

NEW YORK, JULY 14, 1849.

Machinery and its Economy.

There are some very honest and sincere men who believe that machinery has been injurious to the working classes, and that restraints should be put upon its use, giving as a reason that " it tends to destroy many occupations." Those men have never examined deeply into the principles involved to such a question-the advantages derived from machinery, and the benefit it has conferred upon all classes. There is no middle position between the advocate of machinery and him who opposes it. The latter must stand upon the ground that man is more benefitted without, than with machinery, and he must fall back upon the resources which nature has provided for him, viz. his hands, his feet and his teeth, to supply his daily wants. In infancy, man is perhaps the most helpless of all God's creatures, but in manhood his seat of intellect rising like a lofty dome which tops a graceful building, crowns him " Lord of Creation."-It is the glorious prerogative of man above all God's earthly creatures, to possess a progressive soul. Created in the image of his Maker, it is an evidence of his divine descent that there are no limits to the expansive grasp of his gigantic intellect. This may not be noticed in individuals, but it is apparent in our race. Compare the progressive grandeur of mind displayed in the rude sled of our Anglo Saxon forefathers with the wonderful locomotive of the nineteenth century, and we will be able to form some idea of developement of mind, as displayed in the invention of machinery. Or if we take the rude canoe of our forefathers that is sometimes dug up from the sands of the Thames and the Clyde, and compare it with the steamship of the nineteenth century, we will be able to form some idea of the blessings conferred upon all mankind by improvements in machinery .Gilbert Burns, the brother of the poet, declared that "the man who invented the threshing machine was a public benefactor," as it relieved one class of men from an occupation of the deepest drudgery ; and we have often wished to see some machine invented, that would at once destroy the slavish occupation of brick making. Our wishes are realized, and although the slaves of brick making have seen their " occupation gone," we have not heard of one suffering for lack of bread, and they never will on that account. A knife, an axe, a spade, a hook, a spear, are all machines. The very savage cannot do without them. Wherever the mechanic arts are found in their rudest state, there man is found as rude. Mehemet Ali of Egypt, once tried what he could accomplish without machinery, by driving 30,000 Arabs to open up one of the old aqueducts of the Nile. No spade, no hoe, no scoop was provided for them. They had to scoop up the mud with their hands, and the result was, that more than ten thousand fell victims to this barbarous spirit of oriental enterprise, and all for the want of machinery.

It is very easy to discomfit any person in argument who takes the opposition ground against machinery, but then there is another class who would use some machinery (they must do it) while they would proscribe other kinds. But what machine shall we proscribe? Will it be a sewing machine, or some new washing machine? We might as well proscribe an organ, or a piano, for they are machines, and although they may be old, it makes no matter for that, if they take away the occupation of some vocalists. An old evil should be dispatched with as little mercy as a new one. But the truth is, every improvement in machinery, is a general benefit.-Some individuals may suffer from the introduction of a new machine, but the greater number are benefitted, and we go for "the greatest good to the greatest number."

The strongest argument against the introduction of new machines and improved machinery, is the impoverished condition of operatives in the British manufacturing districts. The decline of manufactures in Ireland is her inability to cope with the coal manufacturing districts of England,-the want of the main manufacturing stimulant. In England her manufacturing machinery may besaid to have passed the limits of supply. This is the cause of her evils, for it is well known that for 30 years, her manufacturing population increased at the rate of 30 per cent, while her agricultural population increased at the rate of only 1 per cent. This was an unnatural drain and she now suffers the consequences. The wars on the Continent of Europe, made her a hotbed of manufactures, and when they ceased to stimulate, it is no wonder that the forced plants suffered. No such evils need be feared on our wide continent. The land is not here absorbed exclusively by beef-eating barons, to the exclusion of oatmeal-eating peasants. No, no, every improvement in American machinery, confers a benefit upon all, whether that improvement be made upon a steam engine, a spinning jenny, or a spinning wheel. It is in view of these considerations, that we look upon America in the future, as the grand centre of civilization, because here we have room for man's developement in mechanical invention. There is one thing however to be observed in connexion with this, viz. the moral, as well as the mental developement. The two must go hand in hand. Unless they do so, we have no hope. But with a moral and mental developement which looks to the general good, every improvement in machinery can, as it should, be made a blessing to the high and low-the dweller in the lordly mansion and the dweller in the humble cottage.

Filtering Water.

