MISCELLANEOUS.

Hydraulic Pressure Engines.

A Mr. Glynn brought under the notice of the British Association in 1849 the means of employing high falls of water to produce reciprocating motion, by means of a pressure engine; this latter acted on by the power of a descending column of water upon the piston of a cylinder to give motion to pumps for raising water to a different level, or to produce a reciprocating motion for other purposes. The pressure engine was calculated to give great mechanical effect in cases where water-falls exist of much too great a height and too small a volume to be practically used efficiently on water wheels within the ordinary limits of diameter. One of these engines is at present worked at the Allport Mines, Derbyshire. The cylinder is 50 inches diameter, and the stroke 10 feet, worked by a column of water 132 feet high, so that the proportion of power to act on it was the area of a piston to that of the plunger, namely, 1,963 to 1,385, or fully 70 per cent. The engine never cost $60 a year since its erection in 1841. Its usual speed is 5 strokes per minute, but can work 7 without any concussion in the descending column. The duty actually done being equal to 163 horse power. Area of plunge 9·621 feet×10÷7 strokes=673·41. 673·41×62·5÷132=5555632 ÷33000=163 horse-power.

In this engine as in others, when water acts by its gravity or pressure, these machines do the best work when the water enters the machine without shock or impulse, and leaves it without velocity, obtaining thus all the available power that the water can yield with the least loss of effect. This result is best accomplished by making the pipes and passages of sufficient size to prevent acceleration of the hydrostatic column.

The pressure of a small column of water, as that of a common hydrant pipe, has been made to turn a coffee-mill, which it works economically and efficiently. There are many small machines which might readily be turned by the Croton water in New York, and also in other large cities by the mere descending force of the small hydrant or hose pipe. It would be in cities one of the simplest and least expensive powers.

Coins in the United States---Mint at Philadelphia.

The ancient coins are displayed in eight cases, mitred in pairs, and placed erect against the walls in the wide doorways and the middle room. The modern coins are variously arranged; part (including all those of the United States) being in a nearly level case, and part being in upright cases, disposed along the walls of the middle and west rooms. The ores, minerals, and metallic alloys are placed in the west room; in the eastern are shown the national and other medals, and the fine beams used for the adjustment of weights. The middle room also contains portraits of the directors of the mint, beginning with Rittenhouse the first director.

A great majority of the coins—almost all of those not over three hundred years old—have been culled from deposits, and consequently have cost us no more than their bullion value.

They are, moreover, the choicest of their kind; and perhaps, there are few cabinets where so large a proportion of the pieces are in so fine preservation, as well the ancient as the modern.

At the present time the aggregate of specimens is about 650 in gold, 2,100 in silver, 1,200 in bullion, brass, copper, &c.; in all, 3,950. Of these, the ancient Greek and Roman number 82 in gold, 503 in silver, and 480 in other metals; in all, 1,065.

There are a number of scarce English and Colonial coins, also some veay rare ancient Persian coins from the East India Company, and some very curious antiques from Middle Asia.

Health Extraordinary.

In the very flourishing village of Cleveland Oswego Co., N. Y., containing a population of 1,200 inhabitants, there has not been a death of either old or young since Nov. 1, 1850; nor has there been a fire, nor a case of assault and battery, nor any open breach of the peace.—[Exchange.

[Much of the good health may be set down to the indicated morality of the people; yet there are plenty of villages in America where crime is as seldom perpetrated. The village is built on a gravelly soil sloping towards the beautiful Oneida Lake. We do not believe that its drinking waters are as good as the croton in this city, but its atmosphere is certainly much purer. There is nothing extraordinary in its situation to cause so much good health among its inhabitants.

Method of Curing Prize Hams.

The hams of Maryland and Virginia have long enjoyed a wide celebrity. At the last exhibition of the Maryland States' Agricultural Society, four premiums were awarded for hams. We are informed by those who had the opportunity of examining them, that they were of first-rate quality. The following are the recipes by which the hams were cured, says the American Farmer:

T. E. Hamilton's Recipe.—First Premium.—To every 100 lb. of pork take 8 lb. of G. A. salt, 2 oz. saltpetre, 2 lb. brown sugar, 1 1-4 oz. of potash, and four gallons of water. Mix the above, and pour the brine over the meat, after it has lain in the tub for some two days. Let the hams remain six weeks in brine, and then drier several days before smoking. I have generally had the meat rubbed with fine salt, when it is packed down. The meat should be perfectly cool before packing.

