



New Steam Pump.

The Baltimore papers speak highly of a new Steam Pump lately invented by Mr. W. Fulton, and pronounce it to be the best pump ever invented for many purposes. The peculiarity of the construction of "the pump consists in several particulars, of which the prominent are the form of the barrels and the mode by which they are constructed; the manner in which the valves are arranged, whereby but half the number usual in double acting pumps is required, and the stationary valves' seat within the pump thus entirely dispensed with. The pump is thus constituted a continuous pipe, diverging in the form of an ellipsis flattened at the sides; the water being drawn in at the middle of one of the flat sides and expelled at the middle of the other, traversing the pump without check or interruption; thus no power lost at all, the necessity of alternating the momentum of the water in opposite directions, as is the case in double acting pumps of the ordinary construction, being entirely superseded.

The pistons, of which there are four, are moved by two pump rods connected with the piston rod of the steam cylinder, by means of a cross-head of wrought iron, the moving parts being thus reduced to the most simple construction. The engine occupies the centre of the ellipsis, the piston rod passing through one end thereof, so as to connect with the cross-head. The steam valve is worked by a very simple arrangement, "plungers," or pistons, being introduced through the cylinder heads, which being partly moved by the piston receive the direct action of the steam, in order to complete the requisite action of the valve."

From the universal necessary employment of pumps, no other kind of machines have presented so many different modifications and applications of mechanical principles, as the result of inventive minds to improve upon such useful machines. Among the many good pumps at present employed, hundreds of others that have been invented, have been laid aside on account of a deficiency in practical economy. It is now only the severe test of the *crucis experimentum* that will satisfy the public. But who is he that believes we are at the end of hydraulic improvements? Not a man of common sense. The great improvements made in pumps during the last century is an evidence of what may be accomplished during the present. "Invention begets invention."

#### Grain Planters.

A correspondent of the Genesee Farmer writing from Augusta, Georgia, says that a corn planter manufactured by Mr. Bachelder of Baltimore, has been used there this season with great success. With it a hand and mule can put in well 100 acres in ten days. It drops and covers the seed, and rolls the ground.

Great care is taken to have each kernel in the exact line of the row, and no seed nearer than three inches to its fellow, in the same hill, where more than one stock is permitted to grow. The rows are worked only one way on the bottoms, and stand from five to six feet apart. By having every stem of corn in a straight line, the hills can be plowed close on either side, so as to stir all the land and not use the hoe at all. To hoe corn is an expensive operation, and by doing as stated, no weeds or grass can grow, the crop is alike clean, beautiful and abundant at the harvest.

As five good hands with Bachelder's planters can plant 500 acres in ten days, the after culture constitutes the principal labor of making this grain. The corn is plowed out with three small plows set in gang and drawn by a single mule twice in each row—turning the three shallow furrows towards the hills or drills, as the case may be. A haulk is left between the rows of from 12 to 20 inches, which is cut up and mostly left near its old position—turned a little to the right and left—

with a sharp cutting instrument something like a 'buzzard.' Notwithstanding the rows of corn are six feet apart, the mule has to pass only three times between each to till well the whole ground once over. In this way a field is gone over three or four times in the course of a season. As a general thing, the corn crop on the Savannah is very good this year.

#### Two New Minerals.

Medjidite is a mineral named in honor of the reigning Sultan of Turkey, Abdel Medjid, who exhibits a most decided patronage of both the Arts and Sciences—certainly much more than any of his predecessors. The other mineral is termed Liebigite. Both were found associated with a specimen of pitchblende from the neighborhood of Adrianople, Turkey; it was quite impure and a portion of it contained crystals of copper pyrites. On the surface of this pitchblende, beside the two minerals in question, there existed crystals of sulphate of lime and a little oxide of iron. Medjidite, is composed of sulphate of uranium and lime, and is of a dark amber color, transparent, of imperfect crystalline structure, and fracture vitreous, although the surfaces exposed are sometimes of a dull yellow color, arising from the loss of water. It is found on the surface of the pitchblende associated in some places with crystals of sulphate of lime.—Its hardness is about 2.5—specific gravity not yet known. Prof. Smith, of South Carolina, Geologist to the Sultan of Turkey, describes it in a recent communication to Silliman's Journal, and observes that, so far as the small quantity then at his disposal, enabled him to make out its composition, it would appear to be a salt similar to Liebigite, with less water, and sulphuric instead of carbonic acid, the acid being derived from the decomposition of the pyrites associated with the pitchblende. Liebigite is a carbonate of uranium and lime, and is not found crystallized, but appears in the form of a concretion, having an apparent cleavage in one direction. It is of a beautiful apple-green color and transparent with a vitreous fracture. The mineral admits of ready separation from the pitchblende, and, owing to its color and transparency, is easily freed from the smallest portion of foreign matter. Chemical analyses show the presence of water, carbonic acid, lime and uranium.

