new paddle wheel, copied from the "N. Y. Tribune," which copied it from the "Detroit (Mich.) Advertizer." The wheel is the invention of Capt. W. A. Bury :—

"The wheel which he has invented is formed, in all its parts, exactly like the paddle-wheels of a steamboat, with the exception of the paddles or buckets. In the common paddle wheel the paddle or bucket is a solid oblong board, fastened firmly across the two parallel arms. In this new wheel a paddle or bucket is affixed to each arm by a strong hinge in the inside corner of the arm. The two paddles being equivalent to one common one. The paddle itself is an oblong piece of wood, shaped like a wedge and hung in the arm, so that the heavy end is between the arms, and the light end is outside. But the lightest division of the paddle has the most surface, and it is upon this fact the utility of the invention depends. For instance, the wheel revolves, the paddle strikes the water, but it is so hung on the arm at a certain angle, that the outside corner gradually sinks in, and as the wheel revolves, the surface of the paddle meets the water gradually, but so as to press it back against the arm, where it is firmly held by the pressure caused by its own motion through the water; as the paddle rises to the surface, the angle at which it comes out of the water permits the heavy end to fly back against the inside of the arm, and it thus comes out edgeways, exactly on the principle of feathering an oar. The paddle, by the simple operation of the principle of gravitation, remains with its edge directly in the line of the revolution of the wheel till the arm passes the perpendicular, when the paddle falls into its place ready to meet the pressure of the water again."

[Paddles with wedge-shaped extremities are not new; neither is the hinging of them; we have seen a number of models with hinged paddles. They will not answer; they may do very well on a model, but on a large scale will soon go to pieces. The water lift, to obviate which so many paddle wheels have been invented, is obviated by making the wheels of large diameter, or on the Galloway feathering principle. In Vol. 2, page 169, Scientic American, there is an illustrated feathering wheel of Mr. D. G. Smith, of Pennsylvania, and on page 249, same volume, there is a paddle-wheel with jointed paddles the invention of Mr. McCarthy, of Saugerties, N. Y.

Recent Foreign Inventions.

WAX CANDLES.—T. H. Smith, of Hammersmith, England, patentee.—The improvement is in the wick preparation. They are saturated in a solution formed of 4 ozs. borax, 1 oz. chlorate of potash, 1 oz. nitrate of potash, and 1 oz. of salammonia dissolved in three quarts of water. After this they are dried and fit for the waxing.

HAT BODIES.—J. Johnson, London, patentee.—He mixes cork dust mixed with wool or the substances now used for hat bodies, employing fine whalebone for stiffening.

NEW COMPOSITION.—J. Hinks and E. Nicholl, of Birmingham, England, patentees.—The new composition is for making boxes for holding steel pens, &c. It is composed of 3 parts of gutta percha mixed with one part of wheat flour, or with other farinacous substances by heated rollers, and then stamped into shape.

Ventilating and Warming large Buildings.

The following process for the above purpose, is adopted in the Northern Hospital of France :—The air is taken from a tower on the top of the building, so as to be always pure, and in summer cool. It is sent inside in a quantity invariably equal and of the same power, by numerous apertures in the centre of the rooms which it passes along from one end to the other, and issues by eighteen orifices without its action being neutralized by opening one or all the windows. The steam engine is relieved in case of stoppage by another auxiliary one, and in cases of epidemic both act together to increase two-fold the supply of injected air. This engine sets in motion the ventilators for driving the air in all directions and likewise raises the water required for the hospital. The steam is likewise used for warming baths of every kind, as well as for the laundry use, the ventilation, during the whole year, consequently costs nothing. Several boilers are employed to produce the steam for the different duties of the hospital, —to warm the rooms by means of hot water stoves, independent of each other, to ventilate the six wards by a steam engine, to heat the office stoves, the baths, &c., to raise the water and wash the linen. These are placed in a court behind, away from the patients and conveniently to the kitchen. There is an open grate on the ground floor of each building, for those preparations that must be made over a fire, and the heat from the smoke is employed to ventilate the water-closets. The expense of warming the hospital in winter is $2,805, and that of ventilating it in summer $935, which is paid for by the employment of the steam for warming the baths.—[Genie Industriel.

Improvements in Machinery Benefit the Working Man.

There are many ignorant men who speak of the evils which have been brought upon working men by improvements in machinery; there are others also who say that in old times, when ignorance in the arts and everything else was bliss, that the working men had more to eat and drink than now, and that old England was then "Merry England," her people having plenty of roast-beef and plum-pudding, while now, owing to machinery and so on, it is no more Merry England; her mechanics are half starved, and her working men are whole starved. This is all nonsense, improvements in machinery have improved the conditions of all classes, as the following extract from the London Builder will show :—

OUR ARTISANS AND THEIR PRESENT PROSPECTS.—It certainly seems to us that the artisans of the United Kingdom have never had a better prospect before them than they have now. Nothing is to be done without industry, right endeavor, and good conduct; but with these they all may, if they please, maintain themselves respectably, and make satisfactory progress. At the present moment we are disposed to think there are comparatively few really good workmen out of employ, and while bread and other necessaries of life are cheap, wages are high. . . . .