J. Green's Recipe.—Second Premium.—To every 1,000 pounds of pork take half a bushel and half a peck of salt, 3 lbs. of saltpetre, 3 lbs. of sugar, and 2 quarts of molasses. Mix—rub the bacon with it well; keep on for three weeks in all; at the end of nine days take out the hams, and put those which are at the top at the bottom.

R. Brooke, Jr.'s Recipe.—Third Premium.—One bushel of fine salt, half bushel ground alum salt, one and a half pounds to a thousand lbs. pork, left to lie in pickle four weeks, hung up and smoked with hickory wood until the rind becomes a dark brown.

C. D. Singluff's Recipe.—Fourth Premium.—To 100 lbs. of green hams take 8 lbs. G. A. salt, 2 pounds brown sugar or molasses equivalent, 2 oz. saltpetre, 2 oz. pearl ashes, 4 gallons water, dissolved well; skimming off the scum arising on the surface. Pack the hams compactly in a tight vessel or cask, rubbing the fleshy part with fine salt. In a day or two pour the above pickle over the meat, taking care to keep it covered with pickle. In four to six weeks, according to the size and weight of the hams, (that is to say, the longer period for heavy hams) hang up to smoke, lock up, smoking with green hickory wood. I have put up hams for the last 12 or 15 years by the above recipe with uniform success, equal at all times to the sample now presented.

Mending Cast Iron Pots.

Mr. Balestier, who was sent by our government on a mission to the East, writes from Macao to the Commissioner of Patents, describing the mode of mending broken iron pots. He describes it as follows:—

I procured the accompanying cast iron pan, measuring 12 inches in diameter, by 4 inches deep. A crack of 3 inches was made in it in the first place, and in the second a piece was entirely broken off; giving rise to two distinct operations.

The operator commenced by breaking the edges of the fractures slightly with a hammer, so as to enlarge the fissures, after which the fractured parts were placed and held in their natural positions by means of wooden braces. The pan being ready, crucibles made of clay were laid in charcoal, and ignited in a small portable sheet iron furnace, with bellows working horizontally. As soon as the pieces of cast iron with which the crucibles were charged, were fused, it was poured on a layer of partly charred husk of rough rice, or paddy, which was previously spread on a thickly doubled cloth, the object of which is to prevent the sudden cooling and hardening of the liquid metal. Whilst in this liquid state it was quickly conveyed with the right hand to the fractured part under the vessel, and forced up with a jerk into the enlarged fissure, whilst with the left hand a paper rubber was passed over the obtruding liquid, inside the vessel, making a strong, substantial, and neat operation.

[We do not see anything very new or extraordinary in this process, it is the same as that employed by our plumbers for uniting the ends of lead pipes, only iron is the material, and not lead. Holes in iron castings are filled up by running the hot metal into them.

Improvement in Canal Locks.

W. W. Virdin, of Havre de Grace, Maryland, has taken measures to secure a patent for a good improvement in locks of canals. The object of the invention is to economise water in passing boats from one level to another, and consists in the employment of reservoirs so connected by wickets or gates with either chamber of the lock, that a portion of the water from the higher level flowing into the lock in the passage of a boat from the higher to the lower level, is made (as the boat is lowering in the lock) to pass into the reservoirs, for the purpose of assisting the succeeding boat in the opposite direction.

It is well known that the water in common locks is let down from the higher to the lower level, and none is returned back. The boat from the lower level is locked up and then the boat above is locked down in the water as it is let out from the lock; in this improvement, a number of floats working in suitable chambers are employed, and these having appropriate passages and wickets connecting them with the lower level, and to the plungers the boat is attached, and as it sinks to the lower level, the weight of the boat is made to force up water in the float chambers to the higher level, thus returning some water which by the plans now in use is entirely lost. On many occasions, the invention will be of great benefit.

Improved Planing Machine.

We learn by the Philadelphia Ledger that two new machines of the Woodworth patent "have recently been put up at the mill of Henry R. Wilson, Hamilton street, west of Broad, Philadelphia, which for rapidity of operation and fine work surpass any other machines of this patent. They are wholly of iron and one weighs about four tons. This was made by John H. Lister, of Hastings, West Chester County, New York, with various improvements suggesed by Mr. Wilson. It now turns out boards planed on both sides, and tongued and grooved, at one operation, at the rate of twenty thousand feet per day. It is capable of being changed to a flooring-board machine, that is, planing but one side, by changing the strap and displacing the under cylinder by raising the bed-plate, which requires but a minute to effect. In planing flooring-boards, it has been worked at the rate of eighty feet per minute.

