

# Scientific American.

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

Vol. 4.

New York, July 21, 1849.

No. 44.

THE  
Scientific American.  
THE  
BEST MECHANICAL PAPER IN THE WORLD.  
CIRCULATION 13,000.  
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  
Barlow & Payne, Agents, 89 Chancery Lane, London  
TERMS—\$2 a year—\$1 in advance, and  
the remainder in 6 months.

## Poetry.

### THOUGHT AND EXPRESSION.

BY THE LATE MRS. GRAY.

They flit, they come, they go,  
The visions of the day;  
They change, they fade, they glow,  
They rise, they die away.  
And all within the scope  
Of one poor human breast,  
Where joy and fear and hope,  
Like clouds on heaven's blue cope,  
Can never be at rest.

They press, they throng, they fill  
The heart where they have birth.  
Oh pour them forth to thrill  
The brethren of the earth!  
In circles still they swim,  
But outward will not go;  
The lute strings cage the hymn,  
The cup is full, full to the brim,  
Yet will not overflow.

When will the lute be stricken,  
So that its song shall sound?  
When shall the spring so quicken  
That its streams shall pour around?  
Wo for the struggling soul  
That utterance cannot find,  
Yet longs without control  
Through all free space to roll  
Like thunders on the wind!

The Painter's pencil came  
The struggling soul to aid,  
His visions to proclaim  
In colored light and shade;  
But though so fair to me  
His handiwork may seem,  
His soul desponds to see  
How pale its colors be  
Before his cherished dream.

So from the sculptor's hand  
To life the marble wrought;  
But he can understand  
How lovelier far his thought.  
The minstrel's power ye own,  
His lyre with bays ye bind;  
But he can feel alone  
How feeble is its tone  
To the music of his mind.

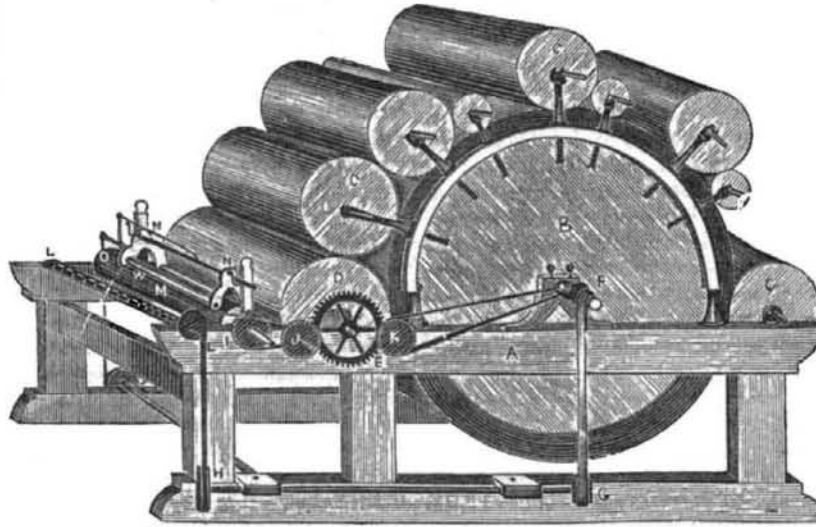
So strife on earth must be  
Between man's power and will:  
For the soul unchecked and free  
We want a symbol still.  
Joy when the fleshy veil  
From the spirit shall be cast;  
Then an ungarbled tale  
That cannot stop or fail  
Shall genius tell at last!

A butterfly basked on a baby's grave,  
Where a lily had chanced to grow;  
Why art thou here with a gaudy eye  
Whilst she of the bright and sparkling eye  
Must sleep in the church yard low?

Then it lightly soar'd through the sunny air,  
And spoke from its airy track;  
I was a worm till I won my wings  
And she whom thou mournst like a seraph  
sings,  
Wouldst thou call the blest one back?

## IMPROVEMENTS IN WOOL CARDING.

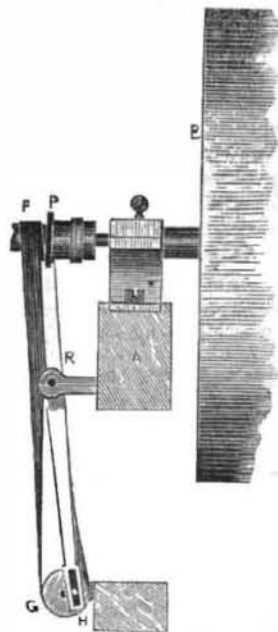
Figure 1.



This is a Condensing Carding Machine, on which valuable improvements have been made both for mixing and carding the wool in the sheet and drawing the roving at one operation, to fit it for the spinning frame.