As this is the season of the year when many impurities are mingled with the water with which we are supplied for domestic use, it is Our work requires the best steel that can be prodent and wise, so far as we are able, to remove those impurities. There are two kinds of impurities in water. First, those which are combined with water chemically. Second, those which combine with water mechanically.

The first cannot be removed by filtering, the second can. In no case, are we supplied from natural resources with pure water .--Pure water, that is water composed of its simple elements, exggen and hydrogen, is not a palatable or healthy beverage. We are therefore wisely provided by providence, with water after it has chemically combined with several substances which are beneficial to the system, such as carbonic acid, and some of the salts of lime. These cannot and they should not be seperated by the common filter. But the mechanical impurities may and should be seperated.

To do this for the most common purposes, the filters that are sold in our Plumbing Establishments are excellent. But any person whatever can filter water, by pouring it into a sheet of flannel through some powdered charcoal. The water can be filtered without the charcoal by passing it through several thicknesses of flannel, or felt, but we like the charcoal, and if it was mixed with burned bone dust, it would be all the better. No person would believe, how pure the water comes trickling through the charcoal, but charcoal is one of the best filtering substances known. Any person with common ingenuity can construct a vessel to filter upon this principle .-For certain reasons we would use two ply of flannel with a wad of cotton wool between. It would be well to let the water fall through a space open to the air, before it is received into the receiving vessel. The reason for this is, that in passing through the charcoal and cloth, the water is deprived of some of its atmospheric air and it should be allowed to absorb some air afterwards before it is used.-No person should use pails that are painted with white lead. We are glad to see unpainted water pails coming into more general use The man who first discovered the Gold in Colifornia, was J. W. Marshall, of New Jersey, who built Captain Suter's saw mill.

Scientific American.

Adirondac American Cast Steel. The high character this important article of home manufacture is obtaining, induces us to refer to it again; and we trust as it is so excellent in quality, that all who feel an interest in home products will give this steel its merited support. The quality we are informed is warranted good, and is adapted to all purposes of the best Cast Steel of any other make, whilst the price is as low as the imported. The following amongst many recommendations have been handed us.

EXTRACTS.

NOVELTY WORKS, May 2, 1849. "A cutter made of it was used in one of our largest Lathes in very heavy wrought iron turning and was found to be, to use the phrase of the very competent and experienced Lathe man, "prime tip top." We shall feel a strong preference for the American manufacture.

UNITED STATES NAVY YARD,

STILLMAN, ALLEN & Co."

BROOKLYN, June 13, 1849,

" This is to certify that I have tested the Adirondac Cast Steel, and found it to be of very superior quality, and prefer it to any I have used heretofore.

DANIEL LADD, Master Smith."

ALLAIRE WORKS, N. Y. June 13, 1849. " Having used the Adirondac American Cast Steel in our Works we find it a very superior article. Our foreman reports that in his trials of this steel ' it stands severe work, and that he prefers it to the best imported."

R. R. MCLLVAINE, Manager of the Allaire Works, 466 Cherry st. New York."

BEALS & FRASER'S GRANITE YARD, N. Y. "The Adirondac American Steel is being used in our Yard on the hardest Granites, and stands fully equal if not superior to any cast steel we have used. It has been tried in Drills, Points, Hand and Stone Hammers, and we prefer it to the best imported Steel. BEALS & FRASER. obtained.

SAM'L. M. JONES, Foreman.

SAM'L. YATES, Blacksmith. Our space will not admit of selecting further from the recommendations.

By a Card accompanying the above, we see that the American Steel Co.'s Warehouse is with QUINCY & DELAPIERE, 81 John st. N. Y., where orders may be addressed.

Reception of Father Mathew.

The welcome extended to this noble man and reformer on the 2d inst., was a tribute to moral worth, and shows that the sentiments of philanthropy and benevolence are warmly cherished by our people. We trust that his mission to this country may prove eminently successful in elevating down trodden and degraded man to the position assigned him by nature to occupy. His labors in Ireland, exhibit in a striking degree the power of kindness and sympathy over the unfortunate, and we hope that wherever he may go, the same generous feeling will be manifested, which will encourage him to enter the great field of reform with zeal and efficiency.

American Queensware.

