

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMENTS.

New York, September 30, 1848.

Dol. 4.

SCIENTIFIC AMERICAN : CIRCULATION 11,000.

PUBLISHED WEEKLY. At 128 Fulton Street, New York (Sun Building,) and 13 Court Street, Boston, Mass. By Munn & Company. The Principal Office being at New York.

THE

the remainder in 6 months. G-See advertisement on last page.

Poetry.

THE SNOW DROP IN THE POOR MAN'S WINDOW.

It was a darksome alley, Where light but seldom shone, Save where at noon a sun-ray touched Its little sill of stone. Beneath the poer man's window.

Whose weary life was bound, To waste in one dull. ceaseless task

The passing seasons round. Spring's dewy breath of perfume,

And summer's wealth of flowers, Or the changing hue of Autumn's leaves. Ne'er blest his lonely hours;

He knew too well when Winter Came bowing forth again-

He knew it by his fireless grate, The snow, and plashing rain.

Pierced by the frost-winds beating, His cheerless task he plied; Want chained him ever to the loom, By the little window side : But when the days grew longer,

He stole an happy hour To tend, within a broken vase, A pale and slender flower.

How tenderly he moved it To catch the passing ray, And smiled to see its folded leaves Grow greener every day. His faded eyes were lifted oft, To see the snow-drop bloom-

To him it seemed a star of light Within a darksome room.

And as he gently moved it Near to the sun-touched pane, Oh ! who can tell what memories

Were busy in his brain ?

- Perchance his home in childhood In a sylvan valley lay,
- And he heard the voice of the running streams And the green leaves' rustling play.

Perchance a long-departed But cherished dream of yore,

Rose up through the mist of want and toil, To bless his heart once more.

A voice of music whispered

Sweet words into his ear, And he lived again that moonlight o'er, Gone by for many a year.

Or but the love of Nature

- Within his bosom stirred-The same sweet call that's answered by
- The blossom and the bird ;
- he free unfettered worship
- Paid by the yearning soul, When it seems to feel its wings expand

To reach a brighter goal,-

An aspiration, showing Earth binds us not her slave,

But we claim a brighter being, A life beyond the grave.

The Rockville (Md.) Journal says that a merchant of that town sold last year \$1,500 worth of sumac. The Journal advises the farmers of the County to gather it.



This is a new propeller invented and patented by M. P. Classen, of London, and first noticed in Barlow and Le Capelain's Patent Journal. The invention relates to propelling boats from the stern, and he employs horizontal propeller shafts respectively attached to the pistons of two steam cylinders. At the ends of these shafts, which pass through stuffing boxes into a water tight casing are affixed two frames subdivided into 12 or more compartments, for the reception of an equal number of swing floats, which open one way

to admit of but little resistance to the return stroke. These propellers, which move in a vertical line with the rudder of the boat, causes the swing floats when opposed to the water to shut and thus propel the vessel. The mode of reversing being the alteration in the direction of the float boards to the required direction. In constructing float wheels according to this invention, instead of applying float boards to hollow frame wheels they are attached to cylindric drums having suitablerecesses formed in their peripheries for their reception.

Figure 2.



ved wheel, and fig. 2 a sectional side elevation taken through the doted lines, A B. a a, is is the cylindrical drum which may be of metal or any other light substance, such as cork, wood, or otherwise. b b, are float motion rods, attached at right angles by the hinge or joint d, to the float boards c c. e e, are small friction rollers which turn on centres at the ends of the motion rods, b b, for the purpose of directing the position of the float boards; g g, are slotted bridles or guides, in which the friction rollers e e, travel: these rollers, when moving concentric with the drum α α , re-

the eccentric channel, h h, they cause the free use of the float boards to move outwards, till, on arriving at a point coincident with a vertical line drawn through the centre of the drum, they present the whole of their surfaces to the water, as seen at f; ii, is a crank shaft, passing through stuffing boxes, k k ; j j, is a water-tight casing, enclosing the paddle wheels. Wheels so constructed are to be placed in the hold of a vessel or boat, on each side of the keel, transversely, and calculated to be driven by steam or other motive power engines.

