Scientific American.

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

Vol. 3. New York, September 9, 1848. No. 51.

THE
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.

☞See advertisement on last page.

Poetry.

CHIDE MILDLY THE ERRING.

BY CAPT. S. W. PATTEN, U. S. A.

Chide mildly the erring!
Kind language endears;
Grief follows the sinful,—
Add not to their tears.
Avoid with reproaches
Fresh pain to bestow,
The heart which is stricken
Needs never a blow.

Chide mildly the erring!
Jeer not at their fall!
If strength were but human,
How weakly were all!
What marvel that footsteps
Should wander astray,
When tempests so shadow
Life's wearisome way!

Chide mildly the erring!
Entreat them with care!
Their natures are mortal,—
They need not despair.
We all have some frailty,
We all are unwise,
And the grace which redeems us
Must shine from the skies.

THE HUMBLE HAPPY MAN.

BY R. BARTHOLOMEW.

Oh pass not by yon lonely man,
With haughty look and proud,
Though sunburnt is his brow, and though
His back with toil is bowed.

His simple cup and daily bread,
By industry are gained;
And calm each night he sinks to rest,
His hand with fraud unstained.

Within his humble whitewashed cot,
This lesson kings might learn,
"How happy virtue can make those,
Who toil their bread to earn."

No glittering crest shines on his wall,
Which tells of lineage high,
But there's a hope within his breast,
The proudest might envy.

An honest heart, a life well spent —
A hope beyond the tomb,
Aye crowns his board with sweet content,
'Mid poverty and gloom.

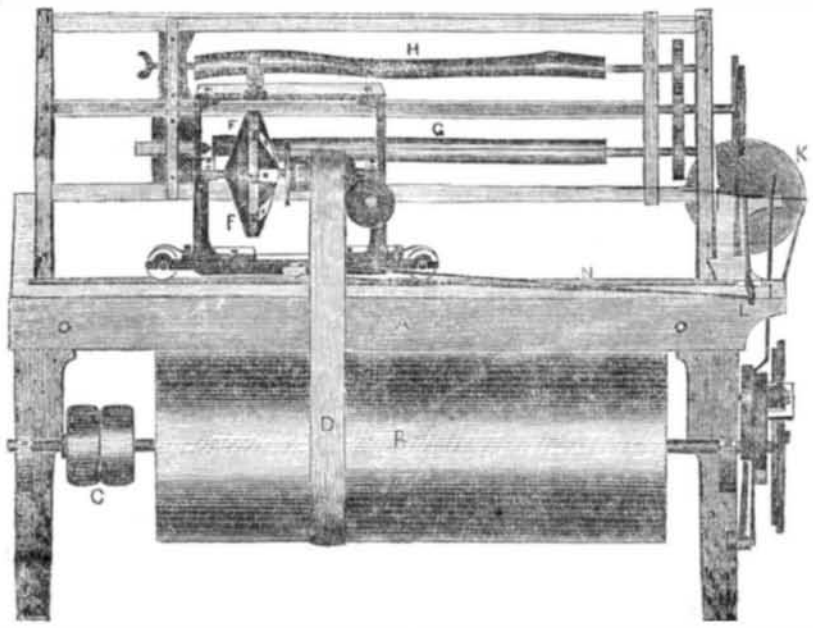
Lost Time.

I threw a bauble to the sea,
A billow caught it hastily;
Another billow quickly came
Successfully the prize to claim;
From wave to wave, unchecked, it passed,
'Till tossed upon the strand at last,
Thus glide unto the unknown shore,
Those golden moments we deplore;
Those moments which not thrown away,
Might win for us eternal day.

Numbers and Philosophy.

Pythagoras, a Greek philosopher, contended that numbers from 1 to 10, govern all things, as—1. bound, or the infinite; 2. the odd and even; 3. one or many; 4. right or left; 5. male or female; 6. rest or motion; 7. straight or curved; 8. light and darkness; 9. good and evil; 10. square and oblong.

MACHINE FOR TURNING IRREGULAR FORMS.



This is an engraving of a machine of Blanchard's Patent owned by Mr. A. K. Carter, of Newark, N. J. and as we have described a number of Last and Spoke machines, and others for turning irregular surfaces, we present this week a view of the machine which has been the cause of so much litigation and the patent for which has been renewed by act of Congress and will be in full force for 14 years from last January. This machine is perfect in principle, as it can turn out a duplicate or fac simile of any pattern whatever, and it is now brought to such minute perfection in all its parts, that an oar blade, a spoke, a last and an axe helve, are all turned upon it with equal facility and equal perfection. At this time we can say no more than give a brief description of the machine, and reserve some other information respecting it till our next number.