The other machine was made by S. B. Schenck, of Mansfield, Mass., and has all the above improvements. There are now sixteen of the Woodworth planing machines in active operation at the mills of H. R. Wilson, Jacob P. Wilson, and George B. Sloat, working, on an average, about twelve million feet per annum.

Improvement in Turbines.

Mr. N. H. Lebby, of Charleston, S. C., has invented and taken measures to secure a patent for a very excellent improvement in Turbines, the nature of which consists in constructing the turbine with ribs on the outer face of its upper disc, working under a cover of the wheel, and which, as the wheel revolves, causes a void to be formed at or about the centre, the tendency of which is to relieve the wheel of its weights, and thereby reduce the running friction. Mr. Lebby has applied his wheel as a pump to reclaim some of the submerged rice fields near Charleston, and it has realized the expectations of the inventor and others.

Improved Carriage Wheels.

George Poe, Ellicott Mills, Md., has filed an application for a patent for improvements in the construction of carriage wheels, which is intended to strengthen the felloe or bent rim at the joint, thereby rendering it impossible for the felloe to give way at the joint, as it now does. This plan is said to obviate the use of plates, bolts, and square ferrules generally used. We hope this improvement will be found to answer an excellent purpose.

Improved Method of Ventilating Cars.

Messrs. Noble S. Barnum & Lewellyn Whitney, New Haven Connecticut, has taken measures to secure a patent for a new method of Ventilating Railroad cars, which consists in arranging air tubes on the top of the cars with branches extending through the roofs, and connected with tubes near the ceiling inside, and which extend longitudinally the entire length of each car. In them there are blowers or rotary fans for drawing in the air from the outside tubes, which run along the top of the cars. The outside tubes extend beyond where the smoke comes from the locomotive, and all the windows of the cars are fitted tight, so that no smoke nor sparks can enter, the air for ventilation being drawn into the cars by the blowers, which are worked by gearing from the engine.

Improved Corn Sheller.

Mr. John Van Horn, of Magnolia, Putnam Co., Ill., has invented a new and useful improvement in Corn Shellers and separators, for which he has taken measures to secure a patent, which consists in the employment of an inclined shoot so arranged as to allow the shoe to be placed sufficiently high that it allows a box or sack to be placed underneath a spout, and dispenses with the use of elevators.

Improvement in Making Railroad Chairs.

Mr. M. M. Ison of Etowah, Ga., has invented and taken measures to secure a patent for a useful improvement in making chairs for rails. The invention consists in a machine for making them, which takes iron bars of suitable thickness and width, and cuts off a piece for a chair, then takes it forward to dies, where it is formed, finished, and delivered at one continuous operation; but while one part is forming in one stage of its progress, another is being cut off, so that the machine combines the good quality of performing every operation distinct on one chair, without interfering with an operation on another chair in its progress of formation.

Fire Annihilator Experiments.---Tripler Hall Saved because there was no Conflagration.

How grandly Byron opens his Waterloo:

"Stop, for thy tread is on an empire's dust,
An earthquake's spoil lies sepulchred below."

Well, we pictured to our imagination, some such a scene, when, last Monday morning, we read the advertisement that Dr. Colton was to lecture on the Fire Annihilator in Tripler Hall, and demonstrate its effective properties in extinguishing fires. We resolved, like John Gilpin's admirer, to "be there and see." But reader, do not suppose Dr. Colton set Tripler Hall on fire, to extinguish it by an Annihilator, and thus annihilate all skepticism respecting its merits; no such thing,—it was a mere harmless lecture, as demonstrative of any practical qualities of the Annihilator to extinguish a conflagration, as a boy's windmill to drive Hecker's famous flouring mill, or a smoke-jack to propel the steamer Atlantic. The lecture was "all leather and prunella."

We are always willing to be convinced of errors by occular demonstration, and, when convinced, say so freely, but if ever we had a doubt respecting the efficacy of the annihilator, that doubt was confirmed by Dr. Colton's sham experiments and miserable logic. It was given out that a model house would be set on fire and extinguished; well this was all a plain falsehood, for a small house of the size of a dog-kennel was on the table, but it was not set on fire, for it was made of sheet-iron. A few dry sticks and shavings were set on fire, but they were so arranged, as we could easily see, that they would go out themselves in a very short time, but Dr. Colton put them out with a small annihilator, and we could easily have done so with our grandmother's coffee-pot. The Doctor is up to such things, he was the man who made such a fuss about Paine's Light, and gassed the public by his statements about it. He said the Fire Annihilator Company were not responsible for what he said; perhaps not, but none but the green ones believe him to have given the lecture on his own account. He evidently spoke as to an audience of dupes.