



The Fair of the American Institute.  
No. 1.

The 21st Annual Fair of the Institute opened up last week, after storms and rains, into clear and sunny weather inviting all who pleased to visit the Castle. We promised last week to say something about the articles exposed for show and observation, and will therefore say nothing about the appearance of the Hall, &c., as a description of it one year might suit, like an almanac, for a first edition of twenty in succession.

#### GUYON'S COTTON PRESS.

This press of Mr. H. Guyon, No. 95 Thompson st., this city, appears at the Fair this year with an entire new and useful improvement. The long horizontal levers are superseded by the curved progressive kind and it is thereby rendered far more compact and portable. Not a single cog wheel is used,—the great objection to all such kinds of presses. The power is now applied in a most direct manner, and we have no doubt but it is now the most perfect press of the kind as its works are of the most simple and effective order.

#### FULTON'S STEAM PUMP.

Among the novelties in the machine line is G. W. Fulton's Steam Pump—a Baltimore invention and worthy of no small share of attention. It cannot be better explained than to say, that the power of the steam is as directly applied to the pumping of water as in Nasmyth's steam hammer, which was in operation close beside it, and which is now generally known and understood.

#### WATER WHEELS.

The most conspicuous water wheel at the Fair is the *centre vent pressure* of Haviland and Tuttle, manufactured at the Fulton Iron Foundry, South Boston. It runs in a glass vase along side of Fulton's steam pump and attracts great attention. It has many strong certificates of very respectable gentlemen as to its practical qualities. One of five feet in diameter, with one pair of Burr stones, 5 feet diameter, ground 40 bushels of corn into merchantable meal in one hour under a head of 7 feet. One experiment gave 2,500 pounds of merchantable meal in 57 minutes under a head of 6 feet 2 inches of water (no back water.) The stones made 144 revolutions per minute. Under a head of 4 feet the stones turned out 25 bushels of good meal per hour.

#### STEAM ENGINES.

There are a number of these at the Fair, the most novel of which is Tremper's Rotary already described in our columns. Mr. Burdon, of 100 Front st., Brooklyn, has two beauties, which were generally and justly admired. Mr. Burdon is a very extensive and excellent builder of portable engines.

The Mattewaa Company, N. Y. exhibited a very fine double cylinder engine, which proves that Company to excel in Machinery of every description, such as shafting—planing machines, and machinery for the cotton manufacture.

#### LATHES.

The Lathes are more numerous this year than last, and in the foremost was Mr. Hartson's of Gold st., N. Y. There are so many little odds and ends about the different lathes, that it is impossible to particularize. We always look to the correctness and solidity of the work and material, being convinced that these characteristics are of the most practical importance.

#### METALIC PACKING.

A very neat and simple elastic metallic packing was that of Dolliver Johnson, engineer, of Charlestown, Mass. In fact it is the most simple packing that we have ever seen and will no doubt come in general use. Messrs. Allen and Noyes, of Greenbush, N. Y., also exhibited their metallic packing, but this kind has been made known to our readers before through our columns.

#### PADDLE WHEEL.

A great variety of paddle wheels are to be

seen, and some of them sad retrograde movements in the history and theory of propulsion. The paddle wheel has been a kind of perpetual motion enigma to hundreds, and curious solutions have been given of the problem. We will not advert to the absurdities of the question, but simply state that all have planetarily struck for a verjical dip and lift of the paddle and many funny plans have been tried to effect this object. One model at the Fair to accomplish this is a good one: it is named the Eccentric Paddle, made by a mechanic in this city. It is the same as Morgan's celebrated one and is new here we believe, although the invention is somewhat old. We should like to see some of our river boats try it, as it is the most simple one of the kind ever brought before the public.

#### COTTON GIN CYLINDER.

This invention of S. R. Parkhurst is intended to supersede the present Gin Saws. It is simply an iron cylinder with angular cut teeth which appear something like a card, but the teeth are so many sharp blades, whereby in the operation the cotton fibres are drawn below the outer surface of the teeth and the seeds are left to fall from the cylinder when it is cleaned of cotton which is done by the ordinary brush.

#### SAWS.

We have never seen so many beautiful Saws, as those exhibited by Messrs. Hoe of this city. Each is ground by a new patent process; and bright as mirrors. A decided improvement is observable in these American manufactured Saws of Messrs. Hoe from the saws that used to be exhibited a few years ago.