The Pittsburg Gazette notices the extensive manufactories of Queensware which are carried on at East Liverpool, about fifty miles below that city. Eight potteries are employed in making ware from the clay which is obtained in the vicinity. The Gazette says the are from these potte es is equally

Interesting to Navigators. An official report from Mr. Bache, the superintendent of the U.S. Coast Survey, gives the information that Lieut. Commanding Chas. H. Davis has determined the position of Cashe's ledge off the Coast of New England. This ledge, termed "dangerous" in the "American Coast Pilot," was sought for last season by Passed Midshipmen Ammen, under the immediate direction of Lieutenant Commanding Davis, but efforts were not crowned with success. The determination by Lieut. Com. Davis places Ammen's rock of Cashe's ledge in latitude 42 56 N., longitude 68 51 W.-This differs nearly 12 minutes in latitude, and 12 in longitude, from the last previous determination. Lieut. Davis says-

The latitude of the rock, by the meridian ob-- 42º 56' N. servation of the sun is

The longitude, the mean of both days, is - - - - 68 51 ± W.

The least water on this rock is twenty-six (26) feet; a less depth has been reported by fisherman, but they sound with their fishing lines, not accurately marked, and having on them a lead of three and a half pounds only ; not heavy enough to press down, or pass through the thick kelp that covers the rock. The extent of rock having ten or less fathoms on it, is about half a mile in a N. W. by W. and a S. E. by E. direction, and very narrow. It is surrounded by a deep water at a short distance, particularly on the south and east side, where the depth increases suddenly to sixty fathoms.

Food in Cholera Times.

Dr. Mitchell, professor of Theory and Practice in the Medical College of Philadelphia, in a late lecture on the subject gives the following as the Safe and Unsafe food during the prevalence of this disease :

SAFE-Beef steak, beef tongue, dried beef, mutton, chickens, ham, mackerel, smoked herrings, rice, roasted good potatoes, toasted bread, crackers, mustard, horse radish, salt, pepper, vinegar, black tea, Java coffee, iced water, iced lemonade, iced claret, soda water, ice cream.

UNSAFE-Fresh pork, veal, fresh fish, oysters, greens generally, unripe fruits, fresh warm bread, sour bread, molasses and water, common alcoholic drinks

The Doctor recommendations are strictly correct and are just as applicable to every day life-healthy and unhealthy seasons.

Newspapers in Europe.

The London Times, a daily paper, costs \$45 per year. The same rate is charged for the Morning Chronicle, Daily News, Globe, Herald and Post. The London Evening Mail is published three times a week at \$25 a year. The London semi-weeklies, \$16,50 per annum, and weeklies, \$12, and \$9. The French daily papers, the large ones, are about the same as the London prints; those about the size of our penny papers cost\$20 and\$25 per annum. The German dailies cost \$22 to \$36 per annum.

[The above we copy from an exchange, in connexion with it we must say that there are some weekly publications in London, which are far cheaper than we can put them up here, such as the London Journal, and the" Family Herald;" they only cost one halfpenny per number and there is a great amount of illustrated reading in them.

Model Making.

This peculiar branch of business in which little has been heretofore done has latterly assumed a stand with other kinds of business and is quite extensively carried on in this City. Among the many establishments which attend to this branch of business we know of none of them that can get up a neater model for a small price than Mr. Peckover, whose advertisement appears in another column.

besides being a great deal cheaper, than the English article manufactured from the same kind of clay.

This branch of our manufactures has sprung up within the past few years, and has already driven the English yellow ware from our market. It is sold in vast quantities in New York, Philadelphia and the other Eastern cities, as well as in Pittsburg, Cincinnati, Louisville, St. Louis, New Orleans, and the rest of the Western towns. The beds of coaland clay found in the vicinity of East Liverpool are inexhaustible, and we learn that several

manufacturers, in addition to the yellow ware, design importing clay from Missouri, for the purpose of making white queensware.

Courts of Conciliation are much needed among us. There are evils and abuses in our present system of courts that need remedving. People bow to them at present submissively, because they are the fruits of long custom; but they are not the less bitter fruits for that.

Flour in Bags.

The Albany Argus states that the sale of flour in bags is becoming quite a trade between the New York Millers and the East. The bags are of sufficient size to hold a barrel.



LIST OF PATENTS. ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending July 3, 1849. To J. E. Serrel and David Smith, for Cen-

tripetal Press. Patented July 3, 1849. To W. E. Bleecker, H. Bleecker, and S. D. Vose, of Albany, N. Y., for improvement in Cooking Stoves. Patented July 3, 1849.

To J. Alley and H. W. Poole, of Worces ter, Mass. for improvement in Keyed Musical Instruments. Patented July 3, 1849.