RAIL ROAD NEWS.

No. 2.

N. Y. and Eric Railroad. This great work, from the Delaware River to Binghamton, is now being pushed forward with vigorous resolution. The Binghampton Courier says it is still the expectation of the Directors to complete it to that place by the 1st of January next.

Reduction of Fares.

The associated Railroads in this State have reduced their through fare from Buffalo to Albany to \$9,75; hitherto \$12. When the Erie Railroad shall be in operation throughout, the central route will reduce their fares, and wish they had not deferred it so long.

Accidents by Rallroad.

The boiler of a Locomotive exploded in Philadelphia on Thursday week, on Willow street railroad, near Schuylkill Eighth street. The Locomotive (the Simon Snider) was attached to a train of portable boats surrounded by several persons, who escaped almost by a miracle. The cause of this explosion was the same that has produced many similar disasters-a want of water in the boiler.

Ninety persons were killed and ninetynine injured, by railroad accidents in Great Britain and Ireland during the six months ending June 30th. The total number of persons travelling by railroad in the same period was 26,330,492. The propurtion of persons killed was one in 292,561 passengers, and of the wounded one in 265,964.

Reprehensible Conduct.

Several instances have occurred of late, in Massachusetts, in which passengers in railroad cars have been severely injured by stones or other missiles being thrown at them by boys as the train was passing. On Monday afternoon last an iron spike, weighing about three quarters of a pound, was thrown at the 4 o'clock up train from Boston, near West Newton, by a boy about twelve years of age. The spike entered the window while the train was under all headway, and grazed the head of a lady who sat next to it, but without doing her serious injury.

A man travelling eastward on the Utica Railroad, last week, who refused to pay his fare, was ejected from the cars by the collector at Oriskany. He gave way to his wrath by throwing a volley of stones through the window near which Hon. John C. Spencer sat, striking that gentleman on the head, inflicting a severe wound.

Such acts should meet with prompt punishment.

The Telegraph.

We learn that the New York and Philadelphia Telegraphic Company have abandoned the project of communicating with this City by means of wires sunk in the river. They have extended their line to the Highlands, where the wires can be suspended across the river at an elevation of 500 feet.

The Fate of a Canal.

New Haven papers are making merry over the destruction of the old canal, once the boast of Connecticut, but now, like a faded beauty devoid of intellectual or moral worth. it is thrown aside and neglected for the more useful railway. There is hardly a vestige of the old canal remaining.

The fragment of a mammoth tooth was recently found near Sulphur Springs, Alabama, weighing 801 pounds. It is of a bluish cast, and in a petrified state, and when found was embedded in the earth with the grinding surface exposed. The teeth of the monster of which this is a part, must have weighed over two hundred pounds-its head several thousand. The animal, we suppose, was one of earliest inhabitants of Mississippi Valley, and was well calculated for traversing its majestic rivers, prairies and forests.



Foreign Correspondence.

NEW KENT ROAD, SURREY, LONDON September 8th, 1848.

MR. EDITOR .- I am in the regular receipt of your valuable paper (through my father, in Cambridge, Mass.) and with your permission will add to the reply that you made your correspondent "G. E. of Philadelphia," in your paper of Aug. 19. Although I am an interested party I will endeavour to give it an impartial consideration. The French Sewing machine has the same detect as the Cambridgemachine, only to a greater extent. For whilst the Cambridge stitch is pulled out with some difficulty the French, or Tambour stitch, is pulled out with the greatest ease, as those that understand the peculiarities of each stitch will lives were lost. readily perceive. The stitch, which is the tambour or chain stitch, is made with a hook instead of a needle, and is used only for purposes of ornament. The machine is very compact and simple, but in my opinion incomplete inasmuch as the cloth has to be presented to it by hand, thereby requiring both hands and one foot to operate it. I don't know how your correspondent can get one for there is not any for sale. At least there was not a few weeks ago.