#### SCAGLIOLA.

A number of columns, table tops, &c. of Scagliola is exhibited by Mr. Farelly, of Canal st., this city. We have seen many specimens of this substitute for granite and marble, but never to our recollection have we seen any that could compare to the specimens of Mr. Farelly. They imitate every kind of fancy marble while the surface is smooth and brilliant as glass. For ornamental work, in the interior of dwellings, Scagliola is certainly superior to marble, at least this much can be said about it, "that if can be made of every variety of color, to carry out the decorative design of any apartment."

#### ARTIFICIAL SLATE.

Mr. Blake, of Akron, Ohio, exhibits his artificial slate. This is made from a substance found in a natural state at Sharon, Ohio. It is found of the consistence of tallow but by a few days exposure it becomes perfectly hard. By grinding the substance and mixing it with oil, it is said to be an excellent and fire proof paint. A patent was granted to Mr. Blake for the application (a singular circumstance, we think,) and it has been successfully used both for paint and covering roofs. It really is an excellent slate. It is lighter and not so brittle as the Welsh kind. In appearance it resembles gutta percha.

Mr. Derby, of 56 Ann st., this city, also exhibits *fire and water proof paint*. All paint should be water proof, but the *fire proof* is an additional quality. This paint is cheap and should be used extensively for outhouses. We would heartily recommend it for this purpose.

#### FURNITURE.

In the Furniture department there are many improvements, among which we noticed the Portable Divan Bedstead of G. Clayton, No. 221 Pearl st., this city. Its principal feature is economy in room, answering both for sofa and couch and so portable that it can be carried about like a trunk. This is an ingenious and useful invention. There are a number of other improved pieces of furniture, and useful machines, which we shall notice next week. There are about 2000 articles entered, and we must say that we can only notice but a limited share of what is new, most of the articles being exposed more for advertising show than any thing else. We therefore have and will confine ourselves to notice only the new and useful, and for that purpose, we will devote next week more space to the subject than we have done this, as articles require a careful examination from us before we speak of them confidently, and it is our purpose to speak only of what is interesting to the mechanical and scientific world.

#### Wholesale Poisoning.

Nearly the entire company of the Lowell City Guards were poisoned by drinking coffee one night last week while at muster in Littleton. The coffee was made in a vessel with a copper bottom, and had stood in it for several hours. It was partaken of by most of the company through the evening, and during the night every one who had partaken of it was more or less sick—some of them violently. The surgeon and assistant surgeon were fortunately there, and attended to their relief with much success. The number poisoned was over forty. Three of the company who did not drink of the coffee were not affected with any of the symptoms under which the others suffered.

The poison, however, could not have been the effect of the coffee upon the pure metal, but there must have been an oxide in the kettle before the coffee was put into it.—Preserves are made in clean copper vessels and no evil results therefrom.

#### Quadrature of the Circle.

It is reported that Mr. Seba Smith delivered a lecture lately at Portland, Maine, on the "Quadrature of the Circle," in the course of which he claimed that this problem, the solution of which has from time immemorial set at defiance the ablest mathematicians, and been demonstrated to be impossible, has at length been accurately solved by John A. Parker, formerly of Portland, and now of New York. Mr. Smith farther stated that several important astronomical calculations have already resulted in consequence. The processes which led to this solution are in preparation for the press, and will soon be published.

#### Sturgeon Flesh in Europe.

The flesh is fat, very palatable, and much better in the Summer, after the fish have been some time in fresh water. That which is not eaten fresh is cut into large slices, salted, peppered, broiled, and put in barrels, where it is preserved in vinegar, and fit for transport. A considerable quantity of their flesh is smoked. The wholesale price of pickled Sturgeon is from \$6 to \$10 a hundred weight. The Caviar is prepared in three different manners: 1. 2 lbs of salt are added to 40 lbs of roe and dried upon mats in the sun. The price of 40 lbs. is \$1. 2. 8-10 lb. salt is mixed with 40 lbs of roe, then dried upon nets or sieves, and pressed into barrels. This is sold for a little more. 3. The best Caviar is that when the roe is put into sacks made of tow cloth, and left for some time in strong pickle. These sacks are then suspended in order to let the salt, watery substance run off, and finally squeezed, after which the roe is dried during 12 hours and pressed into barrels. This roe, of which 40 lbs. are sold for \$1 50 at the place, is that which is sent all over Asia and Europe as a considerable article of commerce, and known by the name of Caviar, and is eaten with bread like cheese.