#### Cool Proceedings of the Oriental Ladies.

During the hottest months, when the thermometer is often at the height of 120 degrees Fahrenheit, the ladies wear a silken garment and slippers but no stockings. At night it is the custom to sleep on the terrace, at the top of the house, in the open air, the ladies, the men, the children, and the domestics, having each their separate terraces. Strange as it may sound, it is by no means an uncommon practice with the ladies in Bagdad, in the months of July and August, to steep their night clothes in cold water, which is slung up for this purpose, in skins, in order to keep it as cool as possible. Having done this they put them on, wringing wet, and again retire to their beds of palm branches, to enjoy refreshing slumbers. Notwithstanding this practice, rheumatism is rarely heard of in that country.

#### The Flemish Mode of Curing Hams.

The ham is cured in brine and saltpetre and aromatic herbs, viz:—a few bay leaves, wild thyme, a handful of juniper berries, and a little garlic. It is steeped for about six weeks, and then dried in the smoke of a common chimney, over a wood fire. When wanted for dressing it is buried in the ground for about twenty-four hours, and then boiled with the addition of some aromatic herbs in the water. After boiling, the bone is taken out, and the ham is pressed under a heavy weight. As a corollary to the dressing, it may be added that it often happens that the ham when produced at the table, disappears at one sitting.

#### Phenomenon of Insects.

A short time ago in Dayton, Ohio, after the lamps were lighted in the evening, clouds of little white flies resembling the "miller" fluttered round the light, danced for a few moments, when each one deposited two eggs and expired. They could have been gathered up in baskets full the next morning.

#### Holden's Dollar Magazine.

The September number of this Magazine has just been laid upon our table. We have frequently noticed this work as the most commendable of our Monthlies at any price, and can only say the present number fully equals those of July and August. The view of Hastings is a most beautiful wood engraving the size of a full page, and the portrait of glorious Tom Moore, of ballad memory, just and excellent as a portrait and engraving. Besides these there is a capital likeness of the celebrated Rev. Henry Ward Beecher, views of the Bishop Bridge Norwich, Stratford Church by moonlight, together with numerous humorous and fanciful engravings of a smaller size. As an illustrated Magazine it is unquestionably superior to any similar publication we have ever seen, resembling some of the best specimens of English wood engraving. There is no necessity of particularizing the different Tales, Sketches, Essays and Reviews of this number. The letter press is excellent as it ever is, and justifies the new title claimed for his Magazine by Mr. Holden—the Blackwood of America. There are not too many love stories though they are really "stories which are stories," and will do more to elevate the standard of American literature than an overflowing of romantic trash. This Magazine commands readers and will have them. Published by C. W. Holden, 109 Nassau street, New York.

#### Law's Stave Dresser and Jointer.

The Commercial of Wilmington, N. C. of August 3, gives a very flattering account of the operation of Mr. Law's Stave Dresser and Jointer, engravings of which have already appeared in our columns. The Commercial says:—

"The Staves are taken as they come to hand from an ordinary pile of all widths, sizes and shapes, and being placed in the dresser are carried forward by the follower, under a pair of weighted levers, and between two sets of revolving cutters, which plane very smoothly both faces of the Stave at the same time. The Jointer immediately follows, and receives the Staves as they come from the dresser, they are then placed by hand in their proper position in the jointer and are carried in a curved line, by a dog attached to a swivel on an endless chain, pass the first saw, and are jointed on that side; the next saw stands some distance beyond on the opposite side, and by the simple moving of a lever, is placed before the Stave reaches it, to the proper width, and joints the side. The Staves are beautifully and handsomely dressed and jointed at the rate of 6 to 7 per minute.

Mr. Law deserves much credit for his persevering efforts in introducing it among us."