I wish to say to your correspondent and others who feel themselves interested, that I expect soon to be able to submit to their inspection a Sewing Machine that will both stitch and sew in the same manner as is done by hand, thereby silencing those objections brought against the Cambridge and French machines. The machine will be extremely simple, not possessing one-half the complication of the others, the patent for which is sealed here. I don't think it will be of any use for you to ridicule John Bull about his patent seal, for the fact is John is thick upon some matters, and upon that seal he is decidedly ELIAS HOWE, JR. thick.

A Noble Act Handsomely Acknowledged

The Common Council of this city have voted the freedom of the city and a gold box with suitable inscriptions, to Frederick Jerome, the gallant sailor who saved so many passengers of the Ocean Monarch, at the evident peril of his own life. Jerome belongs to the port of New York, where his wife and family reside. He had, on a previous occasion saved a number of lives and when the catastrophe happened to the Ocean Monarch, he swam to the wreck and with his own hands lowered some fifteen or twenty helpless females into the boat. He was rewarded by a present of £50 from the Prince de Joinville and Duc d'Aumale; the Queen of England also presented him with another £50, and the Humane Society of Liverpool with a gold medal. This intrepid sailor reached this city a few days since in the ship New World, and the Common Council have appointed a special committee to wait on him with their handsome acknowledgment of his intrepidity and humanity.

"The star-spangled banner rejoices to wave O'er one so intrepid, so noble, so brave."

An Interesting Relic.

The venerable John Binns has proposed to the Philadelphia Councils to purchase an original portrait of George Washington, painted by Charles W. Peale, just after the battle of Trenton, when the great man was in his 46th year This picture is the only one taken of him in contenental uniform and the back ground embraces likenesses of Knox and Mercer. The frame is of the oak of the frigate Macedonian, captured during the war with Great Britain by the United States.

In the course of the next month the Central (Michigan) Rail Road, will be completed to Niles, leaving 25 miles by stages to St. Joseph. Passengers then will make the distance between Chicago and Detroit, in 24 hours.

Scientific American.

Hints to Gas Consumers.

As gas obtained from coal or oil has now nearly superseded every other kind of artificial light for both public and domestic purposes, its proper management becomes a matter of great importance. In the first place, the greatest care should be taken to prevent its escape into the apartments in which it is used ; for as it forms, when mixed with common air, a highly explosive compound, re. sembling the fire-damp in coal-pits, both in constitution and properties, very dangerous accidents frequently happen from a neglect of this precaution. To this end the taps of the various burners, and especially of the main-feed pipe, should be turned so as to quite cut off all supply of gas. Should, however, the gas be found to have escaped, a light should never be introduced into the apartment until the upper sashes of the windows have been open some time, and every available way of exit provided for the dangerous mixture of gas and air then in the room. By neglecting this precaution a fearful accident lately occurred in London, whereby some

The next point claiming attention is the meter. To make our remarks on this subject the more intelligible, it may be proper to give a brief account of its construction .-It consists of an external gas chamber, in which there is a rotating chambered cylinder properly connected with the register wheels. Into the chambers of this cylinder the gas is delivered by the outer feed-pipe to be measured by the burners. Projecting from the front of the main chamber is a smaller one, provided with two screwtaps, one for the admission of water, the other for its emission. Water is poured through the former into the external chamber, and finds its way into the cylinder chambers, and, of course, rises to a height proportioned to the quantity poured into the apparatus. The second of the screwtaps above mentioned is used to regulate the height, and must, therefore, be withdrawn whilst pouring in the water. The form of the chambers in the rotating cylinder is such that the pressure of the entering gas on the water causes the cylinder to go round. This rotation communicates motion to the wheels' which register the number of rotations, and, of course, the volumes of gas delivered at each rotation into the chamber from which the burners are supplied. Now, as the rotating cylinder is partially filled with water, it is obvious that its capacity for gas must depend on the height to which the water has risen in it. This capacity is estimated for each meter from a given height of water, and this is regulated by the emission screw tap as just stated. If this is not withdrawn whilst pouring in the water, the capacity of the chambers will be diminished by the rise of the water ; and more gas registered than has been consumed. On the other hand, should there be too little water consumed, the light will be unsteady, and may suddenly go out altogether. We have thought it right to give these hints at the present time, as accidents are more likely to happen now than at most other seasons.