"At the present day, a Manchester joiner, who earns 4s. 4d. for ten hours' labor, can purchase a day's food for one-fourth of that sum; hence it follows that his disposable wages are 200 per cent. higher for ten hours labor, than a man could have earned in 1725 by working twelve hours. Compare the prices of things even forty years ago, with the prices now—salt, sugar, tea, butter, soap, flour, clothes;—examine, too, the increase in the average length of life (an important point,) and the improvement in the material condition is made evident; while, if you notice the establishment of elementary drawing schools, artisans' schools, schools of design, and free libraries, you will see a good prospect opening for intellectual advancement. At all events, and we offer the advice only to such as are disposed to take it from us, and will not think it impertinent, do not fail to give your children the advantage of the means of improvement and ultimate advancement which offer themselves; send your sons to the elementary drawing schools, and encourage in them a taste for reading.

Explosion of Lime Barrels.

George Dragan, for the last six years employed in the shops of the Mad River Railroad, was killed at Sandusky on Thursday morning last, by the explosion of a barrel, into which he had put unslacked lime for the purpose of cleansing it. On pouring boiling water upon the lime and shaking the barrel after closing the bung, it exploded with great force, and so badly shattered the German's head as to cause his death in a few moments. He leaves a wife and four small children.—Here then is another question for savans—"will lime explode.—[Ex.

[This is no question for savans at all; everybody knows that lime will explode by pouring boiling water upon it. The gas given out by lime when water is poured upon it, is active steam—one exceedingly sensible of heat, and which has a most extraordinary expansive power. A large cast-iron cylinder of great thickness, which was employed to contain carbonic acid gas in the Polytechnic Institute of Paris, exploded with terrific force, killing the assistant lecturer in an instant. If carbonic acid gas burst an iron cylinder as thick as a cannon, what is to hinder steam from bursting a barrel. A reader of the Scientific American would have known this, for the information has more than once been propagated through our columns.

Mechanics and the Scientific American.

The following is from our excellent cotemporary, the Marshall Telegraph, Marshall, Ill., J. G. Jones, editor. It contains plain and kindly spoken truths. No mechanic now can rise either to be a foreman or manager, or a good tradesman, or can be qualified to do business for himself intelligently, unless he takes a paper devoted to the progress of invention and the arts :—

"We acknowledge the receipt of the Scientific American from the commencement of the present volume, and most cordially recommend it to the patronage of the mechanics and others in this section.

Whilst on this subject we must confess that we have been pained to witness the indifference manifested by our young mechanics generally, and those who are learning mechanical occupations, in qualifying themselves to become complete masters of their business.—This is not right. When a young man starts out in life to learn a trade, he should do it with a determination to excel in his particular branch. This can only be effected by reading the observations of others, and profiting by their experience; and at the same time deep thought and close application on the part of the student. If a young man desires to become complete master of his business, he should not consent to be satisfied with the instructions of his employer only—imagining that all has been learned that can be; but he should read, study, reflect, investigate, and inquire into the whys and wherefores—become acquainted with first principles. Why have we so few superior workmen in the different branches of mechanics? Simply for the want of the right kind of application on the part of those who follow such pursuits. They have the ability, the intelligence, and the energy if they would but bring them into operation. Young men! instead of idling your time in reading foolish, simpering, mawkish love stories and novels, get good scientific works, connected with the branch of business you are learning, and store your minds with facts which will last you as long as you live, laying the foundation for future usefulness, and bring to you honor, fame, and competence. What made a Franklin, a Fulton, an Arkwright, and a Watt? Was it foolish, trifling reading? or was it a proper direction of their leisure hours to the right kind of study?—That which has been done by others can be accomplished by you; the positions they have filled in community can be attained by you, if you use the same industry and persevering application.

Throw away your love-sick novels and procure good scientific works. We know of none better to recommend than the Scientific American."

Shawl Fringes.

M. Blanquet, a French manufacturer has invented an ingenious apparatus for giving a double twist to the fringes of shawls, tartans, &c. This has been contrived in order to imitate in French shawls, the fringes of the common English shawls, which were eagerly purchased by French ladies at the World's Fair in London, on account of their superiority in this respect.

Coining Machine.

M. Bovy, of Geneva, has just introduced into France, with the authorization of the State, a new coining press; having an eccentric and direct action, and of simple and economical construction, which appears to unite all the advantages of regularity, precision and firmness that are required in a similar machine. It is now being tried in the government mint at Paris, and will be specially employed for striking a new copper coinage.