Scientific American.

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

Dol. 3.

New York, August 5, 1848.

No. 46.

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 TERMS---\$2 a year--\$1 in advance, and the remainder in 6 months. 83-See advertisement on last page.

Poetry.

THE WIFE TO HER HUSBAND. "You took me, William, when a girl, Unto your home and heart, To bear in all your after-fate A fond and faithful part; And tell me, have I ever tried That duty to forego, Or pined there was not joy for me, When you were sunk in woe? No; I would rather share your tear Than any other's glee. For though your nothing to the world, You're all the world to me.

You make a palace of my shed, This rough hewn bench a throne; There's sunlight for me in your smiles, And music in your tone. I look upon you when you sleep-My eyes with tears grow dim, I cry, "O parent of the poor, Look down from heaven on him: Behold him toil from day to day, Exhausting strength and soul; Oh look with mercy on him Lord, For thou cans't make him whole !

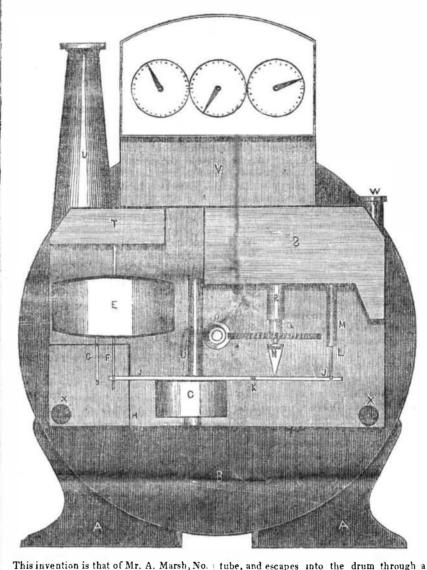
And when at last relieving sleep Has on my eyelids smiled, How oft are they torbade to close In slumber by our child? I take the little murmurer That spoils my span of rest, And feel it is a part of thee, I lull it on my breast. There's only one return I crave, I may not need thee long, And it may soothethee when I'm where The wretched feel no wrong.

I ask not for a kinder tone, For thou wert ever kind, I ask not for less frugal fare, My fare I do not mind; I ask not for attire more gay-If such as I have got, Suffice to make me fair to thee, For more I murmur not. But I would ask some share of hours That you on clubs bestow. Ot knowledge which you prize so much, Might I not something know?

Subtract from meetings among men Each eve an hour for me : Make me companion of your soul As I may safely he. If you will read, I'll set and work; Then think when you're away; Less tedious I shall find the time. Dear William, of your stay. A meet companion seen I'll be For e'en your studious hours, And teacher of those little ones You call your cottage flowers; And if we be not rich and great, We may be wise and kind, And as may heart can warm your heart, So may my mind your mind."

It is not our interest always to be over-rigorous in the demanding of our rights .-Nothing looks better than for a man sometimes to drop part of his pretensions.

ALFRED MARSH'S IMPROVED GAS METER.



This invention is that of Mr. A. Marsh, No. 87 Ninth Avenue, this city, whose long experience in the construction of gas apparatus insures confidence in its originality and usetulness. It is well known that there is both trouble and expense incurred to the maker and consumer of gas by the wet meters at present in use, owing to the water in them getting either above or below its proper line. This metre removes that evil. It is self acting and the water float that admits the gas is connected with a water supply reservoir so as to work in unison and be a self-feeder and cor-

A A, is the base of the meter B, is a hollow drum, in the inside of which there is a wheel that is operated by the gas which works a screw spindle communicating motion to clockwork in V, which is registered on the dials, according to the quantity of gas admitted into the meter. The quantity of gas admitted into the meter is regulated by a float E, which is floated by water admitted into the meter to fill a little more than half of it. When the float is up the gas which is admitted to the chamber through U, comes into the meter through in the bottom of a small chamber T, and that hole is opened or closed by the spin-, a gas meter, but those who are acquainted with dle of E, on the end of which is a valve to i meters will perceive those improvements for fit the said hole. The float there regulates the quantity of gas admitted. Before the gas gets to the consumer, it has to pass into the hollow drum and operate the wheel which turns the clock work or registering machinery. The gas therefore goes down D, an open

Much of the country to the northward of the Island of Montreal, especially about St. Eustache, hat been completely devastated by the caterpillars and grassheppers. In some parts they have effected a hideous destruction.