#### The Spider's Thread.

That any creature could be found to fabricate a net, not less ingenious than that of the fisherman, for the capture of its prey; that it should fix it in the right place, and then patiently await the result, is a proceeding so strange that, if we did not see it done daily before our eyes by the common house-spider and garden-spider, it would seem wonderful.

But how much is our wonder increased when we think of the complex fabric of each single thread, and then of the mathematical precision and rapidity with which, in certain cases, the net itself is constructed; and to add to all this, as example of the wonders which the most common things exhibit when carefully examined, the net of the garden-spider consists of two distinct kinds of silk. The threads forming the concentric circles are composed of a silk much more elastic than that of the rays, and are studded over with minute globules of a viscid gum, sufficiently adhesive to retain any unwary fly which comes in contact with it. A net of average dimensions is estimated by Mr. Blackwall to contain 87,360 of these globules, and a large net of fourteen or sixteen inches in diameter, 120,000; and yet such a net will be completed by one species (*Epeiraa poeica*) in about forty minutes, on an average, if no interruption occurs!

A new locomotive has lately arrived at Montreal from Dundee, Scotland, and runs 50 miles per hour.

#### Devonshire Butter.

The Gardener's Chronicle says that the way excellent Devonshire butter is made, is as follows:—

Scald your cream in a zinc pan, over a charcoal fire, but do not let it boil. When the cream is cold, say the next morning, take it off with the hand. Put the cream into a wide wooden bowl; stir it with the hand for ten or fifteen minutes, and the butter will be the same as out of a churn, and to be dealt with the same. A cow that will make one pound of butter per day, that is seven pounds a week, if the cream is scalded, will make nine pounds in the seven days. Great care must be taken not to let any dust rest upon the cream.

Connoisseurs in butter making say that butter ought always to be churned in an apartment the temperature of which is between thirty and sixty degrees. At sixty degrees, butter is obtained in the largest quantity, and at fifty-two degrees, of the best quality. These facts are of high practical importance to those interested in dairy economy.

#### The Crops.

Throughout the whole United States there are the most flattering accounts of abundant crops.

The crops through Ohio are unprecedented. It is estimated that this State will yield this year, 23,000,000 bushels of wheat, over one-third more than ever before in one year.

Throughout England and Ireland, the crops never looked better and there were no appearances of the potatoe rot. Therefore we may not expect to export much during this and the next year. We hope not to hear people talking of hard times, when there is plenty in the land.

#### Winchester, Va. Iron Works.

The Virginian states that the numerous wagons passing through that town loaded with pig iron, and the quantities of that metal deposited at their depot, show that the furnaces around Winchester are in full blast. It mentions four works, and says that new life has been infused within a few years into the iron business of Virginia.

#### Horse Power.

The Hagerstown Herald of Freedom, speaking of a Horse Power, just built by Mr. Samuel H. Little of that town, which is designed for thrashing, separating and cleaning grain all at the same time; says it is constructed upon the most simple principles, being free from complicated works, is not liable to become disordered, and will be a great desideratum with farmers and others using thrashing machines. It will take from the sheaf two hundred bushels of wheat, and prepare it for the mill in one day, with the aid of but seven hands.

#### Branch Mint at New Orleans.

The following is the amount of coinage at the mint in New Orleans during the months of June and July. In June, Gold, 3500 Eagles, \$35,000. Silver, 200,000 Half Dollars, \$100,000—total \$135,000. In July, Gold, 2000 Eagles, \$20,000; Silver, 360,000 Half Dollars, \$180,000—total \$200,000. Total during the mouths of June and July, \$335,000.

#### To Destroy Flies.

Mix in a saucer, a table-spoonfull of cream, half as much ground black pepper, and a teaspoonful of brown sugar. This will attract and kill flies without danger of poisoning children.

The Legislature of Wisconsin has passed through every stage a bill exempting the homestead of a family from sale on execution for debt. The area exempted, is forty acres in the country, or a quarter of an acre in the village. The final vote in the Senate stood 14 to 5; in the House, 33 to 25.

On the 26th ult., at New Orleans, a flatboat freighted with coal, when descending the river, was struck by lightning opposite the Bonnet-Carre, St. John the Baptist Parish, and sunk immediately, with three men on board. So sudden was the disaster, that no assistance could be rendered them.

Letters from Missouri state that the hemp crop will be very poor this season; and that although more ground has been sown this year than last, yet the amount received will be less.