To W. B. Carlock, of New York City, for improved manufacture of Bags and Sacks .--Patented July 3, 1849.

To B. L. Stedman, of Warren, Mass., for improvement in machinesfor cutting Veneers in cylindrical blocks. Patented July 3, 1849.

To L. S. Chichester, of Troy, N. Y. for improvement in machinery for the Jointing of Staves. Patented July 3, 1849.

To J. W. Fisk, of Rileytown, Ohio, for improvement in Winnowing Machines. Patented July 3, 1849.

To E. C. Langer, of Salem, Mass., for improvement in Regulators for self-acting Mules. Patented July 3, 1849.

To E. & E. Gore, of Charlestown, Iowa, for improvement in Windmills. Patented July 3, 1849.

To William MacLardy and J. Lewis, of Manchester, England, for improvement in Live Spindles and Fliers. Patented in the United States July 3, 1849-In England May 9, 1848.

To William Massey, of Greene Co. Ill., for machine for contracting the circumference of wrought iron bauds. Patented July 3, 1849.

To Thomas King, of Westchester Co. N. Y. for improvement in Washing Machines. Patented July 3, 1849.

To John Abernethy, of Woodbury, Conn., for improvement in attaching Buckles to Suspenders, &c. Patented July 3, 1849.

To George Wheeler, of Little Valley, N. Y. for improvement in Bee Hives. Patented July 3, 1849.

To L. W. Colver, of St. Louis, Mo., for improvement in Washing Machines. Patented July 3, 1849.

To J. L. Kingsly, assignee of J. G. Day, of Brooklyn, N. Y., for Rotating Disk, Bolt and Rivet Machine. Patented July 3, 1849.

To Joshua Bailey, of Cohoes, N. Y. forimprovement in Machinery for Picking Waste .-Patented July 3, 1849.

To David Philips, of Pittsburg, Pa. for improvement in Circular Saw Mills. Patented | book in England on the subject, which was il-July 3, 1849.

Cures for Rheumatism.

The following are said to be good lotions for the evils of rheumatism. As they are simple they can at very little expense be fairly tried by those inflicted with those evils. INFLAMATORY.

pulverized ealtpetre, put in half a pint of ures. In 1801 Fulton invented his nautilus, sweet oil. Bathe the parts affected. COMMON RHEUMATISM.

which add half an ounce of camphor. When Fulton came near destroying an English Man dissolved, rub it on the part affected, and it

For the Scientific American. The History of Steam Navigation. OLIVER EVANS, WILLIAM STEVENS AND ROBERT FULTON.

About the year 1789 Oliver Evans, who was undoubtedly the most original steam engine inventor in the United States, the contemporary and equal inventor with Vivian and Trevithick of the high pressure locomotive, also made drawings of the application of his engine to propel steamboats. We may well give him more credit than any other of our steamboat inventors, for inventing a good steam engine and adapting it to all kinds of machinery a steamboat among the rest. To William Stevens of Hoboken, also belongs great credit for his early attempts at steam navigation .-He first tried a rotary engine but it was a failure, yet the first steamboat boiler which Mr. Stevens made to generate steam for his rotary engine steamboat, was a capital invention. It was made of small copper tubes each about 1 inch in diameter and two feet long in serted at each end into a brass plate and the plates were closed at the ends of the pipes by a strong cap of cast iron or brass with the space of an inch or two between the plates. The water was supplied by a forcing pump. Col. Stevens was the first inventor of the all important tubular boiler which he secured by letters patent in England in 1805. In 1804 Mr. Stevens with one of Watts' engines, having a cylinder of 61 inches diameter and 9 inch stroke propelled a boat on the Hudson at the rate of 8 miles per hour. This steamboat was run for a few weeks and laid aside, after Col. Stevens had spent as he said 20 years of his life and \$20,000 without deriving a shillings' worth of benefit There must however, have been either something faulty about the engine, the build of the vessel or that our country was not ripe to be convinced of its utility at that time, for the steamboat slumbered with us until Robert Fulton took it up in 1806. Before that period however, Fulton had been a sojourner in foreign lands and it has been charged upon him that he derived all his knowledge and ideas of the steamboat from others.

