

Scientific American.

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

Vol. 3.

New York, April 29, 1848.

No. 32.

THE SCIENTIFIC AMERICAN:

PUBLISHED WEEKLY
At 138 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.

See advertisement on last page.

Poetry.

DEPARTING AFFECTIONS.

BY R. BARTHOLOMEW.

When this head is sleeping
'Neath the willow tree,
Will no one be weeping,
Sad, there for me?
When balmy breezes glad,
Shake the golden corn,
Will no one mourning sad,
Come there at morn?
Will all the love and sorrow,
Smiles and happy hours,
Lie in my lonely barrow,
Like faded flowers?
Will hopes of youthful days,
Bright as summer sky,
Tales of love and lovers lays,
Unremembered die?

Oh no! one will come
Soft as the flower
Scenting the desert lone
After the shower,
And o'er my lowly tomb.
Like hopes and fears,
Wild flowers will sweetly bloom
Gem'd with her tears,
Fragrant as summer gale,
Kissing the lea,
Soft as a seraph's tale,
Thy love's for me,
Oh who can read our love,
What tongue can tell?
Mary we'll meet above—
Loved one, farewell!

A MOTHER'S BLESSING.

BY E. M. MOUNTAIN.

Mother! send me but thy blessing—
'Tis the gift I highest prize;
Other Gems may go amissing—
This—O! this is in the skies,
Like the iris bright to cheer me,
When the floods of sorrow roll—
Like the summer shower when weary,
Shedding freshness to my soul!

I can raise my face to heaven,
Think that I have treasures there—
The promise that my God hath given
To a mother's fervent prayer;
And that promise and that blessing
Never, never can deceive—
Other gifts may go amissing,
These attend me while I live.

NATURE.

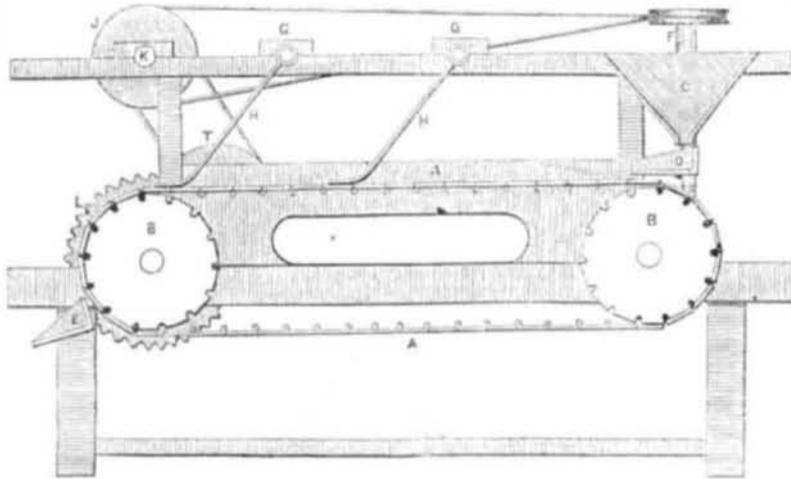
From the noise and the tumult
I've hid me away,
To spend in the forest
The warm sultry day.

The waters that ripple
So joyous along,
With the birds and the breezes,
Make eloquent song.

O, come and sit with me,
My dearest, my own;
And list to sweet music
As ever was known.

Misunderstanding and inattention create
more uneasiness in the world than deception
and artifice.

J. MASSEY'S IMPROVED GRAIN DRYER.



The above cut is a longitudinal section view of an improvement in a Grain Dryer, invented by Mr. John Massey, of Providence, R. I. The principal feature of the invention consists in providing a flexible iron-plate endless web on which the grain is to be dried as it revolves in a kiln heated economically by double flues running under the endless iron web.

A, is the endless iron-plate web. It is formed of a number of plates of sheet or cast iron and united together like a common hinge. It may in fact be called a *broad hinge band*. This web receives the grain from a hopper C, conveyed down through a spout D. The web is revolved by a band and pulley driving the rollers B B. These rollers are of cast iron having grooves cast in them for the barrels of the hinges of the plates of A, to mesh into. The surface of these rollers as will be observed, is not perfectly circular but of such shape as to accommodate them to the plates of the web. This combination of the rollers and web is a new feature in a Grain Dryer. The apparatus is made of iron, cast or wrought as the case may be. The grain is confined on the face of the web by a kind of wedge side or rim, and it is shifted on the web so as to dry it thoroughly and equally by rakes H H, which traverse from side to side across the web stirring and shifting the grain. This is done in the following manner. On the other side of the frame placed longitudinally, is a rocking shaft to which are attached the shafts G G, across the web, that shifts the grain.—This rocking shaft is not seen in the engraving, but is driven by a crank, attached by a flexible connecting rod with K, on which is fixed another crank placed at right angles

Effects of Cannon Balls on Iron Steamers.