Potatoe Cheese.

In some parts of Saxony. potatoes of the best quality are dressed in steam, peeled, and reduced to a pulp. Five pounds of this are mixed with about ten pounds of sweet curd kneaded together, with the addition of some salt; after lying for a few days, the mixture is again kneaded, pressed into little baskets, where the superfluous moisture drains off and the cheese is then formed into balls, and dried in the shade. These cheeses are said to keep well, when dry, and their taste and quality improve with age, with the advantage that they generate no vermin.

Bogardus Flour Mill.

A singular building is about being put up at the corner of Duane and Centre streets, by Mr. James Bogardus, the inventor of the Eccentric Mills for grinding grain, drugs, &c. The foundation has been built, and it is now proposed to make the whole basement and four stories with the exception of the floors, of American Iron. The building, which is to be 25 teet wide and 89 feet 9 inches deep, is to be a manufactory and Flour Mill. Morse's Air Distributor, for burning Sawdust, Tan, Fine Coal Dust, and Refuse Fuel.

We copy the following article from the Niagara Courier, which shows the merits of "Morse's Air Distributor from actual test."

This is deservedly one of the most impor tant patents, relative to generating heat, ever obtained. It brings into use substances that hitherto were deemed worthless-and saves the consumption of valuable wood and other fuel. In this Village Mr. G. Revnale has introduced it in his large Gang Saw mill for cutting ship plank and sawing stone. He has two gangs of twenty saws for plank, and five gangs for stone-and says that since he removed his old grates and substituted Morse's, he has better steam and an abundance, from the sawdust, bark, chips and refuse litter, without a stick of wood, than he had before-though previously he burned a portion of the sawdust but with little effect, as it had to be dried .-He now shovels it into his fireplace as made from the logs drawn directly from the Canal. It certainly is a great and valuable affair, and as such we heartily recommend it to the country-every dollar saved in this way adds to the substantial wealth of our people.

The inventors and patentees, Messrs. L. Morse & Brothers, live in Athel, Mass. L. A. Spaulding, of Lockport, has the right of the State of New York. We notice in the report that a Silver medal was awarded at the late fair at Buffalo, by the State Agricultural Society, for this invention.

Holden's Dollar Magazine.

Praising Holden's Magazine now-a-days is as common as reading the newspapers, and each month we feel more and more impressed with the idea that it supplies a vacancy in our national literature never before filled. The October No. is fully equal to any that has preceded it and contains among other choice articles "Naumentenes an Indian Tale" "a Duel in Georgia," "Lawyer vs. Hunter," and a fine Sketch of Doctor Cox the eccentric Clergyman of Brooklyn. The engravings are as usual excellent specimens of art. We see announced for the next No. of the Magazine " the most extraordinary work of the age." It is a novel or romance containing letters from all the distinguished Authors, Poets and Politicians of the present day in the fac similes of their autographs. This feature must be invaluable to subscribers. Holden's Magazine is published at 109 Nassau st. New York, at only \$1 per year. See advertisement.

The Census of France.

The census of France taken in 1846 shows that since the previous census, in 1841, the population had increased 1,170,000, or at the rate of 234,000 per annum. The average population of the period being 34,865,000, annual average increase appears to be 1 on 149, which would cause the population to be doubled in 103 years; but, in point of fact, the increase was not so great, some errors having been made in the census of 1841. The returns, drawn up with the greatest care, show that the excess of births over deaths is annually only 182,000, or 1 in 190, which would only cause the population to be doub led in 132 years. From 1791 to 1840, it is calculated that the population increased from 24,000,000 to 31,000,000. In 1721, the total production of wheat in France was about 47,-000.000 hectolitres, or, after deducting for sowings, 1 hecto. 65 cent. per inhabitant; and in 1840, it amounted to 70,000,000, or 2 hecto. per individual. The quantity of ground cultivated in wheat is about the same as it was before the revolution, from which it results that the increase of production is owing to improvement in cultivation. Other agricultural products have also greatly increased; potatoes, for instance, were scarcely in use before the revolution, and the cultivation of vegetables was not so extensive; so that it appears that the increase in food has been much greater than in population.