#### Importance of Punctuality.

Method is the very Hinge of Business; and that there is no method without punctuality is evident, because it subserves the peace and good temper of a family; the want of it not only infringes on necessary duty, but sometimes excludes this duty. The calmness of mind which it produces is another advantage of punctuality; a disorderly man is always in a hurry; he has no time to speak to you because he is going elsewhere; and when he gets there he is too late for his business; or he must hurry away before he can finish it.—Punctuality gives weight to character. 'Such a man has made an appointment; then I know he will keep it.' And this generates punctuality in you; for like other virtues it propagates itself. Servants and children must be punctual where their leader is so. Appointments, indeed, become debts. I owe you punctuality, if I have made an appointment with you: and I have no right to throw away your time if I do my own.

A fish came through the hydrant of a hotel in Cincinnati lately alive and in good condition, and delivered himself up to the authorities in the kitchen. It was no doubt a very accommodating fish but scarcely polite enough to jump into the Alderman's pot.

#### An Ancient Press.

The Leonardtown, Beacon (Md.) says that but few of our readers are aware, we expect, that the press upon which our little sheet is printed, is the oldest now in use in the United States, and probably in the world. Yet such is the fact. The press now in use by us has been in almost constant service for more than a hundred years! Upon it was first printed "the Maryland Gazette," the earliest paper published in the Province of Maryland, and one among the very first in America. Upon it, also, was printed the first volume of the Laws of Maryland that ever appeared. It is constructed somewhat on the Ramage principle, and requires three pulls, though two were originally sufficient to produce a good impression. It is truly a venerable object, and has afforded us matter for many an hour's pleasant reflection, and we shall be sorry, indeed, when the time arrives for it to be removed from the place it has so long occupied in our office.

#### Singular Phenomenon.

The Matagorda (Texas) Tribune, contains an account of an oily, yellowish green scum which has recently appeared upon the peninsula and bay shore in that vicinity. It has an offensive smell, like putrid flesh.—The account says, "In Uncle Moses Bayou, which is some twenty yards wide, and about four hundred yards long, the matter, whatever it is, appeared to issue from a particular spot." It emitted a strong phosphorescent light when agitated. Great numbers of fish have died in the waters by this scum.

#### Hours of Labor.

The French Assembly having passed the law fixing the day's labor at 12 hours, the master masons at Paris have attempted to compel their workmen to labor for that length of time, although the day's work for that trade has been only 10 hours from time immemorial, and the decree of the Provisional Government, superseded by the law, introduced no change in it. In consequence of the attempt of the employers, the workman have struck. They prefer to suffer the serious inconvenience of being out of employment to the imposition which the masters have sought to put upon them. In this case the Republic is worse than the monarchy.

#### Religious Manufacturing Association.

The tendency of large manufacturing establishments to irreligion, has led to the starting of one in West Springfield, Massachusetts, on a new plan. The directors and agents are to be religious men, and no person will be employed who uses profane language, violates the Sabbath, drinks intoxicating liquors, or is in any way known to be immoral. The boarding-houses will be kept by pious persons, and a church opened when the factory commences, for the use of those employed. It is intended as an establishment where christian parents may safely place their sons and daughters.

We hope that with the profession of piety they will also mingle the practice—which does not consist in working 14 hours per day for potatoes and salt.

In the city of Boston the increase of crime since 1832, as shown by police cases, has been over one hundred and fifty per cent—of this it said that the increase the past year alone is one hundred per cent! The city of Pilgrims and the city of Quakers, are outfleeting New York in criminality. What is the remedy?

There is now in bloom, in the garden of Drummond Castle, Perthshire, Scotland, a splendid American aloe, with a stem thirty feet high, supporting 2800 flowers.

Four thousand paupers boys and girls, will this year be sent to Australia from Ireland, and 10,000 from England.

In his Letters from the United States" in the Manchester Times, Mr. Prentice says: "I saw more cheerful faces in Connecticut, than in all the other States put together."

The Watertown and Rome Railroad has been let to a New England company of railroad builders, who begin operations forthwith. The cost of grading will amount to nearly half a million of dollars.