At Portsmouth some remarkable results have been produced by the experimental shot practice, from the Excellent, on the iron steamer Ruby, and it is expected the Admiralty will, in consequence, stop the building of iron Steamers and other vessels for the present. The shots which hit the Ruby not only penetrated the side first struck, but in some instances passed through the other side carrying with it whole plates of iron. In action this would risk the total loss of the vessel, for on heeling over to leeward, such a body of water must rush in, that nothing could prevent her sinking, with all on board. A representation of this important circumstance arising from the recent trials, has been made to the Admiralty, and should further experimental firing prove that serious risk will be occasioned to iron vessels of war when exposed to the chance of being struck by heavy shot, it is doubtful if the board will not abolish them as men of war

with the crank on the end of the rocking shaft.

OPERATION.—From the pulley F, passes a cord around the pulley J, which operates the rakes as described. From J, over T, another grooved pulley, there is another band for driving said pulley T. On the axis of this latter pulley there is a rack into which meshes the cogs of L, a cog wheel, so that when T is revolved, it also operates the cog wheel which is fixed upon the axle of B, and thus the endless web is driven. It will readily be observed, that if a drum was fixed upon the axle of B, instead of the cog wheel L, a band from J, passing around said drum would drive the web and dispense altogether with T, and the rack and cog wheel entirely. The hopper C, is operated by a crank on F, not seen in the engraving, but which works it like all other hoppers. The hinge plate web is far superior to wire gauze for drying the grain. In fact wire gauze presents a cooling, not a radiating surface. We would suppose that this kind of endless web might be adapted by machinery for biscuit and cracker baking, carrying the crackers or biscuits through some ingeniously constructed opening to an oven and thus finishing them at a single operation, letting them drop down on a table perfectly baked. By an arrangement of this kind the dough would never need to be touched from the moment it was entered upon the apron or feed table into the pressing rollers. Look what a saving of labor this would be. We have no doubt but some application of this kind will yet be effected.

Mr. Massey has taken measures to secure a patent.

Power of Eloquence.

The eloquence of the celebrated Whitfield, it is said, was at times irresistible. The accomplished skeptic Chesterfield, was present when this popular preacher presented the votary of sin under the figure of a blind beggar, led by a little dog. The dog had broken his string. The blind cripple, with his staff between both hands, grouped his way unconscious to the side of a precipice. As he felt along with his staff, it dropped down the descent too deep to send back an echo. He thought it on the ground, and bending forward took one careful step to recover it. But he trod on vacancy, poised a moment and he fell headlong.—Chesterfield sprang from his seat exclaiming, "By heaven he is gone."

Explosion.

The steamer Magdalen, built in New York and intended for the Grenada and Carthage trade, burst her boilers on her passage out, killing Capt. Beekman, of the steamer Grenada, and 9 others. The boat was blown to atoms.

RAIL ROAD NEWS.

Ohio will soon be threaded with railroads which is both an evidence of her increasing riches and civilization. There are but fourteen miles of staging now between Cincinnati and Lake Erie. The cars are now running from Urbana to Sandusky City.

A Railroad is projected between Charleston S. C. and Savannah, Geo. These two important Southern Cities are to be connected by railroad with Nashville, Tenn.

The directors of the Hudson River Railroad have called for a fifth instalment of \$10 per share on the capital stock.

The directors of the Great Western Railroad on the Canada side, are busily engaged in procuring the funds for the full completion of that important Railroad.

Montreal Telegraph.

The important work of stretching the wire across the St. Lawrence, at a point near the Chute of the Lachine Rapids, for the Troy and Montreal Telegraph, is now fast progressing toward completion. From the East shore to Alsopp's Island, is 3,260 feet, and from this Island to the West or Montreal shore, 3,190. A pier will be built on a small island now submerged in water, between Alsopp's island and the East, or Laprarie shore, on which will be erected a strong and high scaffolding, supporting a mast, projecting from the top to 150 feet from the ground. Two other masts, one on the East side of Alsopp's Island, will be of the same height, and that on the West shore, 120 feet, including piers, &c. The most difficult work, and that requiring the utmost skill, will be to stretch the wire across the current; where the rapids exceed in dangers and difficulties, any other part of the St. Lawrence.

Lucky Dream.

The forms of small shot used by sportsmen are exactly spherical. The manner in which this advantage is secured, is ingenious. It is said that a Mr. Watt, a native of Bristol, and a plumber by trade, had a dream, in which he saw the whole contrivance. A person appeared before him on the top of a high tower, with a sieve in one hand, and a ladle of melted lead in the other, the lead was poured into the sieve, which he shook violently and the liquid metal fell in drops, like rain to the floor of the tower, but in its fall had recovered its solidified state.—The imaginary person then descended, from the tower and examined some of the shot, and among them Watt saw several that were not either perfectly round or had tails to them. To separate these from the others, the man removed the shot to an inclined plane. Those that were round ran down the plane, while those that were misshapen wriggled over the side. A perfect separation was thus effected. This was a lucky dream for Watt, as he sold his patent for £10,000, and a similar method is still employed by manufacturers.

Tea in France.

The *Journal des Debats* states, that the experiments made for introducing the culture of the tea plant in France have fully succeeded, the climate, in the coldest part of the country, being fully adapted to it. The experiments made in Algeria have not been so successful; all the plants were killed by the heat notwithstanding every precaution.

Screw and Paddle.

Two war steamers, the Rattler and Alecto, the one a screw and the other a paddle steamer, were lashed together stern to stern recently in England and both their engines put to their full speed, when it was found that the screw towed the paddle steamer backwards.