The number of deaths in this city last week was 282. Their places of nativity were as follows: United States, 211; Ireland, 44; England, 5; Germany, 16; France, 2; Switzerland, 1; British Possessions in North America, 2 unknown, 1.

Pencils.

The pencils mcnufactured by A. G. Fay of Concord, Mass. we are glad to see are finding their way fast into the market, and will no doubt yet supercede the foreign, which has long carried the sway. Home industry should certainly be encouraged when its produce is as cheap and good as the foreign, and the Yankee made pencils of Mr. Fay, are certainly inferier to no others, and really superior to many. Those who want good pencils, mechanics, artists and accountants, should mind Fay's improved Graphite Pencils. They are hard without brittleness and can be pared with a knife like the strongest material in nature.

A New Suspension Bridge.

The Niagara Chronicle, of the 14th, says it understands that the project of constructing a suspension bridge across the Niagara, at Queenstown, is again revived, and this time with every prospect of being carried out. Mr. Ellet, the engineer of the bridge at the Falls undertakes to construct it for \$10,000, and will himself take one fourth of the stock. This leaves \$7,500 to be subscribed for—half of which has been already taken upon the American side, and a large portion of the other half on the Canada side of the river. If no unforseen difficulties arise, the bridge will be ready for use by September of next year.

Maryland Institute for the Promotion of the Mechanic Arts.

We learn that the committee of arrangements have secured the services of J. B. H. Latrobe, Esq. for the purpose of delivering an oration before this important institution, during the fair which is to take place at Washington Hall on the 31st of October. We also learn that the prospects thus far, for a grand demonstration of the advancement being made in the Mechanic Arts are highly flattering, and afford great encouragement to the board of managers, under whose auspices the fair will be conducted.

Theft of an Ancient Manuscript.

An ancient illustrated manuscript volume was stolen from the library of Georgetown, (D. C.) College, about the 11th or 12th Sept. It is about 600 years old, is of fine parchment, 4 by 3 inches, and some of its pages decorated with rubrics and figured letters, and contain prayers and portions of Scripture in the form of the Roman Breviary. The reverend faculty are very anxious for its return.

Drunkenness among the Hindoos.

It is a lamentable fact that many of the Hindoos, (who were formerly a temperate people,) of all ranks, are learning to drink, and are fast becoming drunkards. This fact is a sufficient ground to lead every Christian to examine, with anxious solicitude, the connection between the drinking usages of Christendom, and the prospective ruin of this interesting people.

Christendom is like a ruler that seeks after the prosperity of his poeple, but neglects to govern his own family.

A Metropolis of Monkies.

Bungalore in the East In the sis on one side completely hidden by a dense grove which stretches around it and is penetrated at different points by roads leading to the gates. This grove is a perfect metropolis of monkies. They swarm in thousands, chasing each other on the boughs, and grinning hungrily at every one who passes with any eatable. They are a constant pest to every housewife in the town, discovering unsuspected passages to their stores, forestalling the meal, and making a hasty retreat.

In England in the early part of last month, ten men, (eight of whom have left widows, with twenty nine children,) and four boys, were killed by an explosion of fire damp, at Murten Colliery. The men were working with naked candles.

A large bale rope and bagging manufactory in St. Louis, Mo., has stopped operations.— The cause is unprofitable business—the price too low for the manufactured article.

A cotton factory in Georgetown, D. C. has stopped from the same cause as the St. Louis bagging factory.