Figure 1, is a perspective view, and figures 2 and 3, transverse sections. The same letters refer to like parts on all the figures. A, is a frame for the machinery. B, is a condensing card cylinder. C, at the right hand is the Lickerin, and the larger cylinders C, and the smaller ones fixed to roll on the periphery of the large cylinder B, are the workers and clearers. All these are covered with cards and the one takes the sheet of wool from the other carrying it and carding it from one to the other until it is received on the doffer D. The doffer has a series of rings of cards around it, which form the sheet of wool into slivers, and from thence it is carried between rubbing rolls W, formed into roving and then through a countertwist band, and afterwards drawn between drawing rolls and finished for

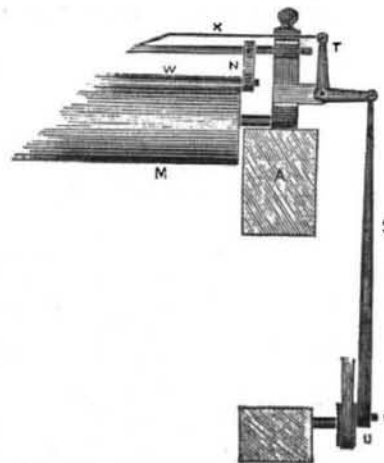
FIG. 2.



spinning at one continuous operation on the carding frame. The peculiarity of this machine is, that the condensing cylinder has two motions—a rotary and a side to side motion. This mixes the wool in the most complete manner, keeps the card teeth better pointed and the finishing qualities of the cloths are improved thereby more than 30 per cent, as has been fully tested by the inventors, Messrs. Charles Jackson and James Moir, of Cazenovia, Madison Co. N. Y. who have taken measures to secure a patent. The section fig. 3

shows the way a side to side motion is given to the condensing cylinder while it is revolving. F, is the shaft of the cylinder B. It extends outside of the frame, and there is room between to let the cylinder slide to and fro. From the shaft F, passes a band over a pulley G, which revolves the low shaft seen fig. 1. R, is a reciprocating rod connected by a pivot joint to the frame. This rod is attached to the pulley G, by an eccentric pin passing through the slot H. This reciprocating rod meshes, by a notch on its top, with the ring P, fixed on the shaft F. When the condensing cylinder is revolved, the band that revolves the pulley G, will give a vibrating motion to the rod R, and thus give the condensing cylinder a reciprocating motion, to produce the

FIG. 3.



results we have already mentioned. The rubbing rolls too, have both a rotary and reciprocating motion. Fig. 3 shows this arrangement. It is produced nearly like that in fig. 2, only the reciprocating rod S, vibrates an angular arm T, which by the rod X, moves the arm N, and the rub rolls W, from side to side. U, V, in fig. 3, is a pulley and eccentric. M, is a cylinder which revolves by means of the gearing K E J I, fig. 1, and carries the roving forward from the doffer D, and revolves the rub rolls, which roll in bearings in the arms G. L, at the side fig. 1, is a countertwist band through which the rovings pass and they are then drawn out in the drawing rolls in front of the machine, and the roving is left free from twist when drawn. This compound motion is as applicable to the Breaker, as the condenser. The improvements embraced in this machine are very important to the woolen manufacture.

More information about this machine, selling rights, &c. may be obtained by letters, post paid, to the inventors.

## RAILROAD NEWS.

### Mad River and Erie Railroad.

The annual report of the Mad River and Lake Erie Railroad, Ohio, contains a statement of the income and expenditures of the road for a period of eleven months, ending June—during the last nine months of which the road had been opened for its whole length 135 miles, from Sandusky to Springfield, where it unites with the Little Miami railroad, forming a continued line from Lake Erie to Cincinnati. The income of the road during this period was \$147,162 from passengers, and \$151,003 from freight, making \$298,165; the expenses including \$18,710 for interest on loan, amounted to \$137,246, making a net income of \$160,919. The cost of the road to the present date amounts to \$1,754,262, of which \$1,400,000 has been paid for in stock paid in. The number of through passengers transported was 27,371, way passengers 49,832, and tons of freight about 35,000.

### Attica and Buffalo Railroad.

The Buffalo papers announce that William Wallace, Esq. who has held the office of Superintendent upon the Attica and Buffalo Railroad since its opening, has resigned, preparatory to entering on his duties as chief engineer of the Buffalo and State Line Railroad. He is succeeded by Mr. Martin, the President of the Company. Mr. Wallace has discharged his duties to very general acceptance of the public and the stockholders.

### Providence Railroad.

The Report of the Providence, R. I., Railroad, for the year ending July 1st inst., shows the expenses to be the same as last year. The Providence travel with the year has increased 7 per cent, way travel 45 per cent, New York do 29, New York freight 10, and local freight 20 per cent. On the 1st of July, 1849, the corporation was estimated to owe about \$110,000 only, and in this estimate was included the probable cost of the West Roxbury branch and of land and buildings in Dedham and land in Boston—a total outlay of \$160,000. The West Roxbury branch has just gone into operation. The cars, engines, bridges and depots are represented as in excellent order. The capital stock of the road has now reached its highest limit, \$3,120,000.

The Niagara Falls Suspension Bridge has been again thrown open to the public, having been impassable for some time in consequence of improvements intended to increase its capacity. Several new cables have been added a new floor has been laid, and the structure is now a thoroughfare, perfectly safe for all business purposes, and is capable of sustaining two hundred and fifty tons. A coach and four which with its passengers, weighed over five tons—passed over it a few days since.

### African Gold.

The Editor of the Baltimore Sun has been shown some specimens of gold, received in that city by the last Liberia packet. "It was gathered by the natives of that country from washings at the base of the mountains, and is the richest specimens we have seen. It is said to be more abundant there than in California, and obtained with very little labor.—When the new colony, now being rapidly settled by the colored emigrants, becomes fully developed, no doubt it will be discovered to possess immense wealth in the way of minerals, as well as in other resources, which will be productive of a large trade between that and our own country."

The Elk Lick Sulphur Springs, in Ralls county, Missouri, are becoming celebrated for their medicinal virtues, which in the estimation of medical men acquainted with the subject, are not excelled by the celebrated Blue Lick waters of Kentucky, or the White Sulphur Springs in Virginia.