In 1788 Mr. Miller a Scottish gentleman propelled a small steamboat on Dalswinton Lake and the engine that propelled that boat is still in existence. Mr. Miller's invention was certainly very successful, but it cost him £30.000 and he never realized a penny for it. It has been asserted by some that Fulton was a witness to Miller's experiments and from them derived his knowledge of the steamboat, but this we believe to be without foundation. for although Stewart says that " he visited Scotland and examined Mr. Miller's boat," yet it is well known that Fulton only arrived in London in 1786 and it is not likely that a stranger like him and an artist could have heard of Miller's invention which had not become much known. In 1793 Fulton made known to the Earl Stanhope his plan for propelling boats by steam and in 1796, he published a lustrated with some very good engravings. In 1796 he went to France and tried to get that government to adopt and provide means for the construction of his boat, but he was refused by the Minister of Marine. After this he went to Holland and made several trials with a boat, the means for which were paid Half an ounce of alum, half an ounce of by a Mr. Vanstaphet but they all proved failto sail under water and to sink and float at pleasure, Napoleon gave him some money to Take a pint of the spirits of turpentine, to try an experiment on a large scale at Havre. of War in Brest Harbor, but it escaped, and af-

grapher, was that of Fitch and Rumsey, but Fitch by the testimony of Nathaniel Boileau who made his paddles, and who was Secretary of State in Pa., after the Revolution, used two paddle wheels on his first model. Fulton however, did not know this. Fulton at one time thought of employing duck foot paddles, and at another time he thought of using paddles on an endless chain, but as Monsier Der Blancs had a patent for paddles on an endless chain and a horizontal cylinder, he warned Fulton not to infringe on the same. Fulton then replied that his boat was to be propelled by paddle wheels, which by experiment he found to be the best system. In August 1803 he tried an experiment on a boat 66 feet long and 8 feet wide, on the Seine. It was very successful considering all things and gave him perfect confidence in its power and so it did to Livingston. Instructions were then given to Watt and Bolton to prepare a steam engine which was to be sent to New York, in order to introduce his invention into his native country, and Livingston and Fulton got a grant by this State, New York, for the exclusive navigation of her waters for 20 years. -Fulton then went to England and remained there till 1806 when he left for New York and arrived here in December. In the Spring of 1807, after much perseverance and difficulty. he had completed his vessel and had it launched on the East River. At this time the engine from James Watt had arrived with engineers to put it up in his boat, and in August 1807 he had the satisfaction of seeing his far famed vessel named the Clermont walk the water to the Jersey shore. There were very many sceptics converted from doubt to admiration before she moved 100 yards, and while the shores were lined with multitudes, one loud shout of triumph from the incredulous multitude, shook the welkin.

To be continued.

Chlorine Gas.---Muriatic Acid,

Chlorine is a gas of a greenish colour, and derives its name from Chloros a Greek word signifying " greenish." This gas is very dangerous to the lungs if inhaled, hence its employment in every case should be a work of caution and prudence. Many people have lost their lives while engaged at the occupation of discharging Adrianople red handkerchiefs, a style of work associated with the name of Sir Henry Monteith who carried it to the highest style of perfection. Chlorine may be obtained by mixing one part by weight of the black oxide of manganese in powder with two parts of common muriatic acid in a flask, and then applying the spirit lamp, when the gas is immediately evolved, and it may be collected over water. Chlorine acts with great energy on all metals, even platinum. Chlorine is a great bleaching agent. It acts directly upon colored vegetable fibres, and is therefor now exclusively used for making green linen and cotton goods white. It must be carefully managed however, or it will act upon and des troy the vegetable fibres as well as the colored fibres. Many pieces of calico are rendered quite rotten through the ignorance of the bleacher. In bleaching linen or cotton sheeting white, there is generally a Turkey red, or a blue thread woven in with the cloth, at the end of each piece, as a guide for the bleacher. Whenever this thread loses much of its color it is a sign that too much chlorine has been used. Sometimes chlorine is required to bleach the whole surface of goods and sometimes only to a portion of the surface. We will describe the former process at some other time Chlorine unites with Hydrogen, and forms an

making use of the acid in the dry or gaseous state. As the liquid hydrochloric acid is merely a solution of the acid gas in water.

Hydrochloric acid gas is perfectly unrespirable; it extinguishes the flame of a taper, and is itself inflammable; it acts violently on the skin; it possesses a strong attraction for water. Hydrochloric acid is always procured (except for purposes of experiment) from common salt, in the manufacture of soda ash, by the action of sulphuric acid. It is not generally manufactured for itself, but is a waste product; and large quantities of it were formerly suffered to escape into the atmosphere, where it acted so injuriously on vegetation, that nearly every soda ash manufacturer has, in his turn, been prosecuted by the neighbouring farmers. Such are its injurious effects on vegetables, that even when mixed with 20.000 times its volume of atmospheric air, it shrivels and kills all the leaves in twenty-four hours. Many different processes have been adopted for preventing the escape of this acid gas into the atmosphere in the manufacture of soda ash; all of them, however, are based on the fact of the great attraction of this gas for water. This acid is very impure, but, if distilled into a receiver containing water, the impurities are nearly all separated. The impure acid is of a yellow colour, the pureacid is colourless.