tube a little above and behind the dry well C. When the wheel inside of the drum revolves, it meshes by its screw O into a cog wheel P, and by its upright spindle Q, which passes through R, a tube, thus turns the registering work .-The water that keeps up the float is admitted through W, into S, a reservoir, and comes down into the meter through the tube M. L, is a spindle attached to a valve inside of S. the same as the one inside of T. and this is connected to the float by J J, a lever rod, and a spindle F. K, is the pivot of the lever rod. It will therefore be observed that when E, the float, is at its proper beight of water line, the supply from the reservoir is shut off, and as it may fall so by their connection water will be admitted to raise the float to its proper line .-This is the self-acting and harmonious governing improvement. X X, are orifices to admit the water to its proper line in the drum G, is a guide rod of the float working in an eye in a broad piece of metal indicated by the dark line and standard H. N, the gudgeon of the clock work shaft, is secured to the side of the meter and does not rest upon the lever J J. It is no easy matter to explain or construct which the inventor has taken measures to secure a patent and those who are not acquainted with gas meters, we think will get as good if not a better idea of their principles and construction from this brief description than from any work we are acquainted with

are known to exist in two, if not three, of certain allotropic states, to which must be re- be wired and in working order. This makes a ferred the marked characteristics of many of

RAIL ROAD NEWS.

Worcester and Nashua R. Road.

The grading of the whole line from Worcester to Nashua is nearly completed, as well as most of the bridges, and the cross ties for the superstructure. The rails are laid from Clintonville in Lancaster to the crossing of the Fitchburg road in Groton, between 11 and 15 miles, and on the 3d inst. the regular trains commenced running The receipts therefrom have exceeded expectations, and are highly encouraging. A communication is thus opened by the Clintonville, by the Fitchburg road to Boston, and by the Stony Brook Road which was opened the 1st of July, to Lowell. Contracts have been made for Depot buildings and Engine houses, and progress made therein, but none of them finished except the Engine house at Clintonville. If the necessary funds are furnished the road may be opened from Worcester to Clintonville by the 1st of November, and through the whole line by the 1st of December.

Louisville and Frankfort Railroad.

The examinations recently made by Col. Long with a view to the selection of the most favorable route for the road above-mentioned are likely to result in the saving of seven or eight miles in distance, of about \$50,000 ia the cost of construction, and of at least \$100-000 in the cost of transportation; making an aggregate saving to the stockholders of the railroad and the public generally of about \$150-

The system of road-location recommended by Col. L. as the most favorable that the ground traversed by the new route will admit of contemplates that all ascending gradients, in the direction of the lighter transports viz: from Louisville eastward, should be limited to forty-five feet per mile, and that all similar gradients in the direction of the heavier trade, viz: from Frankfort, westward, should be limited to forty feet per mile, except in the valley of Benson's creek, where the minimum gradient or rate of declivity must unavoidably be 48 or 50 feet per mile. The gradients thus restricted are more favorable than those adop. ted on the surveyed route, which contemplate numerous declivities in both directions, varying from 40 to 60 feet per mile.

St. Andrews and Quebec Railroad.

The accounts from England by the last steamer outstripped the most sanguine expectations-£25,000 of stock has been taken by two gentlemen in England, and the whole stock would to a certainty, beimmediately taken up, and the money paid in forthwith, and the time was actually calculated in London. when this great work would reach Woodstock.

Mr. Hudson, has declared, in the House of Commons, that it will never be practicable to work the double gauge. It has been tried onsix miles of the Midland line, and will, he says, never do. We shall see.

The Mining Journal states that Sir James Anderson, who has spent a fortune in experiments, has at length succeeded in perfecting a locomotive carriage for common turnpike roads An old story.

Telegraph in the West and Southwest.

Every part of the great Mississippi Valley Telegraph is now erected from Dubuque and Galena to New Orleans, from Iowa to the Gult of Mexico. The line is about 1800 miles long, and is a portion of the Atlantic, Lake and Mississippi line telegraph range, constructed by Henry O'Reilly. The wire is now at Galena, and will be at Dubuque in a few Sulphur, selenium, phosphorus and arsenic days. The lower end of the line, from Tuscumbia and Memphis to New Orleans will soon total of 4000 miles of telegraph construction under the arrangements of Mr. O'Reilly.