Scientific American.

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

Dol. 4.

New York, July 21, 1849.

No. 44.

Scientific American.

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. Ob 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 isfull, 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 Painters'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.

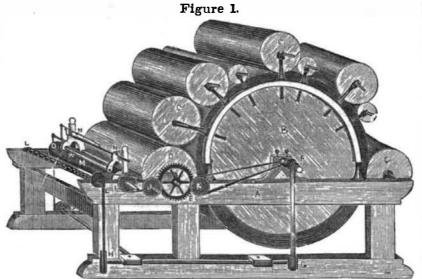
So from the sculptor's hand To lite the marble wrought; But he can understand How lovelier far his thought, The minstrel's power ye own, His lyre with bays ye bind; But he can feel alone How feeble is its tone To the music of his mind.

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 dye Whilst she of the bright and sparkling eye Must sleep in the church yard low?

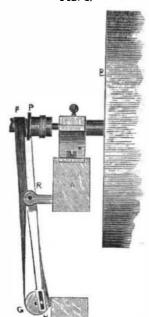
Then it lightly soar'd through the sunny air, And spoke from its airy track; I was a worm till I won my wings And she whom thou mournst like a seraph sings, Wouldst thou call the blest one back?

IMPROVEMENTS IN WOOL CARDING.



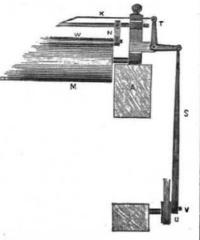
which valuable improvements have been made both for mixing and carding the wool in the sheet and drawing the roveing at one operation, to fit it for the spinning frame.

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 daffer 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



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, Mesers. Charles Jackson and James Moir, of Cazenovia, Madison Co. N. Y. who have taken measures to secure a patent. The section fig. 3

This is a Condensing Carding Machine, on a 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 trame. This rod is attached to the pulley G, by an eccentric pin passing through the slot H. This reciprocating rod cylinder is revolved, the band that revolves the rod R, and thus give the condensing cylinder a reciprocating motion, to produce the



results we have already mentioned. The rub 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 N, and the rub rolls W, from side to side. U, washings at the base of the mountains, and V, in fig. 3, is a pulley and eccentric. M, is a cylinder which revolves by means of the said to be more abundant there than in Caligearing K E J I, fig. 1, and carries the roving fornia, and obtained with very little labor .forward from the doffer D, and revolves the When the new colony, now being rapidly G. L, at the side fig. 1, is a countertwist fully developed, no doubt it will be discoverband through which the rovings pass and ed to possess immense wealth in the way of they are then drawn out in the drawing rolls | minerals, as well as in other resources, which in front of the machine, and the roving is will be productive of a large trade between that lest 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.

ling rights, &c. may be obtained by letters Lick waters of Kentucky, or the White Sulost paid, to the inventors.

RAILROAD NEWS.

Mad River and Eric 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 Mami 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 xpenses 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 Ralirond.

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. Waltace has discharged his duties to very general acceptation of the public and the stockholders.

Providence Raitruad.

'he Report of the Providence, R I, Railroad, for the year ending July 1st inst., shows meshes, by a notch on its top, with the ring the expenses to be the same as last year. The P, fixed on the shaft F. When the condensing | Providence travel with the year has increased 7 per cent, way travel 45 per cent. New York the pulley G, will give a vibrating motion to 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, \$3,160,000.

> The Niagara Falls Su-pension Bridge has been again thrown open to the public, having been impassible 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 arm I, which by the rod X, moves the arm gathered by the natives of that country from is the richest specimens we have seen. It is rub rolls, which roll in bearings in the arms settled by the colored emigrants, becomes 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 sub-More information about this machine, sel- ject, are not excelled by the celebrated Blue phur Springs in Virginia.