England as it will Be.

It is now the fashion says Macauley, to place the golden age of England in times when noblemen were destitute of comforts, the want of which would be intolerable to a modern footman; when farmers and shopkeepers breakfasted on loaves the very sight of which would raise a riot in a modern workhouse : and when men died faster in the purest country air than they now die in the most pestilential lanes of our towns or than they now die on the coast of Guinea. We too, in our turn will be envied. It may be in the twentieth century, that the peasant of Dorsetshire may think himself miserably paid with 15s. a week; that the carpenter of Greenwich may receive 10s. a day; the laboring men may be as little used to dine without meat as they now are to eat rye bread; that sanitory police and medical discoveries may have added several more years to the average length of human life ; that numerous comforts and luxuries which are now unknown, or confined to a few, may be within the reach of every diligent and thrifty-working man.

"British National" Debt.

The London Standard of Freedom says that the constant course of the government to style the public debt "National" is an exception to their mode of nomenclature for everything else of a public nature. The Army and Navy are the Queen's. The Church is a State Church. The Courts of Justice are all Regal. Down to the very constable, every officer is the Queen's officer; nay, the peace of the nation is the Queen's peace. The Debt alone has, ever since its commencement, in the year 1694, been deemed solely the People's concern. The part of the government was to borrow and spend it. It was the People's part to pay it.

Superlative Unconcern.

The tranquility and phlegm of the Scotch in most extraordinary circumstances, " brings to mind," says Colman, in his "Random Records," the incredible tale of the Scotchman tumbling from one of the loftiest houses in the old town of Edinburgh. He slipped, says the legend, off the roof of a habitation sixteen stories high ; and when midway in his descent through the air, he arrived at a lodger looking out a window of the eighth floor, to whom (as he was an acquaintance) he observed, en passant, "Eh, Saundy, man, sic a fa' as I shall hae !"

will never fail of removing the complaint.-Flannel should be applied after the part is ney. Many have endeavored to rob Fulton of well fomented with turpentine. Repeat the an original and inventive mechanical mind, application morning and evening.

Making a Mark.

A captain of a sloop at one of our wharves hired a Yankee, " a green hand," to assist in loading his sloop with corn. Just as the vessel was about to set sail, the Yankee, who was jingling the price of his day's work in his pantaloons, cried out from the wharf,-" Say, yeou capting ! I lost yeour shovel overboard, but I cut a big notch on the rail fence around the starn, right over the spot where when yeou come back."

ter that Napoleon would advance no more mo acid compound, known by several different names, as Muriatic Acid, Spirits of Salts, and Hydrochloric Acid. The first of these names but his nautilus condemns all detractors is perhaps the most common even among There can be no doubt but Fulton was a keen chemists, but hydrochloric acid is the most observer and wherever he saw a good thing, he appropriate as it expresses the composition of was not the man to forget it, this itself, is the sign of a great mind. When Fulton was in the acid. When equal volumes of these two gases are mixed together, and exposed to the Paris he communicated to Mr. Robert Livingsdiffused light of day, they slowly combine, but ton his plan for propelling vessels by steam, if exposed to the direct solar rays, an explosand Livingston being a man of a comprehenion takes place, and the acid compound is insive mind saw the utility of such a mode of stantaneously formed. The acid thus formed navigation. An agreement was made between is a gas, but water absorbs 480 times its vothem to embark in the enterprise, and to Fulton was left the direction of the experiments. lume of this gas, and, as the liquid form is it whent down, so't you'll find yeour shovel Among the schemes which Fulton thought of more convenient, this solution of the acid gas for propulsion and discarded, says his bio- in water is generally employed, instead of is lost.

Blowing Furnaceson Sunday.

The Pittsburg American says that the yield of metal from the Pine Grove Furnace of Messrs. Hamilton & Co., which is stopped on Sundays, is on an average of 10 tons per day, producing as much as those of equal size that work the seven days. When the furnace is not blowing, it is stopped tight below and above, hermetically, and thus but little heat