This is a front view as seen looking somewhat down upon the machine. A, is the frame. B, is a large drum. C, is a driver pulley. D, is a band which from the drum passes over a pulley E, and drives its rotary cutter wheel F F. This cutter wheel is fixed on an axis in a small sliding frame which moves from one end to the other of the lathe, by a cord N, winding upon a spindle lying across the machine which cannot therefore be seen, but which is driven by the large pulley K, thus giving it a requisite slow motion. H, is the pattern axe helve, and G, the rough material to be cut exactly like H. The pattern and rough material are placed in the lathe—represented by the upright frame—and sustained by spindles. On the back part of the machine, there is a curious but beautiful sliding rest, which is the subject of a patent in itself. It moves along after the cutter wheel and has two plane faces on which the pattern and cut helve rest. The pattern and helve roll upon the planes, while the rest has a rocking motion which accommodates itself to all the uneven turning of the patterns, &c. as they revolve. For turning long articles, this rest is a beautiful and positively necessary part of the machine. To turn a fac simile of any pattern, it will at once be evident to every mechanic, that if a pattern be placed in a lathe and the material to be turned be placed with its axis of rotation similar to that of the pattern, and if a guide pressing on the pattern directs a wheel with cutters to operate on the rough material over a surface like the pattern as guided, a perfect representation of the pattern will be produced on what was the rough material—simply by the cutters chipping away all the rough material outside of the axis of direction—in other words, all the wood on the rough material outside of the pattern. This is the principle upon which this machine is constructed. The cutter frame slides from one end to the other of the pattern and the small guide seen on the frame pressing on the pattern makes the cutters chip away all the rough material outside of the pattern, on G, as the cutter frame moves from end to end of the lathe. The cutter wheel has three motions—a rotary, a horizontal and an eccentric motion. The pattern and rough material revolve in the lathe. This is done by three pinions on the right moved by the pulley seen above K. The speed of the spindles in the lathe are regulated by a very excellent arrangement of a small gang of pulleys and straps seen on the right at the end of the machine. These pulleys are operated by a lever L, and they are so arranged that a slower motion is communicated to the spindles when the thicker part of the pattern is to be turned, or such a part as an oar blade. The cutter frame moves along from one end to the other of the lathe upon a rail, and it is pressed out and in according to the shape of the pattern, by the upper guide, and the cutter wheel being directed in the same manner thus cuts the pattern on the rough material. The strap D, is retained in its proper place by a grooved pulley on the cutter frame, and the whole kept firm and snug to the work to be turned. The above drawing is taken from a model that has been before the Court to establish the principle of Blanchard's invention, and we will find more room for other details at another time being now limited to a brief description.

The Comet.

Encke's comet was seen on Monday morning last, about 2 o'clock, at Cambridge Observatory, by Mr. G. P. Bond. It appeared like an exceedingly faint nebulous patch of light. It was seen again on Wednesday night and Thursday morning, having increased in brightness since Monday.

Singular Death.

Christopher Dunn, of Belgrade, Maine, was walking in a room where a gun and bayonet were hanging horizontally against the wall, and at the moment when his shoulder was near the bayonet, the lightning passed from the point of the bayonet to his body and killed him.

RAIL ROAD NEWS.

Improvement in Railroad Speed.

The Harford (Conn.) Times says that two weeks ago a railroad train with a new engine having 5½ feet driving wheels, ran from Springfield to Harford with 5 passenger cars and 250 passengers in the short space of 33 minutes. The distance is 26 miles, or at the rate of 50 miles an hour—and from Springfield to New Haven, a distance of 62 miles in 1 hour and 30 minutes. This is the quickest trip ever made in this country with a heavy train over any railroad, and the road is now regularly run with greater speed than any other railroad in the United States, and with double the average velocity of railroads out of New England. This is owing to the road being remarkably straight, level, and thoroughly constructed.

With engines having driving wheels seven and eight feet in diameter, which have been brought into use on the best roads in England, there is litile doubt that the Harford and New Haven Railroad could be run with perfect ease and safety at the rate of 50 to 60 miles an hour. But the engine makers of this country hitherto have enjoyed to such a degree a monopoly in their business, and realised such large profits (from 40 to 50 per cent.) upon it, that they have been contented to furnish the old-fashioned small wheel engines, and not shown the usual enterprise of our American artizans in keeping pace with and generally outstripping the improvements and inventions of their British rivals.

We want to see our trains making the average speed of 50 miles per hour. They will do this yet.

New Rail Road Bridge.

The Hartford and Providence Railroad Company have made a contact with Messrs. Harris and Stone, of Springfield, for the construction of a Railroad Bridge over Connecticut River, about three-eights of a mile above the present bridge. The price is $77,000—$10,000 of which is to be paid in stock. This is a saving from the original estimate, which was $100,000. The work is to be commenced forthwith, and to be completed by the first of November, 1849.

Principle of Railroad Damages.

The Albany Journal says: There is a law in this State which holds Railroad Companies pecuniarily responsible for deaths on their roads. Under this law Mr. Howard, father of the young man who was killed in May last, by a collision near Herkimer, applied for damages, and the Company offered to pay all expenses and $2,200 beside. The offer was accepted.

Railroad between Watertown and Rome.

The Watertown, N. Y. Journal, says the survey of the route of this Road, just completed, reduces the distance nearly five miles. The estimated expence of construction is also reduced about $240,000. The work is to be pushed forward vigorously

The little Miami and Mad River railroad is expected to be ready at the end of the week, when there will be an uninterupted line of railroad from Cincinnati to the Lakes.

Railroads are said to have been *highly* beneficial to the public health in Boston, in consequence of the facilities *they* afford for a residence and excursions *in* the country.

Hints to Young Farmers.

Make it a rule to read a little every day, even if it is but a single sentence. A short paragraph will often afford you a profitable source of reflection for the whole day. For this purpose your agricultural paper is admirably adapted. Keep it always within your reach so that you may lay your hand on it at any moment when you are about the house.